## Statistical procedure

Statistical analysis was handled in RStudio1 (version 4.3.3), The statistical code for the analysis will be publicly available on Github (<https://github.com/Malte-Lund/Lung_Posture>).

Analysis used a linear mixed model (LMM), with the LMMstar package2. Assuming an unstructured covariance pattern to account for repeated measures in the same subject. Sex (assigned at birth, male or female), height (numerical), and posture (categorical: upright, handstand, supine, prone) was included as fixed effects. Missing data was handled implicitly by maximum likelihood estimation in the LMM.

Models were for goodness of fit visually by assessing the qq-plot and the residual vs. predicted values. Outcomes were not adjusted for multiple testing.

1. Team Rs. RStudio. Published online 2020. http://www.rstudio.com/

2. Ozenne B, Forman J. LMMstar: Repeated Measurement Models for Discrete Times. Published online 2024.

3. Benjamini Y, Hochberg Y. Controlling the false discovery rate : A practical and powerful approach to multiple testing author ( s ): Yoav Benjamini and Yosef Hochberg Source : Journal of the Royal Statistical Society . Series B ( Methodological ), Vol . 57 , No . 1 ( 1995 ), Publi. *J R Stat Soc*. 1995;57(1):289-300.