

Imbio RV/LV Analysis™

Bibliography of Peer-Reviewed Scientific Literature

Regulatory Clearance Notice: RV/LV Analysis is FDA 510(k) cleared and pending CE Mark certification.

Indications for Use: The Imbio RV/LV Software device is designed to measure the maximal diameters of the right and left ventricles of the heart from a volumetric CTPA acquisition and report the ratio of those measurements. RV/LV analyzes cases using an artificial intelligence algorithm to identify the location and measurements of the ventricles. The RV/LV software provides the user with annotated images showing ventricular measurements. Its results are not intended to be used on a stand-alone basis for clinical decision-making or otherwise preclude clinical assessment of CTPA cases.

The intended use of this software application provides a calculation of the ratio of right ventricular diameter to left ventricular diameter from contrast enhanced CT images of the chest acquired using a standard CT pulmonary angiogram acquisition.

Below is a representative sampling of published scientific and technical peer-reviewed articles that relate to the RV/LV analysis. This bibliography is being provided by way of illustration of the scientific discourse on the subject.

Potential Prognostic Value of RV/LV Analysis: Correlations to Acute Pulmonary Embolism & Survival

Automated calculation of the right ventricle to left ventricle ratio on CT for the risk stratification of patients with acute pulmonary embolism.

Foley RW, Glenn-Cox S, Rossdale J, Mynott G, Burnett TA, Brown WJH, Peter E, Hudson BJ, Ross RVM, Suntharalingam J, Robinson G, Rodrigues JCL. Eur Radiol. 2021 Jan 18; PMID: 33459854 DOI: 10.1007/s00330-020-07605. Online ahead of print.
<https://pubmed.ncbi.nlm.nih.gov/33459854/>

General Clinical Value of the RV/LV Ratio Biomarker: Predicting Ventricle Dysfunction and Mortality in Acute Pulmonary Embolism

Computed tomography pulmonary angiography for acute pulmonary embolism: prediction of adverse outcomes and 90-day mortality in a single test.

Akhoundi N, Langroudi TF, Rajebi H, Haghi S, Paraham M, Karami S, Langroudi FK. Pol J Radiol. 2019 Nov 6;84:e436-e466. PMID: 31969963 PMCID: PMC6964354 DOI: 10.5114/pjr.2019.89896
<https://pubmed.ncbi.nlm.nih.gov/31969963/>

Association between computed tomography obstruction index and mortality in elderly patients with acute pulmonary embolism: A prospective validation study.

Mean M, Tritschler T, Limacher A, Breault S, Rodondi N, Aujesky D, Qanadli SD. PLoS One 2017 Jun 8;12(6):e0179224. PMID: 28594950 PMCID: PMC5464630 DOI: 10.1371/journal.pone.0179224
<https://pubmed.ncbi.nlm.nih.gov/28594950/>

Automated Axial Right Ventricle to Left Ventricle Diameter Ratio Computation in Computed Tomography Pulmonary Angiography.

Gonzalez G, Jimenez-Carretero D, Rodriguez-Lopez S, Kumamaru KK, George E, Estepar RSJ, Rybicki FJ, Ledesma-Carbayo MJ. PLoS One 2015;10(5):e0127797. PMID: 26000632 PMCID: PMC4441508 DOI: 10.1371/journal.pone.0127797
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4441508/>

Enhancement Characteristics of the Computed Tomography Pulmonary Angiography Test Bolus Curve and Its Use in Predicting Right Ventricular Dysfunction and Mortality in Patients With Acute Pulmonary Embolism.

Li C, Lin CT, Kligerman SJ, Hong SN, White CS. J Thorac Imaging. 2015 Jul;30(4):274-81; PMID: 25635705 DOI: 10.1097/RTI.0000000000000141.
<https://pubmed.ncbi.nlm.nih.gov/25635705/>

Right Ventricle Enlargement on Chest Computed Tomography: Prognostic Role in Acute Pulmonary Embolism.

Quiroz R, Kucher N, Schoepf UJ, Kipfmueller F, Solomon SD, Costello P, Goldhaber S. Circulation 2004;109(20):2401-4. PMID: 15148278 DOI: 10.1161/01.CIR.0000129302.90476.BC
<https://pubmed.ncbi.nlm.nih.gov/15148278/>