![Cystic Fibrosis Foundation logo]

October 1, 2020

Erika Lease, MD
Chair, Lung Transplantation Committee
Organ Procurement and Transplantation Network
United Network for Organ Sharing
700 N 4th Street
Richmond, VA 23219

RE: Updated Cohort for Calculating the Lung Allocation Score (LAS)

Submitted electronically at optn.transplant.hrsa.gov.

Dear Dr. Lease:

On behalf of the Cystic Fibrosis Foundation and the below signed individuals of the CF Lung Transplant Consortium, we write in response to the OPTN/UNOS Public Comment Proposal, *Updated Cohort for Calculating the Lung Allocation Score (LAS)*.

Updating the Cohort is Not Enough – the LAS Model Must Be Revised
We appreciate that UNOS has recognized the importance of updating the LAS as part of the transition to the continuous distribution allocation scheme for lungs. The LAS is so critical to the organ allocation process that the Committee would be remiss in not making the necessary updates if it is to be used as a core measure in this new model. It is critical that all attributes used in the composite score under the continuous distribution model are as appropriately reflective as possible in measuring the factors they are designed to assess, and the LAS is no exception.

While we appreciate that UNOS has proposed using more up-to-date data for calculating the LAS and removing variables that are a poor fit for the model, we urge UNOS to go further. UNOS has promised in the past to review the LAS as new data emerges and revise it as appropriate in a timely manner. However, LAS reforms remain minimal despite evidence that further adjustments are needed to decrease waitlist mortality and reduce arbitrary biases in the existing scoring system.

A paper published last year using merged data from the Scientific Registry of Transplant Recipients and the CF Foundation's patient registry demonstrated that the LAS fails to account

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for critical variables reflecting waitlist mortality for individuals with CF and COPD.[1] This data demonstrates that the LAS, as it stands, does not identify those most likely to benefit from transplant. However, this data has yet to be acted upon in full by UNOS. With the addition of a few variables, the LAS would better predict the risk of mortality on the waitlist, which would in turn make the model a more useful tool in accomplishing the goals in the Final Rule.

We are further concerned that despite the updated cohort, the model for calculating the LAS uses the same variables selected from the previous update to the LAS. This is a methodologically invalid approach, as it assumes that the model will continue to hold despite important differences between the two patient cohorts. It is critical that UNOS reassess the model in full along with this update to the data being used to calculate the LAS to ensure that the model is accurate and predictive of transplant need and benefit.

We would additionally like to express concern with removing forced vital capacity (FVC) and diabetes as variables from the score calculation for expected waitlist survival based on data analyzed from the new cohort. While we understand that the goal of this update was to remove unnecessary or counterproductive variables from the LAS based on the new dataset, these variables may have bearing for patients with CF seeking transplant. We ask UNOS to carefully consider how removing these variables may impact estimates of waitlist survival within this patient population.

UNOS Must Revise the Benefit Component
As an important component of the continuous distribution model, post-transplant survival should be accurate and predictive of transplant benefit. However, the one-year survival measure currently accounted for through the LAS does not accurately reflect how beneficial a transplant is for any given patient. It is unlikely that people undergo lung transplantation with the aim of only surviving for one year. Instead, we should be using endpoints that are more reflective of transplant success and patient wishes. We therefore urge UNOS to move away from use of one-year survival to either three- or five-year survival as part of the current plans to revise the LAS in preparation for the change to continuous distribution.

Changes to the LAS Should Be Made Immediately
We would like to see UNOS address *all* needed changes to the LAS as soon as possible rather than waiting for certain changes to the LAS to be carried out in conjunction with the implementation of continuous distribution for lungs or at a date following implementation of the new allocation framework. Failure to more thoroughly update the LAS will do a great disservice to those patients who are dying unnecessarily while awaiting transplant. We cannot wait until all organs have transitioned to continuous distribution in order to make these important changes.

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[1] https://www.ncbi.nlm.nih.gov/pubmed/31199166 accessed 9/27/2019.

Background on Cystic Fibrosis and the Foundation

Cystic fibrosis (CF) is a rare genetic disease that affects over 30,000 people in the United States. In people with CF, a defective gene causes a thick buildup of mucus in the lungs, pancreas and other organs. In the lungs, the mucus obstructs the airways and traps bacteria leading to infections, extensive lung damage and eventually, respiratory failure. Over 280 people with CF received transplants in 2018, the majority of which were lung transplants. However, some people with CF also may require liver or kidney transplants due to the disease.

In order to address the needs of people with CF living with advanced lung disease, as well as those considering transplant, the CF Foundation launched the Lung Transplant Initiative in 2016. Through this initiative, the Foundation is working to improve and standardize the care received by people with CF for whom transplant is an option and to find solutions to barriers that may adversely impact a person with CF's chance of receiving a donor organ.

Conclusion

We are pleased to see UNOS take steps to revise the LAS. However, we are concerned that maintaining a singular focus on the change to continuous distribution without simultaneously addressing any and all arbitrary measures and biases in the existing LAS model will be a major disservice to patients on the waitlist. We urge UNOS to take immediate further actions to reassess and revise the LAS in order to ensure continuous distribution provides the maximum benefit to patients seeking lung transplants.

We are happy to serve as a resource and look forward to working alongside OPTN/UNOS in the future on this issue.

Sincerely,

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