Imbio Lung Density Analysis™
(with PRM technology exclusively licensed from the University of Michigan)

Bibliography of Peer-Reviewed Scientific Literature

Regulatory Clearance Notice: Lung Density Analysis (LDA) is FDA Cleared, CE Mark certified and Health Canada Approved. LDA is available for research use only in other regions without regulatory clearance for clinical use.

Indications for Use: The Imbio CT Lung Density Analysis Software provides reproducible CT values for pulmonary tissue, which is essential for providing quantitative support for diagnosis and follow up examinations. The Imbio CT Lung Density Analysis software can be used to support the physician in the diagnosis and documentation of pulmonary tissue images (e.g. abnormalities) from CT thoracic datasets. Three-D segmentation and isolation of sub-compartments, volumetric analysis, density evaluations and reporting tools are provided.

Below is a representative sampling of published scientific peer-reviewed articles that relate to general CT Lung Densitometry, as well as Imbio Lung Density Analysis - including core embedded technology known as “PRM” (Parametric Response Mapping) - used for classification of pulmonary tissue. This bibliography is being provided by way of illustration of the scientific discourse on the subject.

Clinical Value of LAA%

Association between emphysema-like lung on cardiac CT and mortality in persons without airflow obstruction: A cohort study.

Quantitative computed tomography in chronic obstructive pulmonary disease.

Optimal threshold in CT quantification of emphysema.

Emphysema scores predict death from COPD and lung cancer.

Effect of emphysema on lung cancer risk in smokers: A CT-based assessment.

Clinical significance of radiologic characterizations in COPD.
Association of radiographic emphysema and airflow obstruction with lung cancer.

**Air Trapping on Expiration**

**Association Between Functional Small Airway Disease and FEV1 decline in COPD**

**Quantitative CT in COPD: Inspiratory and expiratory assessment.**

**Air trapping on expiratory high-resolution CT scans in the absence of inspiratory scan abnormalities: correlation with pulmonary function tests and differential diagnosis.**

**Inter-reader Variability in Assessing COPD**

**Pulmonary emphysema: subjective visual grading versus objective quantification with macroscopic morphometry and thin-section CT densitometry.**

**A combined pulmonary- radiology workshop for visual evaluation of COPD: study design, chest CT findings and concordance with quantitative evaluation.**

**Technical Methods and Limitations**

**CT lung densitometry: Dependence of CT number histograms on sample volume and consequences for scan protocol comparability.**


**Reference standard and statistical model for intersite and temporal comparisons of CT attenuation in a multicenter quantitative lung study.**

**Effects of CT section thickness and reconstruction kernel on emphysema quantification: relationship to the magnitude of the CT emphysema index.**