

NHS BLOOD AND TRANSPLANT
CARDIOTHORACIC ADVISORY GROUP – LUNG

LUNG ALLOCATION – UPDATE

Recent meetings

Lung Allocation HLA Subgroup meeting 20th May 2026
Lung Allocation Core Group meeting 14th April 2026
Lung Allocation Group meeting 27th November 2025
Lung Allocation Core Group meeting 4th September 2025

Group membership

Lung Allocation Core Group:

Anna Reed (Chair)
Rossa Brugha
Ander Fisher
Lisa Mumford
Sally Rushton
Karthik Santhanakrishnan
Joanne Chalker
Jas Parmar
Julie Whitney

Lung Allocation Group:

Core Group members plus

Iain Harrison
Amit Adlakha
Vicky Gerovasili
Martin Carby
Jim Lordan
Debra Thomas
Richard Thompson
Shamik Ghosh
Matthew Thomas
Chris Blake
Havi Carel

Lung Allocation HLA Subgroup:

Anna Reed
Sally Rushton
Rommel Ravanah
Carla Rosser
Corinna Freeman
Joanne Chalker
Julie Whitney
Iain Harrison

Current status of work

A number of important decisions have been made, however some elements remain in progress.

Decisions:

1. Urgent and super-urgent tiers to remain as they are.
2. Scoring system will be applied to the non-urgent tier, thus there will be a national list of non-urgent patients with named-patient offering.
3. The score will be applied to non-urgent patients aged 12 and over and will rank blood group identical matches above blood group compatible.
4. Non-urgent patients aged <12 will form a separate national list ordered by waiting time (blood group identical followed by compatible) – see Appendix for proposed allocation sequences.
5. The scoring system will be a combination of
 - a. Waiting list survival
 - b. Post-transplant survival
 - c. Paediatric priority
 - d. Small adult priority
 - e. Geographical proximity
6. The exact weighting of each attribute and how they will be combined into an allocation score has not been agreed, but the following is an example:

Attribute	Weighting (W)	Rating (R)
Waiting list survival	20	1-WL rating
Post-transplant survival	40	PT rating
Paediatric weighting	20	If patient <18 then 1, otherwise 0
Height weighting	10	If patient <=155cm then 1, otherwise 0
Geographical proximity	10	If closest 3 centres then 1, otherwise 0

Non-Urgent Lung Composite Offering Score (NLCOS) = $(R_{WL} \times W_{WL}) + (R_{PT} \times W_{PT}) + (R_P \times W_P) + (R_H \times W_H) + (R_G \times W_G)$

Where:

WL rating = $WLAUC/730$

PT rating = $PTAUC / 1826$

WLAUC = predicted days of survival on the WL (within 2 years) without a transplant

PTAUC = predicted days of survival post-transplant (within 5 years) with a transplant (from this donor)

7. Waiting list and post-transplant survival models have been developed using available registry data with clinical review of factors included. These models currently contain the following variables, though there is further work to test percentage predicted FEV1 and FVC in the waiting list model.

Waiting list model: Disease group, home oxygen, previous transplant, FVC, six minute walk distance, BMI, FEV1, age

Post-transplant model: CMV mismatch, prednisolone daily dose, donor type, donor past smoker, in hospital status, disease group, six minute walk distance, BMI, donor age, recipient age

8. New data collection is required to a) improve predictive ability of survival models, b) ensure mandatory reporting of data items needed for the NLCOS if appropriate, and c) collect HLA data both to prioritise sensitised patients in future and to screen out incompatible offers. Further discussion is needed to finalise future data collection and any default values if a particular data item is not reported (score is likely to take the median from a historic cohort).
9. As per the urgent/super-urgent registration form, the future non-urgent registration form will allow centres to record an acceptable donor height range, which would then screen out incompatible offers.

Simulations:

Simulations are an important stage in developing any new allocation scheme. Newcastle University colleagues have developed a lung allocation simulation engine. There is work on going to allow NHSBT colleagues to utilise this simulation engine directly and remotely from NHSBT. There is also work on going to add flexibility to the series of allocation policies that the engine can run, in order for the composite allocation score to be simulated.

Patient engagement:

CTAG has two new patient representatives. The June 2026 meeting will be the first in which they are in attendance. Decisions regarding allocation based on wait-list mortality vs post transplant survival will be discussed then.

Appendix – proposed sequences

Future allocation sequence

