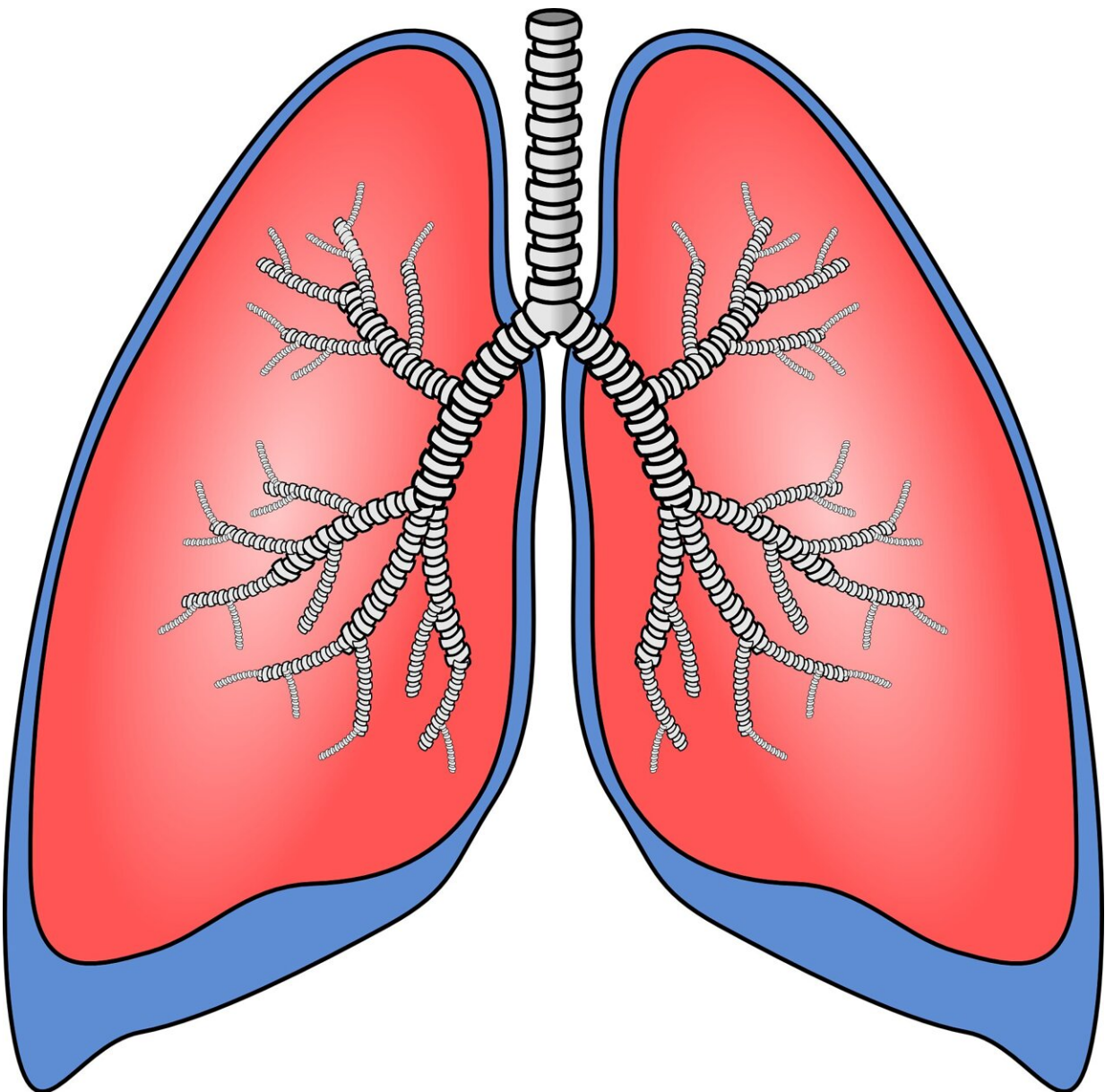


New method of donor-lung distribution expected to decrease deaths among those on transplant waiting list

January 5 2023



Credit: Pixabay/CC0 Public Domain

A new method of donor-lung distribution is projected to decrease the number of candidate deaths who are on the waitlist for lung transplant, according to a study by Cleveland Clinic and the U.S. Scientific Registry of Transplant Recipients (SRTR) published in *The American Journal of Transplantation*.

Under the [current system](#), [donor lungs](#) are distributed to candidates waiting for lung transplant using the Lung Allocation Score. However, in early 2023, the LAS will be replaced by a new distribution system called the Composite Allocation Score.

Maryam Valapour, M.D., Director of Lung Transplant Outcomes at Cleveland Clinic, is the primary author of the study. Dr. Valapour also serves as the Senior Investigator for Lung Transplantation for the Scientific Registry of Transplant Recipients, the organization responsible for analyzing U.S. transplant data.

The Lung Allocation Score system measures donor and recipient compatibility, geographical restrictions and prioritizes calculated survival benefit from transplant. It first aligns compatibility for candidates within a 250-mile radius, sometimes resulting in an inefficient distribution of organs based on geographical restriction. Under this current system, sicker patients who live just outside the 250-mile radius may lose out on a life-saving transplant because of where they live.

The new Composite Allocation Score system was developed to improve

equity in organ allocation by eliminating geographical boundaries and prioritizing the candidate's medical needs. This system is expected to set a precedent for the Organ Procurement and Transplantation Network and United Network for Organ Sharing (UNOS) for all organs, with lungs being the first organ allocation system to undergo this change.

"The importance of removing the geographical barrier can't be overstated here," said Dr. Valapour. "The Composite Allocation Score system's goal of making access to lung transplant more equitable for all candidates in the United States will help reduce waitlist mortality and we hope will even improve post-transplant survival over time."

To understand the potential effects on lung transplant candidates waiting for organs, the research team tested six alternative scenarios over 10 simulations using data from individuals on the lung transplant waiting list from Jan. 1, 2018, through Dec. 31, 2019. Depending on the scenario tested, waitlist deaths decreased by 36% to 47% in the Composite Allocation Score system as compared to the current system.

Across all simulated Composite Allocation Score scenarios, the system led to improved overall measures of equity compared with the current Lung Allocation Score system, including reduced waitlist deaths, and resulted in similar post-[transplant](#) survival.

"With more candidates added to the waitlist every day, access to available lungs is incredibly important," says study co-author, Carli Lehr, M.D., a pulmonary and critical care physician at Cleveland Clinic. "The Composite Allocation Score system will help those on the waitlist overcome challenges associated with their proximity to potential donors."

In 2022, there were over 3,000 candidates added to the [lung transplant waitlist](#) with over 2,600 [lung](#) transplants performed, according to UNOS.

While the numbers of donors and transplants are improving, there is still a shortage of available organs in the United States. For more information on how to become an organ donor, visit [UNOS](#).

More information: Maryam Valapour et al, Expected effect of the lung Composite Allocation Score system on US lung transplantation, *American Journal of Transplantation* (2022). [DOI: 10.1111/ajt.17160](https://doi.org/10.1111/ajt.17160)

Provided by Cleveland Clinic

Citation: New method of donor-lung distribution expected to decrease deaths among those on transplant waiting list (2023, January 5) retrieved 5 March 2023 from <https://medicalxpress.com/news/2023-01-method-donor-lung-decrease-deaths-transplant.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.