Eric A Hoffman

List of Publications by Citations

558 papers	24,583 citations	82 h-index	137 g-index
615 ext. papers	29,345 ext. citations	6.5 avg, IF	6.66 L-index

#	Paper	IF	Citations
558	The Lung Image Database Consortium (LIDC) and Image Database Resource Initiative (IDRI): a completed reference database of lung nodules on CT scans. *Medical Physics*, **2011**, 38, 915-31	4.4	999
557	The National Lung Screening Trial: overview and study design. *Radiology*, **2011**, 258, 243-53	20.5	735
556	Automatic lung segmentation for accurate quantitation of volumetric X-ray CT images. *IEEE Transactions on Medical Imaging*, **2001**, 20, 490-8	11.7	639
555	Upper airway and soft tissue anatomy in normal subjects and patients with sleep-disordered breathing. Significance of the lateral pharyngeal walls. *American Journal of Respiratory and Critical Care Medicine*, **1995**, 152, 1673-89	10.2	595
554	Percent emphysema, airflow obstruction, and impaired left ventricular filling. *New England Journal of Medicine*, **2010**, 362, 217-27	59.2	396
553	Dynamic upper airway imaging during awake respiration in normal subjects and patients with sleep disordered breathing. *The American Review of Respiratory Disease*, **1993**, 148, 1385-400		385
552	Clinical Significance of Symptoms in Smokers with Preserved Pulmonary Function. *New England Journal of Medicine*, **2016**, 374, 1811-21	59.2	355
551	Predictors of mortality in patients with emphysema and severe airflow obstruction. *American Journal of Respiratory and Critical Care Medicine*, **2006**, 173, 1326-34	10.2	310
550	Vocal tract area functions from magnetic resonance imaging. *Journal of the Acoustical Society of America*, **1996**, 100, 537-54	2.2	275
549	CT-Definable Subtypes of Chronic Obstructive Pulmonary Disease: A Statement of the Fleischner Society. *Radiology*, **2015**, 277, 192-205	20.5	273
548	Lung image database consortium: developing a resource for the medical imaging research community. *Radiology*, **2004**, 232, 739-48	20.5	270
547	Impaired mucus detachment disrupts mucociliary transport in a piglet model of cystic fibrosis. *Science*, **2014**, 345, 818-22	33.3	263
546	Sex differences in severe pulmonary emphysema. *American Journal of Respiratory and Critical Care Medicine*, **2007**, 176, 243-52	10.2	249
545	Practical reconstruction method for bioluminescence tomography. *Optics Express*, **2005**, 13, 6756-71	3.3	236
544	CT-based geometry analysis and finite element models of the human and ovine bronchial tree. *Journal of Applied Physiology*, **2004**, 97, 2310-21	3.7	234
543	Airway remodeling measured by multidetector CT is increased in severe asthma and correlates with pathology. *Chest*, **2008**, 134, 1183-1191	5.3	225
542	Registration-based estimates of local lung tissue expansion compared to xenon CT measures of specific ventilation. *Medical Image Analysis*, **2008**, 12, 752-63	15.4	221

541	Characteristics of the turbulent laryngeal jet and its effect on airflow in the human intra-thoracic airways. *Respiratory Physiology and Neurobiology*, **2007**, 157, 295-309	2.8	219
540	Quantification of pulmonary emphysema from lung computed tomography images. *American Journal of Respiratory and Critical Care Medicine*, **1997**, 156, 248-54	10.2	217
539	A multivariate analysis of risk factors for the air-trapping asthmatic phenotype as measured by quantitative CT analysis. *Chest*, **2009**, 135, 48-56	5.3	216
538	Design of the Subpopulations and Intermediate Outcomes in COPD Study (SPIROMICS). *Thorax*, **2014**, 69, 491-4	7.3	212
537	Severe asthma: lessons learned from the National Heart, Lung, and Blood Institute Severe Asthma Research Program. *American Journal of Respiratory and Critical Care Medicine*, **2012**, 185, 356-62	10.2	198
536	Association between Functional Small Airway Disease and FEV1 Decline in Chronic Obstructive Pulmonary Disease. *American Journal of Respiratory and Critical Care Medicine*, **2016**, 194, 178-84	10.2	194
535	Intrathoracic airway trees: segmentation and airway morphology analysis from low-dose CT scans. *IEEE Transactions on Medical Imaging*, **2005**, 24, 1529-39	11.7	188
534	Airway Mucin Concentration as a Marker of Chronic Bronchitis. *New England Journal of Medicine*, **2017**, 377, 911-922	59.2	182
533	Intramural myocardial shortening in hypertensive left ventricular hypertrophy with normal pump function. *Circulation*, **1994**, 89, 122-31	16.7	179
532	Upper airway and soft tissue structural changes induced by CPAP in normal subjects. *American Journal of Respiratory and Critical Care Medicine*, **1996**, 154, 1106-16	10.2	177
531	Mucus plugs in patients with asthma linked to eosinophilia and airflow obstruction. *Journal of Clinical Investigation*, **2018**, 128, 997-1009	15.9	176
530	Computer recognition of regional lung disease patterns. *American Journal of Respiratory and Critical Care Medicine*, **1999**, 160, 648-54	10.2	175
529	Cigarette smoking is associated with subclinical parenchymal lung disease: the Multi-Ethnic Study of Atherosclerosis (MESA)-lung study. *American Journal of Respiratory and Critical Care Medicine*, **2009**, 180, 407-14	10.2	173
528	Predictors of operative mortality and cardiopulmonary morbidity in the National Emphysema Treatment Trial. *Journal of Thoracic and Cardiovascular Surgery*, **2006**, 131, 43-53	1.5	165
527	MDCT-based 3-D texture classification of emphysema and early smoking related lung pathologies. *IEEE Transactions on Medical Imaging*, **2006**, 25, 464-75	11.7	158
526	Segmentation and analysis of the human airway tree from three-dimensional X-ray CT images. *IEEE Transactions on Medical Imaging*, **2003**, 22, 940-50	11.7	158
525	Circumferential myocardial shortening in the normal human left ventricle. Assessment by magnetic resonance imaging using spatial modulation of magnetization. *Circulation*, **1991**, 84, 67-74	16.7	158
524	Characterization of the interstitial lung diseases via density-based and texture-based analysis of computed tomography images of lung structure and function. *Academic Radiology*, **2003**, 10, 1104-18	4.3	152

523	Evaluation of the upper airway in patients with obstructive sleep apnea. *Sleep*, **1991**, 14, 361-71	1.1	152
522	Frequency of exacerbations in patients with chronic obstructive pulmonary disease: an analysis of the SPIROMICS cohort. *Lancet Respiratory Medicine,the*, **2017**, 5, 619-626	35.1	148
521	Mass preserving nonrigid registration of CT lung images using cubic B-spline. *Medical Physics*, **2009**, 36, 4213-22	4.4	145
520	In vivo mouse studies with bioluminescence tomography. *Optics Express*, **2006**, 14, 7801-9	3.3	143
519	Accurate measurement of intrathoracic airways. *IEEE Transactions on Medical Imaging*, **1997**, 16, 820-7	11.7	142
518	Association of sputum and blood eosinophil concentrations with clinical measures of COPD severity: an analysis of the SPIROMICS cohort. *Lancet Respiratory Medicine,the*, **2017**, 5, 956-967	35.1	140
517	Measurement of three-dimensional lung tree structures by using computed tomography. *Journal of Applied Physiology*, **1995**, 79, 1687-97	3.7	140
516	CT Super-Resolution GAN Constrained by the Identical, Residual, and Cycle Learning Ensemble (GAN-CIRCLE). *IEEE Transactions on Medical Imaging*, **2020**, 39, 188-203	11.7	140
515	SPIROMICS Protocol for Multicenter Quantitative Computed Tomography to Phenotype the Lungs. *American Journal of Respiratory and Critical Care Medicine*, **2016**, 194, 794-806	10.2	132
514	Association Between Long-term Exposure to Ambient Air Pollution and Change in Quantitatively Assessed Emphysema and Lung Function. *JAMA - Journal of the American Medical Association*, **2019**, 322, 546-556	27.4	130
513	Atlas-driven lung lobe segmentation in volumetric X-ray CT images. *IEEE Transactions on Medical Imaging*, **2006**, 25, 1-16	11.7	129
512	Extraction of airways from CT (EXACT'09). *IEEE Transactions on Medical Imaging*, **2012**, 31, 2093-107	11.7	124
511	Three-dimensional human airway segmentation methods for clinical virtual bronchoscopy. *Academic Radiology*, **2002**, 9, 1153-68	4.3	124
510	Pulmonary hypertension and computed tomography measurement of small pulmonary vessels in severe emphysema. *American Journal of Respiratory and Critical Care Medicine*, **2010**, 181, 218-25	10.2	123
509	State of the Art. A structural and functional assessment of the lung via multidetector-row computed tomography: phenotyping chronic obstructive pulmonary disease. *Proceedings of the American Thoracic Society*, **2006**, 3, 519-32		123
508	Interstitial lung disease: A quantitative study using the adaptive multiple feature method. *American Journal of Respiratory and Critical Care Medicine*, **1999**, 159, 519-25	10.2	121
507	The effects of serotonin antagonists in an animal model of sleep-disordered breathing. *American Journal of Respiratory and Critical Care Medicine*, **1996**, 153, 776-86	10.2	121
506	Virtual bronchoscopy for three--dimensional pulmonary image assessment: state of the art and future needs. *Radiographics*, **1998**, 18, 761-78	5.4	119

505	A study in ventricular-ventricular interaction. Single right ventricles compared with systemic right ventricles in a dual-chamber circulation. *Circulation*, **1995**, 92, 219-30	16.7	119
504	Late ventricular geometry and performance changes of functional single ventricle throughout staged Fontan reconstruction assessed by magnetic resonance imaging. *Journal of the American College of Cardiology*, **1996**, 28, 212-21	15.1	118
503	Genetic determinants of emphysema distribution in the national emphysema treatment trial. *American Journal of Respiratory and Critical Care Medicine*, **2007**, 176, 42-8	10.2	116
502	Matching and anatomical labeling of human airway tree. *IEEE Transactions on Medical Imaging*, **2005**, 24, 1540-7	11.7	116
501	Regional deposition of particles in an image-based airway model: large-eddy simulation and left-right lung ventilation asymmetry. *Aerosol Science and Technology*, **2011**, 45, 11-25	3.4	114
500	Simulation of pulmonary air flow with a subject-specific boundary condition. *Journal of Biomechanics*, **2010**, 43, 2159-63	2.9	114
499	Computer-aided classification of interstitial lung diseases via MDCT: 3D adaptive multiple feature method (3D AMFM). *Academic Radiology*, **2006**, 13, 969-78	4.3	111
498	Quantitative analysis of pulmonary airway tree structures. *Computers in Biology and Medicine*, **2006**, 36, 974-96	7	110
497	Subclinical atherosclerosis, airflow obstruction and emphysema: the MESA Lung Study. *European Respiratory Journal*, **2012**, 39, 846-54	13.6	106
496	Pulmonary emphysema subtypes on computed tomography: the MESA COPD study. *American Journal of Medicine*, **2014**, 127, 94.e7-23	2.4	104
495	A mouse optical simulation environment (MOSE) to investigate bioluminescent phenomena in the living mouse with the Monte Carlo method. *Academic Radiology*, **2004**, 11, 1029-38	4.3	102
494	On intra- and intersubject variabilities of airflow in the human lungs. *Physics of Fluids*, **2009**, 21, 101901	4.4	101
493	Supine and prone differences in regional lung density and pleural pressure gradients in the human lung with constant shape. *Journal of Applied Physiology*, **2009**, 107, 912-20	3.7	101
492	Establishing a normative atlas of the human lung: intersubject warping and registration of volumetric CT images. *Academic Radiology*, **2003**, 10, 255-65	4.3	101
491	Quantitative computed tomography of the lungs and airways in healthy nonsmoking adults. *Investigative Radiology*, **2012**, 47, 596-602	10.1	99
490	Maximizing quantitative accuracy of lung airway lumen and wall measures obtained from X-ray CT imaging. *Journal of Applied Physiology*, **2003**, 95, 1063-75	3.7	98
489	Intestinal CFTR expression alleviates meconium ileus in cystic fibrosis pigs. *Journal of Clinical Investigation*, **2013**, 123, 2685-93	15.9	96
488	Blood eosinophil count thresholds and exacerbations in patients with chronic obstructive pulmonary disease. *Journal of Allergy and Clinical Immunology*, **2018**, 141, 2037-2047.e10	11.5	95

487	Pulmonary Microvascular Blood Flow in Mild Chronic Obstructive Pulmonary Disease and Emphysema. The MESA COPD Study. *American Journal of Respiratory and Critical Care Medicine*, **2015**, 192, 570-80	10.2	95
486	At the Root: Defining and Halting Progression of Early Chronic Obstructive Pulmonary Disease. *American Journal of Respiratory and Critical Care Medicine*, **2018**, 197, 1540-1551	10.2	94
485	Endothelial microparticles in mild chronic obstructive pulmonary disease and emphysema. The Multi-Ethnic Study of Atherosclerosis Chronic Obstructive Pulmonary Disease study. *American Journal of Respiratory and Critical Care Medicine*, **2013**, 188, 60-8	10.2	92
484	Assessment of the pulmonary structure-function relationship and clinical outcomes measures: quantitative volumetric CT of the lung. *Academic Radiology*, **1997**, 4, 758-76	4.3	90
483	Validation of in vivo myocardial strain measurement by magnetic resonance tagging with sonomicrometry. *Journal of the American College of Cardiology*, **2001**, 38, 555-61	15.1	90
482	Long-residence-time nano-scale liposomal iohexol for X-ray-based blood pool imaging. *Academic Radiology*, **2003**, 10, 475-83	4.3	89
481	Genome-wide association study identifies BICD1 as a susceptibility gene for emphysema. *American Journal of Respiratory and Critical Care Medicine*, **2011**, 183, 43-9	10.2	88
480	Comparison of spatially matched airways reveals thinner airway walls in COPD. The Multi-Ethnic Study of Atherosclerosis (MESA) COPD Study and the Subpopulations and Intermediate Outcomes in COPD Study (SPIROMICS). *Thorax*, **2014**, 69, 987-96	7.3	86
479	CT-measured regional specific volume change reflects regional ventilation in supine sheep. *Journal of Applied Physiology*, **2008**, 104, 1177-84	3.7	85
478	Pulmonary perfused blood volume with dual-energy CT as surrogate for pulmonary perfusion assessed with dynamic multidetector CT. *Radiology*, **2013**, 267, 747-56	20.5	83
477	Subsecond multisection CT of regional pulmonary ventilation. *Academic Radiology*, **2002**, 9, 130-46	4.3	82
476	Assessment of morphometry of pulmonary acini in mouse lungs by nondestructive imaging using multiscale microcomputed tomography. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 17105-10	11.5	81
475	Mechanics of the single left ventricle: a study in ventricular-ventricular interaction II. *Circulation*, **1998**, 98, 330-8	16.7	81
474	Very low-dose (0.15 mGy) chest CT protocols using the COPDGene 2 test object and a third-generation dual-source CT scanner with corresponding third-generation iterative reconstruction software. *Investigative Radiology*, **2015**, 50, 40-5	10.1	80
473	The effects of geometry on airflow in the acinar region of the human lung. *Journal of Biomechanics*, **2009**, 42, 1635-42	2.9	80
472	Lung imaging in asthmatic patients: the picture is clearer. *Journal of Allergy and Clinical Immunology* , **2011**, 128, 467-78	11.5	79
471	Rule-based detection of intrathoracic airway trees. *IEEE Transactions on Medical Imaging*, **1996**, 15, 314-26	11.7	79
470	CT metrics of airway disease and emphysema in severe COPD. *Chest*, **2009**, 136, 396-404	5.3	78

469	Genome-wide study of percent emphysema on computed tomography in the general population. The Multi-Ethnic Study of Atherosclerosis Lung/SNP Health Association Resource Study. *American Journal of Respiratory and Critical Care Medicine*, **2014**, 189, 408-18	10.2	77
468	Variation in the percent of emphysema-like lung in a healthy, nonsmoking multiethnic sample. The MESA lung study. *Annals of the American Thoracic Society*, **2014**, 11, 898-907	4.7	77
467	A multiscale MDCT image-based breathing lung model with time-varying regional ventilation. *Journal of Computational Physics*, **2013**, 244, 168-192	4.1	76
466	Segmentation of intrathoracic airway trees: a fuzzy logic approach. *IEEE Transactions on Medical Imaging*, **1998**, 17, 489-97	11.7	76
465	Heterogeneity of pulmonary perfusion as a mechanistic image-based phenotype in emphysema susceptible smokers. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 7485-90	11.5	75
464	The Lung Image Database Consortium (LIDC): an evaluation of radiologist variability in the identification of lung nodules on CT scans. *Academic Radiology*, **2007**, 14, 1409-21	4.3	74
463	High attenuation areas on chest computed tomography in community-dwelling adults: the MESA study. *European Respiratory Journal*, **2016**, 48, 1442-1452	13.6	74
462	Infection Is Not Required for Mucoinflammatory Lung Disease in CFTR-Knockout Ferrets. *American Journal of Respiratory and Critical Care Medicine*, **2018**, 197, 1308-1318	10.2	73
461	Reproducibility and validity of lung density measures from cardiac CT Scans--The Multi-Ethnic Study of Atherosclerosis (MESA) Lung Study. *Academic Radiology*, **2009**, 16, 689-99	4.3	73
460	Three-dimensional path planning for virtual bronchoscopy. *IEEE Transactions on Medical Imaging*, **2004**, 23, 1365-79	11.7	72
459	Vocal tract area functions for an adult female speaker based on volumetric imaging. *Journal of the Acoustical Society of America*, **1998**, 104, 471-87	2.2	70
458	Computational fluid dynamics. *IEEE Engineering in Medicine and Biology Magazine*, **2009**, 28, 25-33		69
457	Can retinoic acid ameliorate the physiologic and morphologic effects of elastase instillation in the rat?. *Chest*, **2000**, 117, 242S-4S	5.3	69
456	Idiopathic Pulmonary Fibrosis: The Association between the Adaptive Multiple Features Method and Fibrosis Outcomes. *American Journal of Respiratory and Critical Care Medicine*, **2017**, 195, 921-929	10.2	68
455	The relationship of vocal tract shape to three voice qualities. *Journal of the Acoustical Society of America*, **2001**, 109, 1651-67	2.2	68
454	Parametric response mapping monitors temporal changes on lung CT scans in the subpopulations and intermediate outcome measures in COPD Study (SPIROMICS). *Academic Radiology*, **2015**, 22, 186-94	4.3	67
453	Impaired left ventricular filling in COPD and emphysema: is it the heart or the lungs? The Multi-Ethnic Study of Atherosclerosis COPD Study. *Chest*, **2013**, 144, 1143-1151	5.3	67
452	The Role of Chest Computed Tomography in the Evaluation and Management of the Patient with Chronic Obstructive Pulmonary Disease. *American Journal of Respiratory and Critical Care Medicine*, **2017**, 196, 1372-1379	10.2	65

451	Statistical interior tomography. *IEEE Transactions on Medical Imaging*, **2011**, 30, 1116-28	11.7	65
450	Common Genetic Polymorphisms Influence Blood Biomarker Measurements in COPD. *PLoS Genetics* , **2016**, 12, e1006011	6	64
449	Cor pulmonale parvus in chronic obstructive pulmonary disease and emphysema: the MESA COPD study. *Journal of the American College of Cardiology*, **2014**, 64, 2000-9	15.1	63
448	Pulmonary hyperinflation and left ventricular mass: the Multi-Ethnic Study of Atherosclerosis COPD Study. *Circulation*, **2013**, 127, 1503-11, 1511e1-6	16.7	63
447	Computed tomographic-based quantification of emphysema and correlation to pulmonary function and mechanics. *COPD: Journal of Chronic Obstructive Pulmonary Disease*, **2008**, 5, 177-86	2	62
446	Association between emphysema-like lung on cardiac computed tomography and mortality in persons without airflow obstruction: a cohort study. *Annals of Internal Medicine*, **2014**, 161, 863-73	8	61
445	Airway wall stiffening increases peak wall shear stress: a fluid-structure interaction study in rigid and compliant airways. *Annals of Biomedical Engineering*, **2010**, 38, 1836-53	4.7	61
444	Cluster analysis in severe emphysema subjects using phenotype and genotype data: an exploratory investigation. *Respiratory Research*, **2010**, 11, 30	7.3	61
443	Differences in regional wash-in and wash-out time constants for xenon-CT ventilation studies. *Respiratory Physiology and Neurobiology*, **2005**, 148, 65-83	2.8	61
442	COPDGene 2019: Redefining the Diagnosis of Chronic Obstructive Pulmonary Disease. *Chronic Obstructive Pulmonary Diseases (Miami, Fla)*, **2019**, 6, 384-399	2.7	61
441	Quantitative Dual-Energy Computed Tomography Supports a Vascular Etiology of Smoking-induced Inflammatory Lung Disease. *American Journal of Respiratory and Critical Care Medicine*, **2016**, 193, 652-61	10.2	60
440	Evaluation of lung MDCT nodule annotation across radiologists and methods. *Academic Radiology*, **2006**, 13, 1254-65	4.3	60
439	Quantitative computed tomographic imaging-based clustering differentiates asthmatic subgroups with distinctive clinical phenotypes. *Journal of Allergy and Clinical Immunology*, **2017**, 140, 690-700.e8	11.5	59
438	Longitudinal Phenotypes and Mortality in Preserved Ratio Impaired Spirometry in the COPDGene Study. *American Journal of Respiratory and Critical Care Medicine*, **2018**, 198, 1397-1405	10.2	59
437	Registration-based assessment of regional lung function via volumetric CT images of normal subjects vs. severe asthmatics. *Journal of Applied Physiology*, **2013**, 115, 730-42	3.7	58
436	Percent emphysema and right ventricular structure and function: the Multi-Ethnic Study of Atherosclerosis-Lung and Multi-Ethnic Study of Atherosclerosis-Right Ventricle Studies. *Chest*, **2013** , 144, 136-144	5.3	58
435	Segmentation and quantitative analysis of intrathoracic airway trees from computed tomography images. *Proceedings of the American Thoracic Society*, **2005**, 2, 484-7, 503-4		58
434	Lung structure phenotype variation in inbred mouse strains revealed through in vivo micro-CT imaging. *Journal of Applied Physiology*, **2010**, 109, 1960-8	3.7	57

433	Matching pulmonary structure and perfusion via combined dynamic multislice CT and thin-slice high-resolution CT. *Computerized Medical Imaging and Graphics*, **1995**, 19, 101-12	7.6	54
432	Human airway branch variation and chronic obstructive pulmonary disease. *Proceedings of the National Academy of Sciences of the United States of America*, **2018**, 115, E974-E981	11.5	53
431	Multiscale image-based modeling and simulation of gas flow and particle transport in the human lungs. *Wiley Interdisciplinary Reviews: Systems Biology and Medicine*, **2013**, 5, 643-55	6.6	53
430	Numerical study of high-frequency oscillatory air flow and convective mixing in a CT-based human airway model. *Annals of Biomedical Engineering*, **2010**, 38, 3550-71	4.7	53
429	Ultra-low dose lung CT perfusion regularized by a previous scan. *Academic Radiology*, **2009**, 16, 363-73	4.3	52
428	Functional imaging: CT and MRI. *Clinics in Chest Medicine*, **2008**, 29, 195-216, vii	5.3	52
427	The comprehensive imaging-based analysis of the lung: a forum for team science. *Academic Radiology*, **2004**, 11, 1370-80	4.3	52
426	Imaging Advances in Chronic Obstructive Pulmonary Disease. Insights from the Genetic Epidemiology of Chronic Obstructive Pulmonary Disease (COPDGene) Study. *American Journal of Respiratory and Critical Care Medicine*, **2019**, 199, 286-301	10.2	52
425	Air pollution and subclinical interstitial lung disease: the Multi-Ethnic Study of Atherosclerosis (MESA) air-lung study. *European Respiratory Journal*, **2017**, 50,	13.6	51
424	Computed tomography studies of lung ventilation and perfusion. *Proceedings of the American Thoracic Society*, **2005**, 2, 492-8, 506		51
423	Assessing mucociliary transport of single particles in vivo shows variable speed and preference for the ventral trachea in newborn pigs. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 2355-60	11.5	50
422	CT-based assessment of regional pulmonary microvascular blood flow parameters. *Journal of Applied Physiology*, **2003**, 94, 2483-93	3.7	50
421	Development of quantitative computed tomography lung protocols. *Journal of Thoracic Imaging*, **2013**, 28, 266-71	5.6	49
420	Association of COPD candidate genes with computed tomography emphysema and airway phenotypes in severe COPD. *European Respiratory Journal*, **2011**, 37, 39-43	13.6	49
419	Short-term hypoxic exposure at rest and during exercise reduces lung water in healthy humans. *Journal of Applied Physiology*, **2006**, 101, 1623-32	3.7	49
418	Pulmonary CT and MRI phenotypes that help explain chronic pulmonary obstruction disease pathophysiology and outcomes. *Journal of Magnetic Resonance Imaging*, **2016**, 43, 544-57	5.6	49
417	The interdependent contributions of gravitational and structural features to perfusion distribution in a multiscale model of the pulmonary circulation. *Journal of Applied Physiology*, **2011**, 110, 943-55	3.7	47
416	Air trapping and airflow obstruction in newborn cystic fibrosis piglets. *American Journal of Respiratory and Critical Care Medicine*, **2013**, 188, 1434-41	10.2	46

415	Comparison of spirometric thresholds in diagnosing smoking-related airflow obstruction. *Thorax*, **2014**, 69, 409-14	7.3	45
414	Comparison of image registration based measures of regional lung ventilation from dynamic spiral CT with Xe-CT. *Medical Physics*, **2012**, 39, 5084-98	4.4	45
413	Topomorphologic separation of fused isointensity objects via multiscale opening: separating arteries and veins in 3-D pulmonary CT. *IEEE Transactions on Medical Imaging*, **2010**, 29, 840-51	11.7	45
412	Shape and dimensions of cardiac chambers: importance of CT section thickness and orientation. *Radiology*, **1985**, 155, 739-44	20.5	45
411	Quantitative assessment of multiscale structural and functional alterations in asthmatic populations. *Journal of Applied Physiology*, **2015**, 118, 1286-98	3.7	44
410	Age and Small Airway Imaging Abnormalities in Subjects with and without Airflow Obstruction in SPIROMICS. *American Journal of Respiratory and Critical Care Medicine*, **2017**, 195, 464-472	10.2	44
409	Reference standard and statistical model for intersite and temporal comparisons of CT attenuation in a multicenter quantitative lung study. *Medical Physics*, **2012**, 39, 5757-67	4.4	44
408	Per cent emphysema is associated with respiratory and lung cancer mortality in the general population: a cohort study. *Thorax*, **2016**, 71, 624-32	7.3	44
407	Rheumatoid arthritis-associated autoantibodies and subclinical interstitial lung disease: the Multi-Ethnic Study of Atherosclerosis. *Thorax*, **2016**, 71, 1082-1090	7.3	43
406	Association Between Expiratory Central Airway Collapse and Respiratory Outcomes Among Smokers. *JAMA - Journal of the American Medical Association*, **2016**, 315, 498-505	27.4	42
405	Effect of carrier gas properties on aerosol distribution in a CT-based human airway numerical model. *Annals of Biomedical Engineering*, **2012**, 40, 1495-507	4.7	42
404	Segmentation of Pulmonary Vascular Trees from Thoracic 3D CT Images. *International Journal of Biomedical Imaging*, **2009**, 2009, 636240	5.2	42
403	Effect of low-xenon and krypton supplementation on signal/noise of regional CT-based ventilation measurements. *Journal of Applied Physiology*, **2007**, 102, 1535-44	3.7	42
402	High-Attenuation Areas on Chest Computed Tomography and Clinical Respiratory Outcomes in Community-Dwelling Adults. *American Journal of Respiratory and Critical Care Medicine*, **2017**, 196, 1434-1442	10.2	41
401	Measurement of renal perfusion and blood flow with fast computed tomography. *Circulation Research*, **1994**, 74, 945-51	15.7	41
400	Computed Tomography Measure of Lung at Risk and Lung Function Decline in Chronic Obstructive Pulmonary Disease. *American Journal of Respiratory and Critical Care Medicine*, **2017**, 196, 569-576	10.2	40
399	Stereological assessment of mouse lung parenchyma via nondestructive, multiscale micro-CT imaging validated by light microscopic histology. *Journal of Applied Physiology*, **2013**, 114, 716-24	3.7	39
398	Association of environmental tobacco smoke exposure in childhood with early emphysema in adulthood among nonsmokers: the MESA-lung study. *American Journal of Epidemiology*, **2010**, 171, 54-62	3.8	39

397	Assessment of regional ventilation and deformation using 4D-CT imaging for healthy human lungs during tidal breathing. *Journal of Applied Physiology*, **2015**, 119, 1064-74	3.7	38
396	Physiological and computed tomographic predictors of outcome from lung volume reduction surgery. *American Journal of Respiratory and Critical Care Medicine*, **2010**, 181, 494-500	10.2	38
395	A cubic B-spline-based hybrid registration of lung CT images for a dynamic airway geometric model with large deformation. *Physics in Medicine and Biology*, **2011**, 56, 203-18	3.8	38
394	Genetic variation of the beta2-adrenergic receptor is associated with differences in lung fluid accumulation in humans. *Journal of Applied Physiology*, **2007**, 102, 2172-8	3.7	38
393	Pulmonary fibrosis 4 months after COVID-19 is associated with severity of illness and blood leucocyte telomere length. *Thorax*, **2021**, 76, 1242-1245	7.3	38
392	A Robust and Efficient Curve Skeletonization Algorithm for Tree-Like Objects Using Minimum Cost Paths. *Pattern Recognition Letters*, **2016**, 76, 32-40	4.7	37
391	Genetic Association and Risk Scores in a Chronic Obstructive Pulmonary Disease Meta-analysis of 16,707 Subjects. *American Journal of Respiratory Cell and Molecular Biology*, **2017**, 57, 35-46	5.7	37
390	Automated segmentation of pulmonary vascular tree from 3D CT images **2004**,		37
389	Using imaging as a biomarker for asthma. *Journal of Allergy and Clinical Immunology*, **2017**, 139, 1-10	11.5	35
388	Machine learning approach for distinguishing malignant and benign lung nodules utilizing standardized perinodular parenchymal features from CT. *Medical Physics*, **2019**, 46, 3207-3216	4.4	35
387	Pulmonary vascular volume, impaired left ventricular filling and dyspnea: The MESA Lung Study. *PLoS ONE*, **2017**, 12, e0176180	3.7	35
386	Registration-based lung mechanical analysis of chronic obstructive pulmonary disease (COPD) using a supervised machine learning framework. *Academic Radiology*, **2013**, 20, 527-36	4.3	35
385	A numerical study of heat and water vapor transfer in MDCT-based human airway models. *Annals of Biomedical Engineering*, **2014**, 42, 2117-31	4.7	35
384	Prevalence and clinical correlates of bronchoreversibility in severe emphysema. *European Respiratory Journal*, **2010**, 35, 1048-56	13.6	35
383	Characteristics of airflow in a CT-based ovine lung: a numerical study. *Journal of Applied Physiology*, **2007**, 102, 1469-82	3.7	35
382	Regional pulmonary blood flow in dogs by 4D-X-ray CT. *Journal of Applied Physiology*, **2006**, 101, 1451-65	3.7	35
381	VIDA: an environment for multidimensional image display and analysis **1992**, 1660, 694		35
380	Association of Dysanapsis With Chronic Obstructive Pulmonary Disease Among Older Adults. *JAMA - Journal of the American Medical Association*, **2020**, 323, 2268-2280	27.4	34

379	Optimized murine lung preparation for detailed structural evaluation via micro-computed tomography. *Journal of Applied Physiology*, **2012**, 112, 159-66	3.7	34
378	Quantitative and semiquantitative measures of regional pulmonary microvascular perfusion by magnetic resonance imaging and their relationships to global lung perfusion and lung diffusing capacity: the multiethnic study of atherosclerosis chronic obstructive pulmonary disease study. *Investigative Radiology*, **2013**, 48, 223-30	10.1	34
377	The lung physiome: merging imaging-based measures with predictive computational models. *Wiley Interdisciplinary Reviews: Systems Biology and Medicine*, **2009**, 1, 61-72	6.6	34
376	Advanced emphysema in African-American and white patients: do differences exist?. *Chest*, **2006**, 130, 108-18	5.3	34
375	Automatic axis generation for virtual bronchoscopic assessment of major airway obstructions. *Computerized Medical Imaging and Graphics*, **2002**, 26, 103-18	7.6	34
374	Longitudinal changes in airway remodeling and air trapping in severe asthma. *Academic Radiology*, **2014**, 21, 986-93	4.3	33
373	Comparison of low- and ultralow-dose computed tomography protocols for quantitative lung and airway assessment. *Medical Physics*, **2017**, 44, 4747-4757	4.4	33
372	Assessment of regional non-linear tissue deformation and air volume change of human lungs via image registration. *Journal of Biomechanics*, **2014**, 47, 1626-33	2.9	33
371	Multiscale imaging and registration-driven model for pulmonary acinar mechanics in the mouse. *Journal of Applied Physiology*, **2013**, 114, 971-8	3.7	33
370	Heart-lung interaction: effect on regional lung air content and total heart volume. *Annals of Biomedical Engineering*, **1987**, 15, 241-57	4.7	33
369	Improved CT-based estimate of pulmonary gas trapping accounting for scanner and lung-volume variations in a multicenter asthmatic study. *Journal of Applied Physiology*, **2014**, 117, 593-603	3.7	32
368	Perfusion scintigraphy and patient selection for lung volume reduction surgery. *American Journal of Respiratory and Critical Care Medicine*, **2010**, 182, 937-46	10.2	32
367	Obstructive Sleep Apnea and Subclinical Interstitial Lung Disease in the Multi-Ethnic Study of Atherosclerosis (MESA). *Annals of the American Thoracic Society*, **2017**, 14, 1786-1795	4.7	31
366	Improved pulmonary nodule classification utilizing quantitative lung parenchyma features. *Journal of Medical Imaging*, **2015**, 2, 041004	2.6	31
365	Three-dimensional vocal tract imaging and formant structure: varying vocal register, pitch, and loudness. *Journal of the Acoustical Society of America*, **2001**, 109, 742-7	2.2	31
364	Angiotensin-Converting Inhibitors and Angiotensin II Receptor Blockers and Longitudinal Change in Percent Emphysema on Computed Tomography. The Multi-Ethnic Study of Atherosclerosis Lung Study. *Annals of the American Thoracic Society*, **2017**, 14, 649-658	4.7	29
363	Voxel-Wise Longitudinal Parametric Response Mapping Analysis of Chest Computed Tomography in Smokers. *Academic Radiology*, **2019**, 26, 217-223	4.3	29
362	APOM and high-density lipoprotein cholesterol are associated with lung function and per cent emphysema. *European Respiratory Journal*, **2014**, 43, 1003-17	13.6	29

361	An imaging-based computational approach to model ventilation distribution and soft-tissue deformation in the ovine lung. *Academic Radiology*, **2006**, 13, 113-20	4.3	29
360	Pruning of the Pulmonary Vasculature in Asthma. The Severe Asthma Research Program (SARP) Cohort. *American Journal of Respiratory and Critical Care Medicine*, **2018**, 198, 39-50	10.2	28
359	Occupational Exposures and Subclinical Interstitial Lung Disease. The MESA (Multi-Ethnic Study of Atherosclerosis) Air and Lung Studies. *American Journal of Respiratory and Critical Care Medicine*, **2017**, 196, 1031-1039	10.2	28
358	Segmentation of pathological and diseased lung tissue in CT images using a graph-search algorithm **2011**,		28
357	Racial differences in CT phenotypes in COPD. *COPD: Journal of Chronic Obstructive Pulmonary Disease*, **2013**, 10, 20-7	2	27
356	Lung growth in infants and toddlers assessed by multi-slice computed tomography. *Academic Radiology*, **2010**, 17, 1128-35	4.3	27
355	Steady streaming: A key mixing mechanism in low-Reynolds-number acinar flows. *Physics of Fluids*, **2011**, 23, 41902	4.4	27
354	Longitudinal assessment of lung cancer progression in the mouse using in vivo micro-CT imaging. *Medical Physics*, **2010**, 37, 4793-805	4.4	27
353	Imaging of pulmonary embolism and t-PA therapy effects using MDCT and liposomal iohexol blood pool agent: preliminary results in a rabbit model. *Academic Radiology*, **2007**, 14, 355-62	4.3	27
352	Mechanism of hypoxemia in acute lung injury evaluated by multidetector-row CT. *Academic Radiology*, **2006**, 13, 916-21	4.3	27
351	Biomechanical CT metrics are associated with patient outcomes in COPD. *Thorax*, **2017**, 72, 409-414	7.3	26
350	Genetic ancestry and the relationship of cigarette smoking to lung function and per cent emphysema in four race/ethnic groups: a cross-sectional study. *Thorax*, **2013**, 68, 634-642	7.3	26
349	Quantification of ventilation distribution in regional lung injury by electrical impedance tomography and xenon computed tomography. *Physiological Measurement*, **2013**, 34, 1303-18	2.9	26
348	Investigation of hyperpolarized 3He magnetic resonance imaging utility in examining human airway diameter behavior in asthma through comparison with high-resolution computed tomography. *Academic Radiology*, **2008**, 15, 799-808	4.3	26
347	Radiographic evaluation of the potential lung volume reduction surgery candidate. *Proceedings of the American Thoracic Society*, **2008**, 5, 421-6		26
346	Serum Matrix Metalloproteinase-7, Respiratory Symptoms, and Mortality in Community-Dwelling Adults. MESA (Multi-Ethnic Study of Atherosclerosis). *American Journal of Respiratory and Critical Care Medicine*, **2017**, 196, 1311-1317	10.2	25
345	Effect of static vs. dynamic imaging on particle transport in CT-based numerical models of human central airways. *Journal of Aerosol Science*, **2016**, 100, 129-139	4.3	25
344	Recent Advances in Computed Tomography Imaging in Chronic Obstructive Pulmonary Disease. *Annals of the American Thoracic Society*, **2018**, 15, 281-289	4.7	24

343	Systems for lung volume standardization during static and dynamic MDCT-based quantitative assessment of pulmonary structure and function. *Academic Radiology*, **2012**, 19, 930-40	4.3	24
342	Optimal graph search based segmentation of airway tree double surfaces across bifurcations. *IEEE Transactions on Medical Imaging*, **2013**, 32, 493-510	11.7	24
341	Quantitative assessment of chronic lung disease of infancy using computed tomography. *European Respiratory Journal*, **2012**, 39, 992-9	13.6	24
340	Lung volumes and distribution of regional air content determined by cine X-ray CT of pneumonectomized rabbits. *Journal of Applied Physiology*, **1994**, 76, 1774-85	3.7	24
339	Evaluation of congenital heart disease with MR imaging: current and coming attractions. *American Journal of Roentgenology*, **1992**, 159, 925-31	5.4	24
338	Magnetic resonance imaging of constant total heart volume and center of mass in patients with functional single ventricle before and after staged Fontan procedure. *American Journal of Cardiology*, **1993**, 72, 1435-43	3	24
337	Five-year Progression of Emphysema and Air Trapping at CT in Smokers with and Those without Chronic Obstructive Pulmonary Disease: Results from the COPDGene Study. *Radiology*, **2020**, 295, 218-226	20.5	24
336	Acute administration of ivacaftor to people with cystic fibrosis and a mutation reveals smooth muscle abnormalities. *JCI Insight*, **2016**, 1, e86183	9.9	24
335	Association of Long-term Ambient Ozone Exposure With Respiratory Morbidity in Smokers. *JAMA Internal Medicine*, **2020**, 180, 106-115	11.5	24
334	A 4DCT imaging-based breathing lung model with relative hysteresis. *Journal of Computational Physics*, **2016**, 326, 76-90	4.1	24
333	Quantitative imaging of peripheral trabecular bone microarchitecture using MDCT. *Medical Physics*, **2018**, 45, 236-249	4.4	23
332	Lobar Emphysema Distribution Is Associated With 5-Year Radiological Disease Progression. *Chest*, **2018**, 153, 65-76	5.3	23
331	Optimization of dual-energy xenon-computed tomography for quantitative assessment of regional pulmonary ventilation. *Investigative Radiology*, **2013**, 48, 629-37	10.1	23
330	Changes in lung composition and regional perfusion and tissue distribution in patients with ARDS. *Respirology*, **2011**, 16, 1265-72	3.6	23
329	Spatial variation of resolution and noise in multi-detector row spiral CT. *Academic Radiology*, **2003**, 10, 607-13	4.3	23
328	A Genetic Risk Score Associated with Chronic Obstructive Pulmonary Disease Susceptibility and Lung Structure on Computed Tomography. *American Journal of Respiratory and Critical Care Medicine*, **2019**, 200, 721-731	10.2	22
327	Cigarette smoking and airway wall thickness on CT scan in a multi-ethnic cohort: the MESA Lung Study. *Respiratory Medicine*, **2012**, 106, 1655-64	4.6	22
326	Respiratory Symptoms Items from the COPD Assessment Test Identify Ever-Smokers with Preserved Lung Function at Higher Risk for Poor Respiratory Outcomes. An Analysis of the Subpopulations and Intermediate Outcome Measures in COPD Study Cohort. *Annals of the American Thoracic Society*, **2017**, 14, 636-642	4.7	21

325	A genome-wide analysis of the response to inhaled β-agonists in chronic obstructive pulmonary disease. *Pharmacogenomics Journal*, **2016**, 16, 326-35	3.5	21
324	Early airway structural changes in cystic fibrosis pigs as a determinant of particle distribution and deposition. *Annals of Biomedical Engineering*, **2014**, 42, 915-27	4.7	21
323	Asthma and lung structure on computed tomography: the Multi-Ethnic Study of Atherosclerosis Lung Study. *Journal of Allergy and Clinical Immunology*, **2013**, 131, 361-8.e1-11	11.5	21
322	Automatic construction of subject-specific human airway geometry including trifurcations based on a CT-segmented airway skeleton and surface. *Biomechanics and Modeling in Mechanobiology*, **2017**, 16, 583-596	3.8	21
321	Species-specific pulmonary arterial asymmetry determines species differences in regional pulmonary perfusion. *Annals of Biomedical Engineering*, **2009**, 37, 2497-509	4.7	21
320	A new paradigm of interactive artery/vein separation in noncontrast pulmonary CT imaging using multiscale topomorphologic opening. *IEEE Transactions on Biomedical Engineering*, **2012**, 59, 3016-27	5	21
319	Pulmonary CT image registration and warping for tracking tissue deformation during the respiratory cycle through 3D consistent image registration. *Medical Physics*, **2008**, 35, 5575-83	4.4	21
318	The effect of maxillary sinus antrostomy size on xenon ventilation in the sheep model. *Otolaryngology - Head and Neck Surgery*, **2004**, 131, 528-33	5.5	21
317	Numerical simulations of aerosol delivery to the human lung with an idealized laryngeal model, image-based airway model, and automatic meshing algorithm. *Computers and Fluids*, **2017**, 148, 1-9	2.8	20
316	Adaptive quantification and longitudinal analysis of pulmonary emphysema with a hidden Markov measure field model. *IEEE Transactions on Medical Imaging*, **2014**, 33, 1527-40	11.7	20
315	Differentiation of quantitative CT imaging phenotypes in asthma versus COPD. *BMJ Open Respiratory Research*, **2017**, 4, e000252	5.6	20
314	Xenon-enhanced CT imaging of local pulmonary ventilation **1996**, 2709, 40		20
313	Disease Progression Modeling in Chronic Obstructive Pulmonary Disease. *American Journal of Respiratory and Critical Care Medicine*, **2020**, 201, 294-302	10.2	20
312	Airway mucin MUC5AC and MUC5B concentrations and the initiation and progression of chronic obstructive pulmonary disease: an analysis of the SPIROMICS cohort. *Lancet Respiratory Medicine,the*, **2021**, 9, 1241-1254	35.1	20
311	The St. George's Respiratory Questionnaire Definition of Chronic Bronchitis May Be a Better Predictor of COPD Exacerbations Compared With the Classic Definition. *Chest*, **2019**, 156, 685-695	5.3	19
310	Genome-wide association study of lung function and clinical implication in heavy smokers. *BMC Medical Genetics*, **2018**, 19, 134	2.1	19
309	Scout-view assisted interior micro-CT. *Physics in Medicine and Biology*, **2013**, 58, 4297-314	3.8	19
308	Intercellular adhesion molecule 1 and progression of percent emphysema: the MESA Lung Study. *Respiratory Medicine*, **2015**, 109, 255-64	4.6	19

307	Relating indices of inert gas washout to localised bronchoconstriction. *Respiratory Physiology and Neurobiology*, **2012**, 183, 224-33	2.8	19
306	Regional aeration and perfusion distribution in a sheep model of endotoxemic acute lung injury characterized by functional computed tomography imaging. *Critical Care Medicine*, **2009**, 37, 2402-11	1.4	19
305	Lung lobe segmentation by graph search with 3D shape constraints **2001**,		19
304	A method for measurement of cross sectional area, segment length, and branching angle of airway tree structures in situ. *Computerized Medical Imaging and Graphics*, **1995**, 19, 145-52	7.6	19
303	Mucus strands from submucosal glands initiate mucociliary transport of large particles. *JCI Insight*, **2019**, 4,	9.9	19
302	Airway fractal dimension predicts respiratory morbidity and mortality in COPD. *Journal of Clinical Investigation*, **2018**, 128, 5374-5382	15.9	19
301	Endothelial progenitor cells in chronic obstructive pulmonary disease and emphysema. *PLoS ONE*, **2017**, 12, e0173446	3.7	19
300	Registration-derived estimates of local lung expansion as surrogates for regional ventilation. *Information Processing in Medical Imaging*, **2007**, 20, 763-74		19
299	Alignment of Inhaled Chronic Obstructive Pulmonary Disease Therapies with Published Strategies. Analysis of the Global Initiative for Chronic Obstructive Lung Disease Recommendations in SPIROMICS. *Annals of the American Thoracic Society*, **2019**, 16, 200-208	4.7	19
298	Combined Forced Expiratory Volume in 1 Second and Forced Vital Capacity Bronchodilator Response, Exacerbations, and Mortality in Chronic Obstructive Pulmonary Disease. *Annals of the American Thoracic Society*, **2019**, 16, 826-835	4.7	18
297	Not all measures of hyperinflation are created equal: lung structure and clinical correlates of gas trapping and hyperexpansion in COPD: the Multi-Ethnic Study of Atherosclerosis (MESA) COPD Study. *Chest*, **2014**, 145, 1305-1315	5.3	18
296	Signs of Gas Trapping in Normal Lung Density Regions in Smokers. *American Journal of Respiratory and Critical Care Medicine*, **2017**, 196, 1404-1410	10.2	18
295	Rapid prototyping raw models on the basis of high resolution computed tomography lung data for respiratory flow dynamics. *Academic Radiology*, **2009**, 16, 495-8	4.3	18
294	The Dynamic Spatial Reconstructor: investigating congenital heart disease in four dimensions. *CardioVascular and Interventional Radiology*, **1984**, 7, 124-39	2.7	18
293	The association of systemic microvascular changes with lung function and lung density: a cross-sectional study. *PLoS ONE*, **2012**, 7, e50224	3.7	18
292	Machine Learning Characterization of COPD Subtypes: Insights From the COPDGene Study. *Chest*, **2020**, 157, 1147-1157	5.3	18
291	Imaging of COVID-19 pneumonia: Patterns, pathogenesis, and advances. *British Journal of Radiology*, **2020**, 93, 20200538	3.4	18
290	Air pollution and percent emphysema identified by computed tomography in the Multi-Ethnic study of Atherosclerosis. *Environmental Health Perspectives*, **2015**, 123, 144-51	8.4	17

289	Multiscale Opening of Conjoined Fuzzy Objects: Theory and Applications. *IEEE Transactions on Fuzzy Systems*, **2016**, 24, 1121-1133	8.3	17
288	Plasma sphingomyelin and longitudinal change in percent emphysema on CT. The MESA lung study. *Biomarkers*, **2014**, 19, 207-13	2.6	17
287	Establishing a normative atlas of the human lung: computing the average transformation and atlas construction. *Academic Radiology*, **2012**, 19, 1368-81	4.3	17
286	High-resolution CT vascular imaging using blood pool contrast agents. *Methodist DeBakey Cardiovascular Journal*, **2012**, 8, 18-22	2.1	17
285	Computational models of structure-function relationships in the pulmonary circulation and their validation. *Experimental Physiology*, **2006**, 91, 285-93	2.4	17
284	Use of 3-dimensional computed tomography reconstruction studies in the preoperative assessment of patients undergoing balloon dilatation for tracheobronchial stenosis. *Respiration*, **2005**, 72, 579-86	3.7	17
283	Measurement of three-dimensional anatomy and function of pulmonary arteries with high-speed x-ray computed tomography. *Investigative Radiology*, **1987**, 22, 28-36	10.1	17
282	Three-dimensional cardiac anatomy and function in heart disease in adults: initial results with the dynamic spatial reconstructor. *Mayo Clinic Proceedings*, **1985**, 60, 383-92	6.4	17
281	Evaluation of lobar biomechanics during respiration using image registration. *Lecture Notes in Computer Science*, **2009**, 12, 739-46	0.9	17
280	The Effects of Rare Variants on Lung Function and Emphysema in SPIROMICS. *American Journal of Respiratory and Critical Care Medicine*, **2020**, 201, 540-554	10.2	17
279	CT-derived Biomechanical Metrics Improve Agreement Between Spirometry and Emphysema. *Academic Radiology*, **2016**, 23, 1255-63	4.3	17
278	A Longitudinal Cohort Study of Aspirin Use and Progression of Emphysema-like Lung Characteristics on CT Imaging: The MESA Lung Study. *Chest*, **2018**, 154, 41-50	5.3	16
277	Rural Residence and Chronic Obstructive Pulmonary Disease Exacerbations. Analysis of the SPIROMICS Cohort. *Annals of the American Thoracic Society*, **2018**, 15, 808-816	4.7	16
276	Anemia and Adverse Outcomes in a Chronic Obstructive Pulmonary Disease Population with a High Burden of Comorbidities. An Analysis from SPIROMICS. *Annals of the American Thoracic Society*, **2018**, 15, 710-717	4.7	16
275	Effect of lung inflation level on hyperpolarized 3He apparent diffusion coefficient measurements in never-smokers. *Radiology*, **2013**, 268, 572-80	20.5	16
274	Evaluation of the human airway with multi-detector x-ray-computed tomography and optical imaging. *Physiological Measurement*, **2004**, 25, 837-47	2.9	16
273	Virtual bronchoscopic approach for combining 3D CT and endoscopic video **2000**,		16
272	Microemboli reduce phase III slopes of CO2 and invert phase III slopes of infused SF6. *Respiration Physiology*, **1993**, 91, 137-54		16

271	Dynamic volume imaging of moving organs. *Journal of Medical Systems*, **1982**, 6, 539-54	5.1	16
270	Cholesterol, lipoproteins and subclinical interstitial lung disease: the MESA study. *Thorax*, **2017**, 72, 472-474	7.3	15
269	The role of dual-energy computed tomography in the assessment of pulmonary function. *European Journal of Radiology*, **2017**, 86, 320-334	4.7	15
268	A four-dimensional computed tomography comparison of healthy and asthmatic human lungs. *Journal of Biomechanics*, **2017**, 56, 102-110	2.9	15
267	Association between Emphysema and Chronic Obstructive Pulmonary Disease Outcomes in the COPDGene and SPIROMICS Cohorts: A Post Hoc Analysis of Two Clinical Trials. *American Journal of Respiratory and Critical Care Medicine*, **2018**, 198, 265-267	10.2	15
266	Genome-wide association study of subclinical interstitial lung disease in MESA. *Respiratory Research* , **2017**, 18, 97	7.3	15
265	Pulmonary function is associated with distal aortic calcium, not proximal aortic distensibility. MESA lung study. *COPD: Journal of Chronic Obstructive Pulmonary Disease*, **2011**, 8, 71-8	2	15
264	Hyperpolarized media MR imaging--expanding the boundaries?. *Academic Radiology*, **2006**, 13, 929-31	4.3	15
263	Computer-aided analysis of regional lung air content using three-dimensional computed tomographic images and multinomial models. *Mathematical Modelling*, **1986**, 7, 1099-1116		15
262	Morphometric differences between central vs. surface acini in A/J mice using high-resolution micro-computed tomography. *Journal of Applied Physiology*, **2016**, 121, 115-22	3.7	15
261	1D network simulations for evaluating regional flow and pressure distributions in healthy and asthmatic human lungs. *Journal of Applied Physiology*, **2019**, 127, 122-133	3.7	14
260	A Numerical Study of Water Loss Rate Distributions in MDCT-Based Human Airway Models. *Annals of Biomedical Engineering*, **2015**, 43, 2708-21	4.7	14
259	Associations Among 25-Hydroxyvitamin D Levels, Lung Function, and Exacerbation Outcomes in COPD: An Analysis of the SPIROMICS Cohort. *Chest*, **2020**, 157, 856-865	5.3	14
258	Prognostic Significance of Large Airway Dimensions on Computed Tomography in the General Population. The Multi-Ethnic Study of Atherosclerosis (MESA) Lung Study. *Annals of the American Thoracic Society*, **2018**, 15, 718-727	4.7	14
257	Local tissue-weight-based nonrigid registration of lung images with application to regional ventilation **2009**,		14
256	Quantitative pulmonary imaging: spatial and temporal considerations in high-resolution CT. *Academic Radiology*, **1998**, 5, 539-46	4.3	14
255	Comparison of airway diameter measurements from an anthropomorphic airway tree phantom using hyperpolarized 3He MRI and high-resolution computed tomography. *Magnetic Resonance in Medicine*, **2007**, 58, 636-42	4.4	14
254	The use of MDCT-based computer-aided pathway finding for mediastinal and perihilar lymph node biopsy: a randomized controlled prospective trial. *Respiration*, **2007**, 74, 423-31	3.7	14

253	Pulmonary MR angiography utilizing phased-array surface coils. *Journal of Computer Assisted Tomography*, **1992**, 16, 410-7	2.2	14
252	Differences in Particle Deposition Between Members of Imaging-Based Asthma Clusters. *Journal of Aerosol Medicine and Pulmonary Drug Delivery*, **2019**, 32, 213-223	3.8	13
251	Clinical, physiologic, and radiographic factors contributing to development of hypoxemia in moderate to severe COPD: a cohort study. *BMC Pulmonary Medicine*, **2016**, 16, 169	3.5	13
250	Radiographic lung volumes predict progression to COPD in smokers with preserved spirometry in SPIROMICS. *European Respiratory Journal*, **2019**, 54,	13.6	13
249	Regional pulmonary blood flow in humans and dogs by 4D computed tomography. *Academic Radiology*, **2008**, 15, 844-52	4.3	13
248	Large image microscope array for the compilation of multimodality whole organ image databases. *Anatomical Record*, **2007**, 290, 1377-87	2.1	13
247	Quantitative 3D reconstruction of airway and pulmonary vascular trees using HRCT **1993**,		13
246	Repeatability and Sample Size Assessment Associated with Computed Tomography-Based Lung Density Metrics. *Chronic Obstructive Pulmonary Diseases (Miami, Fla)*, **2014**, 1, 97-104	2.7	13
245	Lack of airway submucosal glands impairs respiratory host defenses. *ELife*, **2020**, 9,	8.9	13
244	Mucus Plugs and Emphysema in the Pathophysiology of Airflow Obstruction and Hypoxemia in Smokers. *American Journal of Respiratory and Critical Care Medicine*, **2021**, 203, 957-968	10.2	13
243	Marijuana Use Associations with Pulmonary Symptoms and Function in Tobacco Smokers Enrolled in the Subpopulations and Intermediate Outcome Measures in COPD Study (SPIROMICS). *Chronic Obstructive Pulmonary Diseases (Miami, Fla)*, **2018**, 5, 46-56	2.7	13
242	Occupational Exposures and Computed Tomographic Imaging Characteristics in the SPIROMICS Cohort. *Annals of the American Thoracic Society*, **2018**, 15, 1411-1419	4.7	13
241	Imaging-based clusters in former smokers of the COPD cohort associate with clinical characteristics: the SubPopulations and intermediate outcome measures in COPD study (SPIROMICS). *Respiratory Research*, **2019**, 20, 153	7.3	12
240	Obesity modulates diaphragm curvature in subjects with and without COPD. *American Journal of Physiology - Regulatory Integrative and Comparative Physiology*, **2017**, 313, R620-R629	3.2	12
239	Evaluation and application of 3D lung warping and registration model using HRCT images **2001**, 4321, 234		12
238	Automated Nomenclature Labeling of the Bronchial Tree in 3D-CT Lung Images. *Lecture Notes in Computer Science*, **2002**, 1-11	0.9	12
237	Disproportionate contribution of right middle lobe to emphysema and gas trapping on computed tomography. *PLoS ONE*, **2014**, 9, e102807	3.7	12
236	Lung lobar slippage assessed with the aid of image registration. *Lecture Notes in Computer Science*, **2010**, 13, 578-85	0.9	12

235	Smoking and Subclinical ILD in RA versus the Multi-Ethnic Study of Atherosclerosis. *PLoS ONE*, **2016**, 11, e0153024	3.7	12
234	A GPU-based symmetric non-rigid image registration method in human lung. *Medical and Biological Engineering and Computing*, **2018**, 56, 355-371	3.1	12
233	Imaging-based clusters in current smokers of the COPD cohort associate with clinical characteristics: the SubPopulations and Intermediate Outcome Measures in COPD Study (SPIROMICS). *Respiratory Research*, **2018**, 19, 178	7.3	12
232	Aspirin Use and Respiratory Morbidity in COPD: A Propensity Score-Matched Analysis in Subpopulations and Intermediate Outcome Measures in COPD Study. *Chest*, **2019**, 155, 519-527	5.3	11
231	Lumen area change (Delta Lumen) between inspiratory and expiratory multidetector computed tomography as a measure of severe outcomes in asthmatic patients. *Journal of Allergy and Clinical Immunology*, **2018**, 142, 1773-1780.e9	11.5	11
230	Asthma Is a Risk Factor for Respiratory Exacerbations Without Increased Rate of Lung Function Decline: Five-Year Follow-up in Adult Smokers From the COPDGene Study. *Chest*, **2018**, 153, 368-377	5.3	11
229	Associations between emphysema-like lung on CT and incident airflow limitation: a general population-based cohort study. *Thorax*, **2018**, 73, 486-488	7.3	11
228	Scatter correction associated with dedicated dual-source CT hardware improves accuracy of lung air measures. *Academic Radiology*, **2013**, 20, 1334-43	4.3	11
227	Higher BMI is associated with higher expiratory airflow normalised for lung volume (FEF25-75/FVC) in COPD. *BMJ Open Respiratory Research*, **2017**, 4, e000231	5.6	11
226	Comparison of breathing gated CT images generated using a 5DCT technique and a commercial clinical protocol in a porcine model. *Medical Physics*, **2015**, 42, 4033-42	4.4	11
225	Effect of Reducing Field of View on Multidetector Quantitative Computed Tomography Parameters of Airway Wall Thickness in Asthma. *Journal of Computer Assisted Tomography*, **2015**, 39, 584-90	2.2	11
224	Associations of dairy intake with CT lung density and lung function. *Journal of the American College of Nutrition*, **2010**, 29, 494-502	3.5	11
223	Socioeconomic status is positively associated with percent emphysema on CT scan: The MESA lung study. *Academic Radiology*, **2011**, 18, 199-204	4.3	11
222	Preoperative assessment of obstruction with computed tomography image analysis. *American Journal of Otolaryngology - Head and Neck Medicine and Surgery*, **2000**, 21, 263-70	2.8	11
221	Subtraction Gated Computed Tomography with the Dynamic Spatial Reconstructor. *Journal of Computer Assisted Tomography*, **1984**, 8, 1-9	2.2	11
220	A comparison of live and videorecord viewing of infant behavior under sound stimulation. I. Neonates. *Developmental Psychobiology*, **1974**, 7, 455-64	3	11
219	CT image segmentation for inflamed and fibrotic lungs using a multi-resolution convolutional neural network. *Scientific Reports*, **2021**, 11, 1455	4.9	11
218	Heterogeneous burden of lung disease in smokers with borderline airflow obstruction. *Respiratory Research*, **2018**, 19, 223	7.3	11

217	Reduction of half-scan shading artifact based on full-scan correction. *Academic Radiology*, **2006**, 13, 55-62	4.3	10
216	Knowledge-based segmentation of intrathoracic airways from multidimensional high-resolution CT images **1994**, 2168, 73		10
215	Unsupervised Discovery of Spatially-Informed Lung Texture Patterns for Pulmonary Emphysema: The MESA COPD Study. *Lecture Notes in Computer Science*, **2017**, 10433, 116-124	0.9	10
214	PrecISE: Precision Medicine in Severe Asthma: An adaptive platform trial with biomarker ascertainment. *Journal of Allergy and Clinical Immunology*, **2021**, 147, 1594-1601	11.5	10
213	Contribution of Individual and Neighborhood Factors to Racial Disparities in Respiratory Outcomes. *American Journal of Respiratory and Critical Care Medicine*, **2021**, 203, 987-997	10.2	10
212	Ambient air pollution and pulmonary vascular volume on computed tomography: the MESA Air Pollution and Lung cohort studies. *European Respiratory Journal*, **2019**, 53,	13.6	9
211	Mucin Concentrations and Peripheral Airway Obstruction in Chronic Obstructive Pulmonary Disease. *American Journal of Respiratory and Critical Care Medicine*, **2018**, 198, 1453-1456	10.2	9
210	NT-proBNP in stable COPD and future exacerbation risk: Analysis of the SPIROMICS cohort. *Respiratory Medicine*, **2018**, 140, 87-93	4.6	9
209	Reproducibility and Changes in Vena Caval Blood Flow by Using 4D Flow MRI in Pulmonary Emphysema and Chronic Obstructive Pulmonary Disease (COPD): The Multi-Ethnic Study of Atherosclerosis (MESA) COPD Substudy. *Radiology*, **2019**, 292, 585-594	20.5	9
208	MDCT-based quantification of porcine pulmonary arterial morphometry and self-similarity of arterial branching geometry. *Journal of Applied Physiology*, **2013**, 114, 1191-201	3.7	9
207	Static versus prospective gated non-breath hold volumetric MDCT imaging of the lungs. *Academic Radiology*, **2005**, 12, 1371-84	4.3	9
206	Influence of gravity on radiographic contrast material-based measurements of regional blood flow distribution. *Academic Radiology*, **2003**, 10, 128-38	4.3	9
205	IMPROMPTU: a system for automatic 3D medical image-analysis. *Computerized Medical Imaging and Graphics*, **1995**, 19, 131-43	7.6	9
204	Explaining Radiological Emphysema Subtypes with Unsupervised Texture Prototypes: MESA COPD Study. *Lecture Notes in Computer Science*, **2017**, 2017, 69-80	0.9	9
203	Physiologic Imaging of the Lung with Volumetric High-Resolution CT. *Journal of Thoracic Imaging*, **1995**, 10, 280-290	5.6	9
202	Associations of Serum Adipokines With Subclinical Interstitial Lung Disease Among Community-Dwelling Adults: The Multi-Ethnic Study of Atherosclerosis (MESA). *Chest*, **2020**, 157, 580-589	5.3	9
201	Effect of Reconstruction Parameters on the Quantitative Analysis of Chest Computed Tomography. *Journal of Thoracic Imaging*, **2019**, 34, 92-102	5.6	9
200	Integrative Genomics Analysis Identifies ACVR1B as a Candidate Causal Gene of Emphysema Distribution. *American Journal of Respiratory Cell and Molecular Biology*, **2019**, 60, 388-398	5.7	9

199	Regional Lung Perfusion Analysis in Experimental ARDS by Electrical Impedance and Computed Tomography. *IEEE Transactions on Medical Imaging*, **2021**, 40, 251-261	11.7	9
198	Lung microbiota associations with clinical features of COPD in the SPIROMICS cohort. *Npj Biofilms and Microbiomes*, **2021**, 7, 14	8.2	9
197	Quantitative CT imaging and advanced visualization methods: potential application in novel coronavirus disease 2019 (COVID-19) pneumonia. *BJR|Open*, **2021**, 3, 20200043	1.4	9
196	Frequency-Selective Computed Tomography: Applications During Periodic Thoracic Motion. *IEEE Transactions on Medical Imaging*, **2017**, 36, 1722-1732	11.7	8
195	Reprint of: Voxel-Wise Longitudinal Parametric Response Mapping Analysis of Chest Computed Tomography in Smokers. *Academic Radiology*, **2019**, 26, 306-312	4.3	8
194	Pulmonary hyperinflation due to gas trapping and pulmonary artery size: The MESA COPD Study. *PLoS ONE*, **2017**, 12, e0176812	3.7	8
193	Effect of segmental bronchoalveolar lavage on quantitative computed tomography of the lung. *Academic Radiology*, **2011**, 18, 876-84	4.3	8
192	Evaluation of in vivo total and regional air content and distribution in primate lungs with high-resolution CT. *Academic Radiology*, **1997**, 4, 674-9	4.3	8
191	Atlas-driven lung lobe segmentation in volumetric x-ray CT images **2003**,		8
190	Macro-optical color assessment of the pulmonary airways with subsequent three-dimensional multidetector-x-ray-computed-tomography assisted display. *Journal of Biomedical Optics*, **2005**, 10, 051703	3.5	8
189	The effect of preclotting on surface thrombogenicity and thromboembolic complications of Dacron grafts in the canine thoracic aorta. *Journal of Thoracic and Cardiovascular Surgery*, **1984**, 88, 253-258	1.5	8
188	Quantitative computed tomography determined regional lung mechanics in normal nonsmokers, normal smokers and metastatic sarcoma subjects. *PLoS ONE*, **2017**, 12, e0179812	3.7	8
187	Structural and Functional Features on Quantitative Chest Computed Tomography in the Korean Asian versus the White American Healthy Non-Smokers. *Korean Journal of Radiology*, **2019**, 20, 1236-1245	6.9	8
186	Clinical Phenotypes of Atopy and Asthma in COPD: A Meta-analysis of SPIROMICS and COPDGene. *Chest*, **2020**, 158, 2333-2345	5.3	8
185	Safety and Tolerability of Comprehensive Research Bronchoscopy in Chronic Obstructive Pulmonary Disease. Results from the SPIROMICS Bronchoscopy Substudy. *Annals of the American Thoracic Society*, **2019**, 16, 439-446	4.7	8
184	Associations of Ⅎ Fatty Acids With Interstitial Lung Disease and Lung Imaging Abnormalities Among Adults. *American Journal of Epidemiology*, **2021**, 190, 95-108	3.8	8
183	Lung function, percent emphysema, and QT duration: The Multi-Ethnic Study of Atherosclerosis (MESA) lung study. *Respiratory Medicine*, **2017**, 123, 1-7	4.6	7
182	Percent Emphysema and Daily Motor Activity Levels in the General Population: Multi-Ethnic Study of Atherosclerosis. *Chest*, **2017**, 151, 1039-1050	5.3	7

181	Quantifying normal geometric variation in human pulmonary lobar geometry from high resolution computed tomography. *Journal of Biomechanical Engineering*, **2015**, 137, 051010	2.1	7
180	Transport and deposition of hygroscopic particles in asthmatic subjects with and without airway narrowing. *Journal of Aerosol Science*, **2020**, 146, 105581	4.3	7
179	Multi-scale Opening of Conjoined Structures with Shared Intensities: Methods and Applications **2011**,		7
178	Assessment of major airway obstruction using image analysis of digital CT information **1996**, 2709, 197		7
177	Virtual bronchoscopy for quantitative airway analysis **2005**,		7
176	3D human airway segmentation for virtual bronchoscopy **2002**, 4683, 16		7
175	ASAP: interactive quantification of 2D airway geometry **1996**, 2709, 180		7
174	Volumetric analysis of abdominal aortic aneurysm **1996**,		7
173	Anatomy and function of the heart and intrathoracic vessels in congenital heart disease: evaluation with the Dynamic Spatial Reconstructor. *Journal of the American College of Cardiology*, **1985**, 5, 70S-76S	15.1	7
172	Soluble receptor for advanced glycation end products (sRAGE) as a biomarker of COPD. *Respiratory Research*, **2021**, 22, 127	7.3	7
171	A CT-Based Automated Algorithm for Airway Segmentation Using Freeze-and-Grow Propagation and Deep Learning. *IEEE Transactions on Medical Imaging*, **2021**, 40, 405-418	11.7	7
170	Impact of advanced detector technology and iterative reconstruction on low-dose quantitative assessment of lung computed tomography density in a biological lung model. *Medical Physics*, **2018**, 45, 3657	4.4	7
169	Quantitative CT metrics are associated with longitudinal lung function decline and future asthma exacerbations: Results from SARP-3. *Journal of Allergy and Clinical Immunology*, **2021**, 148, 752-762	11.5	7
168	GENERATIVE METHOD TO DISCOVER EMPHYSEMA SUBTYPES WITH UNSUPERVISED LEARNING USING LUNG MACROSCOPIC PATTERNS (LMPS): THE MESA COPD STUDY **2017**, 2017, 375-378	1.5	6
167	Quantitative CT-based structural alterations of segmental airways in cement dust-exposed subjects. *Respiratory Research*, **2020**, 21, 133	7.3	6
166	Reference values for high attenuation areas on chest CT in a healthy, never-smoker, multi-ethnic sample: The MESA study. *Respirology*, **2020**, 25, 855-862	3.6	6
165	A skeleton-tree-based approach to acinar morphometric analysis using microcomputed tomography with comparison of acini in young and old C57BL/6 mice. *Journal of Applied Physiology*, **2016**, 120, 1402-9	3.7	6
164	A process model for direct correlation between computed tomography and histopathology application in lung cancer. *Academic Radiology*, **2010**, 17, 169-80	4.3	6

163	Registration-based regional lung mechanical analysis: retrospectively reconstructed dynamic imaging versus static breath-hold image acquisition **2009**,		6
162	Tracking regional tissue volume and function change in lung using image registration. *International Journal of Biomedical Imaging*, **2012**, 2012, 956248	5.2	6
161	Estimation of regional lung expansion via 3D image registration **2005**,		6
160	Automatic lung lobe segmentation in x-ray CT images by 3D watershed transform using anatomic information from the segmented airway tree **2005**,		6
159	Automated method for relating regional pulmonary structure and function: integration of dynamic multislice CT and thin-slice high-resolution CT **1993**,		6
158	Vascular actions of histamine H1- and H2-receptor agonists in dogs and cats. *European Journal of Pharmacology*, **1977**, 45, 73-7	5.3	6
157	Genetic and non-genetic factors affecting the expression of COVID-19-relevant genes in the large airway epithelium. *Genome Medicine*, **2021**, 13, 66	14.4	6
156	A controlled statistical study to assess measurement variability as a function of test object position and configuration for automated surveillance in a multicenter longitudinal COPD study (SPIROMICS). *Medical Physics*, **2016**, 43, 2598	4.4	6
155	Aerosol deposition predictions in computed tomography-derived skeletons from severe asthmatics: A feasibility study. *Clinical Biomechanics*, **2019**, 66, 81-87	2.2	6
154	Relative Regional Air Volume Change Maps at the Acinar Scale Reflect Variable Ventilation in Low Lung Attenuation of COPD patients. *Academic Radiology*, **2020**, 27, 1540-1548	4.3	5
153	Pulmonary artery stiffness in chronic obstructive pulmonary disease (COPD) and emphysema: The Multi-Ethnic Study of Atherosclerosis (MESA) COPD Study. *Journal of Magnetic Resonance Imaging*, **2018**, 47, 262-271	5.6	5
152	Alveolar eosinophilia in current smokers with chronic obstructive pulmonary disease in the SPIROMICS cohort. *Journal of Allergy and Clinical Immunology*, **2018**, 141, 429-432	11.5	5
151	Metrics of lung tissue heterogeneity depend on BMI but not age. *Journal of Applied Physiology*, **2018**, 125, 328-339	3.7	5
150	Sparse sampling and unsupervised learning of lung texture patterns in pulmonary emphysema: MESA COPD study **2015**,		5
149	A New Approach of Arc Skeletonization for Tree-Like Objects Using Minimum Cost Path **2014**, 2014, 942-947		5
148	Virtual Bronchoscopy. *Imaging Decisions (Berlin, Germany)*, **2007**, 11, 10-20		5
147	Airway tree segmentation using adaptive regions of interest **2004**,		5
146	CT-video registration accuracy for virtual guidance of bronchoscopy **2004**,		5

145	A numerical study of gas transport in human lung models **2005**,		5
144	Experiments in virtual-endoscopic guidance of bronchoscopy **2001**,		5
143	Three-dimensional canine renovascular structure and circulation visualized in situ with the dynamic spatial reconstructor. *American Journal of Anatomy*, **1988**, 181, 77-88		5
142	Identification of Sputum Biomarkers Predictive of Pulmonary Exacerbations in Chronic Obstructive Pulmonary Disease. *Chest*, **2021**,	5.3	5
141	QIBA guidance: Computed tomography imaging for COVID-19 quantitative imaging applications. *Clinical Imaging*, **2021**, 77, 151-157	2.7	5
140	Quantitative Chest CT Assessment of Small Airways Disease in Post-Acute SARS-CoV-2 Infection.. *Radiology*, **2022**, 212170	20.5	5
139	Quantifying Regional Lung Deformation Using Four-Dimensional Computed Tomography: A Comparison of Conventional and Oscillatory Ventilation. *Frontiers in Physiology*, **2020**, 11, 14	4.6	4
138	Comparison of spirometric thresholds in diagnosing smoking-related airflow obstruction: authorsS response. *Thorax*, **2014**, 69, 1147-8	7.3	4
137	Imaging in COPD. *Imaging Decisions (Berlin, Germany)*, **2009**, 13, 11-17		4
136	The Lung Image Database Consortium (LIDC): pulmonary nodule measurements, the variation, and the difference between different size metrics **2007**,		4
135	Branchpoint labeling and matching in human airway trees **2003**, 5031, 187		4
134	Computerized detection of pulmonary nodules using cellular neural networks in CT images **2004**, 5370, 30		4
133	Laser fluorescence bronchoscopy for detection of fluorescent reporter genes in airway epithelia. *Gene Therapy*, **2002**, 9, 1639-44	4	4
132	Three-dimensional true color topographical analysis of the pulmonary airways **2004**, 5369, 189		4
131	Sensitivity and specificity of 3-D texture analysis of lung parenchyma is better than 2-D for discrimination of lung pathology in stage 0 COPD **2005**,		4
130	3D intersubject warping and registration of pulmonary CT images for a human lung model **2002**, 4683, 324		4
129	Computed tomographic-based estimation of airway size with correction for scanned plane tilt angle **2000**,		4
128	New technique to quantitate regional pulmonary microvascular transit times from dynamic x-ray CT images **1998**,		4

127	Computer-based objective quantitative assessment of pulmonary parenchyma via x-ray CT **1998**, 3337, 377		4
126	Pulmonary CT image classification with evolutionary programming. *Academic Radiology*, **1999**, 6, 736-41	4.3	4
125	Perfusion deficit versus anatomic visualization in detection of pulmonary emboli via electron-beam CT: validation in swine **1995**,		4
124	Emphysema Quantification on Cardiac CT Scans Using Hidden Markov Measure Field Model: The MESA Lung Study. *Lecture Notes in Computer Science*, **2016**, 9901, 624-631	0.9	4
123	Lung and fissure shape is associated with age in healthy never-smoking adults aged 20-90 years. *Scientific Reports*, **2020**, 10, 16135	4.9	4
122	An integrated 1D breathing lung simulation with relative hysteresis of airway structure and regional pressure for healthy and asthmatic human lungs. *Journal of Applied Physiology*, **2020**, 129, 732-747	3.7	4
121	The Reversion of cg05575921 Methylation in Smoking Cessation: A Potential Tool for Incentivizing Healthy Aging. *Genes*, **2020**, 11,	4.2	4
120	Aortic enlargement in chronic obstructive pulmonary disease (COPD) and emphysema: The Multi-Ethnic Study of Atherosclerosis (MESA) COPD study. *International Journal of Cardiology*, **2021**, 331, 214-220	3.2	4
119	Radiomics side experiments and DAFIT approach in identifying pulmonary hypertension using Cardiac MRI derived radiomics based machine learning models. *Scientific Reports*, **2021**, 11, 12686	4.9	4
118	LINKING LUNG AIRWAY STRUCTURE TO PULMONARY FUNCTION VIA COMPOSITE BRIDGE REGRESSION. *Annals of Applied Statistics*, **2016**, 10, 1880-1906	2.1	4
117	The matrikine acetyl-proline-glycine-proline and clinical features of COPD: findings from SPIROMICS. *Respiratory Research*, **2019**, 20, 254	7.3	4
116	Adiposity and Interstitial Lung Abnormalities in Community-Dwelling Adults: The MESA Cohort Study. *Chest*, **2021**, 160, 582-594	5.3	4
115	Racial Segregation and Respiratory Outcomes among Urban Black Residents with and at Risk of Chronic Obstructive Pulmonary Disease. *American Journal of Respiratory and Critical Care Medicine*, **2021**, 204, 536-545	10.2	4
114	Multiscale Lung Imaging Provides New Insights into Disease Progression in the Chronic Obstructive Pulmonary Disease Lung. *American Journal of Respiratory and Critical Care Medicine*, **2017**, 195, 551-552	10.2	3
113	Postnatal airway growth in cystic fibrosis piglets. *Journal of Applied Physiology*, **2017**, 123, 526-533	3.7	3
112	Computed Tomography and Magnetic Resonance Imaging for Longitudinal Characterization of Lung Structure Changes in a Yucatan Miniature Pig Silicosis Model. *Toxicologic Pathology*, **2016**, 44, 373-81	2.1	3
111	Location, location, location: studying anatomically comparable airways is highly relevant to understanding COPD. *Thorax*, **2014**, 69, 1049-50	7.3	3
110	Tensor scale-based anisotropic region growing for segmentation of elongated biological structures **2012**,		3

109	Intrathoracic airway wall detection using graph search and scanner PSF information **1997**,		3
108	An image-based computational model of ovine lung mechanics and ventilation distribution **2005**, 5746, 84		3
107	Automatic axis generation for 3D virtual-bronchoscopic image assessment **1998**,		3
106	Fuzzy logic approach to extraction of intrathoracic airway trees from three-dimensional CT images **1996**,		3
105	Validation of an enhanced knowledge-based method for segmentation and quantitative analysis of intrathoracic airway trees from three-dimensional CT images **1995**, 2433, 158		3
104	Cardiovascular anatomy and function imaging with the dsr in humans with complex congenital heart disease Initial results. *American Journal of Cardiology*, **1982**, 49, 975	3	3
103	Reconsidering the Utility of Race-Specific Lung Function Prediction Equations.. *American Journal of Respiratory and Critical Care Medicine*, **2021**,	10.2	3
102	Do pulmonary cavity shapes influence lung function?. *Journal of Biomechanical Engineering*, **2019**,	2.1	3
101	Correcting Nonpathological Variation in Longitudinal Parametric Response Maps of CT Scans in COPD Subjects: SPIROMICS. *Tomography*, **2017**, 3, 138-145	3.1	3
100	The Precision Interventions for Severe and/or Exacerbation-Prone (PrecISE) Asthma Network: an overview of Network organization, procedures and interventions. *Journal of Allergy and Clinical Immunology*, **2021**,	11.5	3
99	Topological leakage detection and freeze-and-grow propagation for improved CT-based airway segmentation **2018**,		3
98	Multi-scale Opening A New Morphological Operator. *Lecture Notes in Computer Science*, **2015**, 417-427	0.9	3
97	Regional distribution of high-attenuation areas on chest computed tomography in the Multi-Ethnic Study of Atherosclerosis. *ERJ Open Research*, **2020**, 6,	3.5	3
96	Generation-based study of airway remodeling in smokers with normal-looking CT with normalization to control inter-subject variability. *European Journal of Radiology*, **2021**, 138, 109657	4.7	3
95	Small Airways Disease is a Post-Acute Sequelae of SARS-CoV-2 Infection		3
94	Regional Gas Transport During Conventional and Oscillatory Ventilation Assessed by Xenon-Enhanced Computed Tomography. *Annals of Biomedical Engineering*, **2021**, 49, 2377-2388	4.7	3
93	A semi-automatic framework of measuring pulmonary arterial metrics at anatomic airway locations using CT imaging. *Proceedings of SPIE*, **2016**, 9788,	1.7	3
92	Clinical Significance of Bronchodilator Responsiveness Evaluated by Forced Vital Capacity in COPD: SPIROMICS Cohort Analysis. *International Journal of COPD*, **2019**, 14, 2927-2938	3	3

91	Ultrasound measurement of knee synovial fluid during external pneumatic compression. *Journal of Orthopaedic Research*, **2019**, 37, 601-608	3.8	3
90	An automated airway segmentation algorithm for CT images using topological leakage detection and volume freezing **2018**,		3
89	Novel Logistic Regression Model of Chest CT Attenuation Coefficient Distributions for the Automated Detection of Abnormal (Emphysema or ILD) Versus Normal Lung. *Academic Radiology*, **2016**, 23, 304-14	4.3	2
88	Robust quantification of pulmonary emphysema with a Hidden Markov Measure Field model **2013**,		2
87	Drs Hoffman and Barr Replies:. *Academic Radiology*, **2010**, 17, 399-401	4.3	2
86	Computer-aided diagnosis of radiographic patterns of lung disease via MDCT images. *International Journal of Computational Science and Engineering*, **2010**, 5, 254	0.4	2
85	How parrots talk: insights based on CT scans, image processing, and mathematical models **1997**, 3033, 14		2
84	Three-dimensional murine airway segmentation in micro-CT images **2007**,		2
83	Segmentation of the ovine lung in 3D CT Images **2004**,		2
82	A whole organ serial sectioning and imaging system for correlation of pathology to computer tomography **2004**, 5324, 224		2
81	3D pulmonary airway color image reconstruction via shape from shading and virtual bronchoscopy imaging techniques **2005**,		2
80	Three-dimensional visual truth of the normal airway tree for use as a quantitative comparison to micro-CT reconstructions **2005**,		2
79	Adaptive multiple feature method (AMFM) for early detecton of parenchymal pathology in a smoking population **1998**,		2
78	High-resolution CT assessment of the pediatric airways: structure and function **1994**, 2168, 320		2
77	3D bronchial tree model and fractal analysis as tools for the performance evaluation of different CT acquisition/reconstruction schemes **1995**,		2
76	A fully automated CT-based airway segmentation algorithm using deep learning and topological leakage detection and branch augmentation approaches **2019**,		2
75	Ambient Air Pollution Exposure and Longitudinal Change in Percent Emphysema on Computed Tomography (CT): the Multi-Ethnic Study of Atherosclerosis (MESA) Lung and Air Pollution Studies. *ISEE Conference Abstracts*, **2014**, 2014, 2712	2.9	2
74	Pulmonary lobar segmentation from computed tomography scans based on a statistical finite element analysis of lobe shape **2019**,		2

73	Automated Assessment of Pulmonary Arterial Morphology in Multi-row Detector CT Imaging Using Correspondence with Anatomic Airway Branches. *Lecture Notes in Computer Science*, **2014**, 521-530	0.9	2
72	Lung function of primary cooks using LPG or biomass and the effect of particulate matter on airway epithelial barrier integrity. *Environmental Research*, **2020**, 189, 109888	7.9	2
71	Lung-Specific Risk Factors Associated With Incident Hip Fracture in Current and Former Smokers. *Journal of Bone and Mineral Research*, **2020**, 35, 1952-1961	6.3	2
70	Latent traits of lung tissue patterns in former smokers derived by dual channel deep learning in computed tomography images. *Scientific Reports*, **2021**, 11, 4916	4.9	2
69	The Reversion of DNA Methylation at Coronary Heart Disease Risk Loci in Response to Prevention Therapy. *Processes*, **2021**, 9, 699	2.9	2
68	Pulmonary Hypertension in Association with Lung Disease: Quantitative CT and Artificial Intelligence to the Rescue? State-of-the-Art Review. *Diagnostics*, **2021**, 11,	3.8	2
67	CT-Measured Lung Air-Trapping is Associated with Higher Carotid Artery Stiffness in Individuals with Chronic Obstructive Pulmonary Disease. *Journal of Applied Physiology*, **2018**,	3.7	2
66	Cluster-Guided Multiscale Lung Modeling via Machine Learning **2018**, 1-20		2
65	Effects of Lung Injury on Regional Aeration and Expiratory Time Constants: Insights From Four-Dimensional Computed Tomography Image Registration. *Frontiers in Physiology*, **2021**, 12, 707119	4.6	2
64	Pulmonary Arterial Pruning and Longitudinal Change in Percent Emphysema and Lung Function: The Genetic Epidemiology of COPD Study. *Chest*, **2021**, 160, 470-480	5.3	2
63	Case Studies in Physiology: Temporal variations of the lung parenchyma and vasculature in asymptomatic COVID-19 pneumonia: a multispectral CT assessment. *Journal of Applied Physiology*, **2021**, 131, 454-463	3.7	2
62	Early Lung Disease Exhibits Bacteria-Dependent and -Independent Abnormalities in Cystic Fibrosis Pigs. *American Journal of Respiratory and Critical Care Medicine*, **2021**, 204, 692-702	10.2	2
61	An iterative method for airway segmentation using multiscale leakage detection **2017**,		1
60	Detection of smoothly distributed spatial outliers, with applications to identifying the distribution of parenchymal hyperinflation following an airway challenge in asthmatics. *Statistics in Medicine*, **2017**, 36, 1638-1654	2.3	1
59	Curve skeletonization using minimum-cost path **2017**, 151-180		1
58	Authors's response: Airway anatomy in COPD: many dimensions to consider. *Thorax*, **2015**, 70, 585	7.3	1
57	Three-dimensional histopathology of lung cancer with multimodality image registration **2007**,		1
56	The Lung Image Database Consortium (LIDC): a quality assurance model for the collection of expert-defined truth in lung-nodule-based image analysis studies **2007**,		1

55	Establishing multimodality datasets with the incorporation of 3D histopathology for soft tissue classification **2006**,		1
54	Effect of mixing scanner types and reconstruction kernels on the characterization of lung parenchymal pathologies: emphysema, interstitial pulmonary fibrosis and normal non-smokers **2006**,		1
53	Ventilation Imaging Using Computed Tomography. *Imaging Decisions (Berlin, Germany)*, **2004**, 8, 15-23		1
52	Methods of in-vivo mouse lung micro-CT **2005**,		1
51	A complete CAD system for pulmonary nodule detection in high resolution CT images **2005**, 5747, 85		1
50	Gas-based vascular imaging. *Academic Radiology*, **2002**, 9 Suppl 1, S165-9	4.3	1
49	CT-based assessment of regional pulmonary blood flow parameters: an update **1999**, 3660, 181		1
48	Biomarkers Predictive of Exacerbations in the SPIROMICS and COPDGene Cohorts. *American Journal of Respiratory and Critical Care Medicine*, **2020**, 201, 473-481	10.2	1
47	**2020**,		1
46	The relationship of smoking to cg05575921 methylation in blood and saliva DNA samples from several studies. *Scientific Reports*, **2021**, 11, 21627	4.9	1
45	Quantitative 3-D imaging of the heart: myocardium and chambers. *Developments in Cardiovascular Medicine*, **1985**, 135-150		1
44	Multi-scale Topo-morphometric Opening of Arteries and Veins: An Evaluative Study via Pulmonary CT Imaging. *Lecture Notes in Computer Science*, **2010**, 129-138	0.9	1
43	Quantitative CT-based image registration metrics provide different ventilation and lung motion patterns in prone and supine positions in healthy subjects. *Respiratory Research*, **2020**, 21, 254	7.3	1
42	Novel Respiratory Disability Score Predicts COPD Exacerbations and Mortality in the SPIROMICS Cohort. *International Journal of COPD*, **2020**, 15, 1887-1898	3	1
41	Quantitative CT-Based Methods for Bone Microstructural Measures and Their Relationships With Vertebral Fractures in a Pilot Study on Smokers. *JBMR Plus*, **2021**, 5, e10484	3.9	1
40	Associations of D-Dimer with Computed Tomographic Lung Abnormalities, Serum Biomarkers of Lung Injury, and Forced Vital Capacity: MESA Lung Study. *Annals of the American Thoracic Society*, **2021**, 18, 1839-1848	4.7	1
39	Longitudinal Imaging-Based Clusters in Former Smokers of the COPD Cohort Associate with Clinical Characteristics: The SubPopulations and Intermediate Outcome Measures in COPD Study (SPIROMICS). *International Journal of COPD*, **2021**, 16, 1477-1496	3	1
38	CT-derived 3D-diaphragm motion in emphysema and IPF compared to normal subjects. *Scientific Reports*, **2021**, 11, 14923	4.9	1

37	Estimated Ventricular Size, Asthma Severity, and Exacerbations: The Severe Asthma Research Program III Cohort. *Chest*, **2020**, 157, 258-267	5.3	1
36	Pulmonary Fibrosis after COVID-19 is Associated with Severity of Illness and Blood Leukocyte Telomere Length		1
35	Clinically Significant and Comorbid Anxiety and Depressive Symptoms Predict Severe Respiratory Exacerbations in Smokers: A Post-Hoc Analysis of the COPDGene and SPIROMICS Cohorts. *Annals of the American Thoracic Society*, **2021**,	4.7	1
34	Novel Subtypes of Pulmonary Emphysema Based on Spatially-Informed Lung Texture Learning: The Multi-Ethnic Study of Atherosclerosis (MESA) COPD Study. *IEEE Transactions on Medical Imaging*, **2021**, 40, 3652-3662	11.7	1
33	Interactions: the integrated functioning of heart and lungs. *Advances in Experimental Medicine and Biology*, **1993**, 346, 347-64	3.6	1
32	Elastic mucus strands impair mucociliary clearance in cystic fibrosis pigs.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2121731119	11.5	1
31	Origins of and lessons from quantitative functional X-ray computed tomography of the lung.. *British Journal of Radiology*, **2022**, 20211364	3.4	1
30	Ambient ozone effects on respiratory outcomes among smokers modified by neighborhood poverty: An analysis of SPIROMICS AIR.. *Science of the Total Environment*, **2022**, 829, 154694	10.2	1
29	A computational model of contributors to pulmonary hypertensive disease: impacts of whole lung and focal disease distributions. *Pulmonary Circulation*, **2021**, 11, 20458940211056527	2.7	0
28	Registration-Invariant Biomechanical Features for Disease Staging of COPD in SPIROMICS. *Lecture Notes in Computer Science*, **2020**, 143-154	0.9	0
27	Disparities in access to food and chronic obstructive pulmonary disease (COPD)-related outcomes: a cross-sectional analysis. *BMC Pulmonary Medicine*, **2021**, 21, 139	3.5	0
26	Emphysema Progression and Lung Function Decline Among Angiotensin Converting Enzyme Inhibitors and Angiotensin-Receptor Blockade Users in the COPDGene Cohort. *Chest*, **2021**, 160, 1245-1254	5.3	0
25	Machine learning and in silico methods **2021**, 375-390		0
24	Defining Resilience to Smoking-related Lung Disease: A Modified Delphi Approach from SPIROMICS. *Annals of the American Thoracic Society*, **2021**, 18, 1822-1831	4.7	0
23	Ratio of FEV/Slow Vital Capacity of Chest, **2021**, 160, 94-103	5.3	0
22	The Association Between Lung Hyperinflation and Coronary Artery Disease in Smokers. *Chest*, **2021**, 160, 858-871	5.3	0
21	Associations of sleep duration and sleep-wake rhythm with lung parenchymal abnormalities on computed tomography: The MESA study. *Journal of Sleep Research*, **2021**, e13475	5.8	0
20	PLOSL: Population learning followed by one shot learning pulmonary image registration using tissue volume preserving and vesselness constraints.. *Medical Image Analysis*, **2022**, 79, 102434	15.4	0

19	Menstrual cycle impacts lung structure measures derived from quantitative computed tomography.. *European Radiology*, **2021**, 1	8	0
18	Quantitative CT Characteristics of Cluster Phenotypes in the Severe Asthma Research Program Cohorts.. *Radiology*, **2022**, 210363	20.5	0
17	A Novel Iterative Method for Airway Tree Segmentation from CT Imaging Using Multiscale Leakage Detection. *Lecture Notes in Computer Science*, **2017**, 46-60	0.9	
16	Antinuclear antibodies and subclinical interstitial lung disease in community-dwelling adults: the MESA study. *European Respiratory Journal*, **2020**, 55,	13.6	
15	Dependence of subject-specific parameters for a fast helical CT respiratory motion model on breathing rate: an animal study. *Physics in Medicine and Biology*, **2018**, 63, 04NT04	3.8	
14	Modeling the respiratory motion of solitary pulmonary nodules and determining the impact of respiratory motion on their detection in SPECT imaging. *IEEE Transactions on Nuclear Science*, **2016**, 63, 117-129	1.7	
13	An in-vivo computed tomography approach for quantifying porcine pulmonary arterial morphometry. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2012**, 2012, 5400-3	0.9	
12	Volumetric image-based comparison of male and female vocal tract shapes **1997**, 3033, 25		
11	Computerized detection of pulmonary nodules using a combination of 3D global and local shape information based on helical CT images **2006**, 6144, 629		
10	Image-guided simulation for bioluminescence tomographic imaging **2005**, 5744, 741		
9	Computational model of the effects of breathing on cardiac function. *Advances in Experimental Medicine and Biology*, **2001**, 499, 471-6	3.6	
8	Cardiac image registration via global and local warping **1993**, 1905, 75		
7	Posture-dependent spatial correlation: similarity of multiple CT-derived pulmonary structural and functional parameters **1994**, 2168, 380		
6	Feasibility of using high-speed electron beam x-ray CT (EBCT) to follow the time course of the pulmonary response to pneumonectomy in rabbits **1994**, 2168, 341		
5	Path-Gradient A Theory of Computing Full Intensity-Transition Between Two Points. *Lecture Notes in Computer Science*, **2018**, 399-407	0.9	
4	Cluster-Guided Multiscale Lung Modeling via Machine Learning **2020**, 2699-2718		
3	Measurement of Pulmonary Vascular Structure and Pulmonary Blood Distribution by Multidetector-Row Computed Tomography and Magnetic Resonance Imaging Techniques **2011**, 511-524		
2	Dysanapsis and COPD-Reply. *JAMA - Journal of the American Medical Association*, **2020**, 324, 1572	27.4	

1	Polycythemia is Associated with Lower Incidence of Severe COPD Exacerbations in the SPIROMICS Study. *Chronic Obstructive Pulmonary Diseases (Miami, Fla)*, **2021**, 8, 326-335	2.7