

Mannudeep K Kalra

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

135 papers	5,606 citations	29 h-index	73 g-index
143 ext. papers	7,237 ext. citations	6.2 avg, IF	5.8 L-index

#	Paper	IF	Citations
135	Cardiovascular disease detection using machine learning and carotid/femoral arterial imaging frameworks in rheumatoid arthritis patients.. <i>Rheumatology International</i> , 2022 , 42, 215	3.6	1
134	Bias Investigation in Artificial Intelligence Systems for Early Detection of Parkinson's Disease: A Narrative Review.. <i>Diagnostics</i> , 2022 , 12,	3.8	6
133	Understanding the bias in machine learning systems for cardiovascular disease risk assessment: The first of its kind review.. <i>Computers in Biology and Medicine</i> , 2022 , 142, 105204	7	8
132	Four Types of Multiclass Frameworks for Pneumonia Classification and Its Validation in X-ray Scans Using Seven Types of Deep Learning Artificial Intelligence Models.. <i>Diagnostics</i> , 2022 , 12,	3.8	2
131	National reference levels of CT procedures dedicated for treatment planning in radiation oncology.. <i>Physica Medica</i> , 2022 , 96, 123-129	2.7	1
130	Accurate auto-labeling of chest X-ray images based on quantitative similarity to an explainable AI model.. <i>Nature Communications</i> , 2022 , 13, 1867	17.4	1
129	Predictive values of AI-based triage model in suboptimal CT pulmonary angiography.. <i>Clinical Imaging</i> , 2022 , 86, 25-30	2.7	1
128	Five Strategies for Bias Estimation in Artificial Intelligence-based Hybrid Deep Learning for Acute Respiratory Distress Syndrome COVID-19 Lung Infected Patients using AP(ai)Bias 2.0: A Systematic Review. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2022 , 1-1	5.2	1
127	Complex Relationship Between Artificial Intelligence and CT Radiation Dose. <i>Academic Radiology</i> , 2021 ,	4.3	1
126	Inter-Variability Study of COVLIA 1.0: Hybrid Deep Learning Models for COVID-19 Lung Segmentation in Computed Tomography. <i>Diagnostics</i> , 2021 , 11,	3.8	6
125	Reply to "Quality Control of Radiomics Study to Differentiate Benign and Malignant Hepatic Lesions". <i>American Journal of Roentgenology</i> , 2021 , 216, W13	5.4	
124	Artificial intelligence-based vessel suppression for detection of sub-solid nodules in lung cancer screening computed tomography. <i>Quantitative Imaging in Medicine and Surgery</i> , 2021 , 11, 1134-1143	3.6	4
123	Quantitative Chest CT in COPD: Can Deep Learning Enable the Transition?. <i>Radiology: Cardiothoracic Imaging</i> , 2021 , 3, e210044	8.3	1
122	Investigating centering, scan length, and arm position impact on radiation dose across 4 countries from 4 continents during pandemic: Mitigating key radioprotection issues. <i>Physica Medica</i> , 2021 , 84, 125-131	2.7	1
121	Deep metric learning-based image retrieval system for chest radiograph and its clinical applications in COVID-19. <i>Medical Image Analysis</i> , 2021 , 70, 101993	15.4	13
120	Deep learning predicts cardiovascular disease risks from lung cancer screening low dose computed tomography. <i>Nature Communications</i> , 2021 , 12, 2963	17.4	11
119	AI-based improvement in lung cancer detection on chest radiographs: results of a multi-reader study in NLST dataset. <i>European Radiology</i> , 2021 , 31, 9664-9674	8	6

118	PRACTICAL CHALLENGES WITH IMAGING COVID-19 IN BRAZIL: MITIGATION IN AND BEYOND THE PANDEMIC. <i>Radiation Protection Dosimetry</i> , 2021 , 195, 92-98	0.9	
117	A multi-center study of COVID-19 patient prognosis using deep learning-based CT image analysis and electronic health records. <i>European Journal of Radiology</i> , 2021 , 139, 109583	4.7	9
116	Integrative analysis for COVID-19 patient outcome prediction. <i>Medical Image Analysis</i> , 2021 , 67, 101844	15.4	35
115	Low contrast volume dual-energy CT of the chest: Quantitative and qualitative assessment. <i>Clinical Imaging</i> , 2021 , 69, 305-310	2.7	2
114	Prediction of burden and management of renal calculi from whole kidney radiomics: a multicenter study. <i>Abdominal Radiology</i> , 2021 , 46, 2097-2106	3	3
113	Variations in CT Utilization, Protocols, and Radiation Doses in COVID-19 Pneumonia: Results from 28 Countries in the IAEA Study. <i>Radiology</i> , 2021 , 298, E141-E151	20.5	20
112	Quantifying and leveraging predictive uncertainty for medical image assessment. <i>Medical Image Analysis</i> , 2021 , 68, 101855	15.4	7
111	Cardiovascular Disease Risk Improves COVID-19 Patient Outcome Prediction. <i>Lecture Notes in Computer Science</i> , 2021 , 467-476	0.9	
110	Deep Interactive Denoiser (DID) for X-Ray Computed Tomography. <i>IEEE Transactions on Medical Imaging</i> , 2021 , 40, 2965-2975	11.7	1
109	Multicenter Assessment of CT Pneumonia Analysis Prototype for Predicting Disease Severity and Patient Outcome. <i>Journal of Digital Imaging</i> , 2021 , 34, 320-329	5.3	4
108	CovidCTNet: an open-source deep learning approach to diagnose covid-19 using small cohort of CT images. <i>Npj Digital Medicine</i> , 2021 , 4, 29	15.7	29
107	Use of radiomics to differentiate left atrial appendage thrombi and mixing artifacts on single-phase CT angiography. <i>International Journal of Cardiovascular Imaging</i> , 2021 , 37, 2071-2078	2.5	1
106	Radiation Dose Reduction in Kidney Stone CT: A Randomized, Facility-Based Intervention. <i>Journal of the American College of Radiology</i> , 2021 , 18, 1394-1404	3.5	1
105	Comparison of deep learning, radiomics and subjective assessment of chest CT findings in SARS-CoV-2 pneumonia. <i>Clinical Imaging</i> , 2021 , 80, 58-66	2.7	2
104	Artificial intelligence matches subjective severity assessment of pneumonia for prediction of patient outcome and need for mechanical ventilation: a cohort study. <i>Scientific Reports</i> , 2021 , 11, 858	4.9	13
103	Association of AI quantified COVID-19 chest CT and patient outcome. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2021 , 16, 435-445	3.9	10
102	COVLIA 1.0 vs. MedSeg: Artificial Intelligence-Based Comparative Study for Automated COVID-19 Computed Tomography Lung Segmentation in Italian and Croatian Cohorts.. <i>Diagnostics</i> , 2021 , 11,	3.8	4
101	Semiautomatic Segmentation and Radiomics for Dual-Energy CT: A Pilot Study to Differentiate Benign and Malignant Hepatic Lesions. <i>American Journal of Roentgenology</i> , 2020 , 215, 398-405	5.4	13

100	Can Dual-Energy Computed Tomography Quantitative Analysis and Radiomics Differentiate Normal Liver From Hepatic Steatosis and Cirrhosis?. <i>Journal of Computer Assisted Tomography</i> , 2020 , 44, 223-229 ^{2,2}	5
99	A method of rapid quantification of patient-specific organ doses for CT using deep-learning-based multi-organ segmentation and GPU-accelerated Monte Carlo dose computing. <i>Medical Physics</i> , 2020 , 47, 2526-2536	4.4 25
98	Accuracy of radiomics for differentiating diffuse liver diseases on non-contrast CT. <i>International Journal of Computer Assisted Radiology and Surgery</i> , 2020 , 15, 1727-1736	3.9 6
97	Chest CT practice and protocols for COVID-19 from radiation dose management perspective. <i>European Radiology</i> , 2020 , 30, 6554-6560	8 35
96	Multiphase abdomen-pelvis CT in women of childbearing potential (WOCBP): Justification and radiation dose. <i>Medicine (United States)</i> , 2020 , 99, e18485	1.8 3
95	CT protocols and radiation doses for hematuria and urinary stones: Comparing practices in 20 countries. <i>European Journal of Radiology</i> , 2020 , 126, 108923	4.7 7
94	Image Quality and Lesion Detection on Deep Learning Reconstruction and Iterative Reconstruction of Submillisievert Chest and Abdominal CT. <i>American Journal of Roentgenology</i> , 2020 , 214, 566-573	5.4 69
93	Quantitative lobar pulmonary perfusion assessment on dual-energy CT pulmonary angiography: applications in pulmonary embolism. <i>European Radiology</i> , 2020 , 30, 2535-2542	8 9
92	Cause determination of missed lung nodules and impact of reader training and education: Simulation study with nodule insertion software. <i>Journal of Cancer Research and Therapeutics</i> , 2020 , 16, 780-787	1.2 2
91	Accuracy of radiomics for differentiating diffuse liver diseases on non-contrast CT 2020 , 15, 1727	1
90	Quadratic Autoencoder (Q-AE) for Low-Dose CT Denoising. <i>IEEE Transactions on Medical Imaging</i> , 2020 , 39, 2035-2050	11.7 24
89	Shape and margin-aware lung nodule classification in low-dose CT images via soft activation mapping. <i>Medical Image Analysis</i> , 2020 , 60, 101628	15.4 25
88	Radiation dose monitoring in computed tomography: Status, options and limitations. <i>Physica Medica</i> , 2020 , 79, 1-15	2.7 6
87	Computed Tomography Radiomics Can Predict Disease Severity and Outcome in Coronavirus Disease 2019 Pneumonia. <i>Journal of Computer Assisted Tomography</i> , 2020 , 44, 640-646	2.2 14
86	Radiomic features of primary tumor by lung cancer stage: analysis in mutated non-small cell lung cancer. <i>Translational Lung Cancer Research</i> , 2020 , 9, 1441-1451	4.4 3
85	Optimization of paranasal sinus CT procedure: Ultra-low dose CT as a roadmap for pre-functional endoscopic sinus surgery. <i>Physica Medica</i> , 2020 , 78, 195-200	2.7
84	Validation of a Deep Learning Algorithm for the Detection of Malignant Pulmonary Nodules in Chest Radiographs. <i>JAMA Network Open</i> , 2020 , 3, e2017135	10.4 20
83	Artificial intelligence in image reconstruction: The change is here. <i>Physica Medica</i> , 2020 , 79, 113-125	2.7 15

82	CT Radiomics, Radiologists, and Clinical Information in Predicting Outcome of Patients with COVID-19 Pneumonia. <i>Radiology: Cardiothoracic Imaging</i> , 2020 , 2, e200322	8.3	31
81	Relation between age and CT radiation doses: Dose trends in 705 pediatric head CT. <i>European Journal of Radiology</i> , 2020 , 130, 109138	4.7	1
80	Severity and Consolidation Quantification of COVID-19 From CT Images Using Deep Learning Based on Hybrid Weak Labels. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2020 , 24, 3529-3538	7.2	13
79	Clinical and imaging features predict mortality in COVID-19 infection in Iran. <i>PLoS ONE</i> , 2020 , 15, e0239519	5.7	7
78	Viewing Imaging Studies: How Patient Location and Imaging Site Affect Referring Physicians. <i>Journal of Digital Imaging</i> , 2020 , 33, 334-340	5.3	
77	Knowledge-Based Analysis for Mortality Prediction From CT Images. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2020 , 24, 457-464	7.2	11
76	Reducing Radiation Dose and Contrast Medium Volume With Application of Dual-Energy CT in Children and Young Adults. <i>American Journal of Roentgenology</i> , 2020 , 214, 1199-1205	5.4	12
75	Deploying Clinical Process Improvement Strategies to Reduce Motion Artifacts and Expiratory Phase Scanning in Chest CT. <i>Scientific Reports</i> , 2019 , 9, 11858	4.9	6
74	Case 30-2019: A 65-Year-Old Woman with Lung Cancer and Chest Pain. <i>New England Journal of Medicine</i> , 2019 , 381, 1268-1277	59.2	7
73	Deep learning-enabled system for rapid pneumothorax screening on chest CT. <i>European Journal of Radiology</i> , 2019 , 120, 108692	4.7	20
72	Competitive performance of a modularized deep neural network compared to commercial algorithms for low-dose CT image reconstruction. <i>Nature Machine Intelligence</i> , 2019 , 1, 269-276	22.5	131
71	Predicting malignant potential of subsolid nodules: can radiomics preempt longitudinal follow up CT?. <i>Cancer Imaging</i> , 2019 , 19, 36	5.6	24
70	Advanced CT Techniques for Decreasing Radiation Dose, Reducing Sedation Requirements, and Optimizing Image Quality in Children. <i>Radiographics</i> , 2019 , 39, 709-726	5.4	25
69	Contrast Administration in CT: A Patient-Centric Approach. <i>Journal of the American College of Radiology</i> , 2019 , 16, 295-301	3.5	7
68	Radiation Dose for Multiregion CT Protocols: Challenges and Limitations. <i>American Journal of Roentgenology</i> , 2019 , 213, 1100-1106	5.4	8
67	Can fully iterative reconstruction technique enable routine abdominal CT at less than 1 mSv?. <i>European Journal of Radiology Open</i> , 2019 , 6, 225-230	2.6	6
66	Development and validation of image quality scoring criteria (IQSC) for pediatric CT: a preliminary study. <i>Insights Into Imaging</i> , 2019 , 10, 95	5.6	11
65	3-D Convolutional Encoder-Decoder Network for Low-Dose CT via Transfer Learning From a 2-D Trained Network. <i>IEEE Transactions on Medical Imaging</i> , 2018 , 37, 1522-1534	11.7	160

64	Low-Dose CT Image Denoising Using a Generative Adversarial Network With Wasserstein Distance and Perceptual Loss. <i>IEEE Transactions on Medical Imaging</i> , 2018 , 37, 1348-1357	11.7	546
63	Bedside Chest Radiographs in the Intensive care Setting: Wireless Direct Radiography Compared to Computed Radiography. <i>Current Problems in Diagnostic Radiology</i> , 2018 , 47, 397-403	1.6	2
62	Allergic-like contrast reactions in the ED: Incidence, management, and impact on patient disposition. <i>American Journal of Emergency Medicine</i> , 2018 , 36, 825-828	2.9	3
61	Potentials of the Potential: The "Lower, Slower, and Brighter" Mantra. <i>Journal of the American College of Radiology</i> , 2018 , 15, 998-999	3.5	
60	Submillisievert chest dual energy computed tomography: a pilot study. <i>British Journal of Radiology</i> , 2018 , 91, 20170735	3.4	4
59	Implications of iodinated contrast media extravasation in the emergency department. <i>American Journal of Emergency Medicine</i> , 2018 , 36, 294-296	2.9	3
58	CT texture analysis of histologically proven benign and malignant lung lesions. <i>Medicine (United States)</i> , 2018 , 97, e11172	1.8	24
57	Correction for 3D Convolutional Encoder-Decoder Network for Low-Dose CT via Transfer Learning From a 2D Trained Network[Jun 18 1522-1534]. <i>IEEE Transactions on Medical Imaging</i> , 2018 , 37, 2750-2757	11.7	3
56	Process improvement for reducing side discrepancies in radiology reports. <i>Acta Radiologica Open</i> , 2018 , 7, 2058460118794727	1.2	2
55	Deep learning in chest radiography: Detection of findings and presence of change. <i>PLoS ONE</i> , 2018 , 13, e0204155	3.7	82
54	Multifactorial Analysis of Mortality in Screening Detected Lung Cancer. <i>Journal of Oncology</i> , 2018 , 2018, 1296246	4.5	8
53	Assessment of chest CT at CTDI less than 1 mGy with iterative reconstruction techniques. <i>British Journal of Radiology</i> , 2017 , 90, 20160625	3.4	10
52	Point Organ Radiation Dose in Abdominal CT: Effect of Patient Off-Centering in an Experimental Human Cadaver Study. <i>Radiation Protection Dosimetry</i> , 2017 , 175, 440-449	0.9	3
51	Low-Dose Computed Tomography for Lung Cancer Screening: The Protocol and The Dose. <i>Seminars in Roentgenology</i> , 2017 , 52, 132-136	0.8	3
50	Low-Dose CT With a Residual Encoder-Decoder Convolutional Neural Network. <i>IEEE Transactions on Medical Imaging</i> , 2017 , 36, 2524-2535	11.7	580
49	Hybrid Imaging System for Simultaneous Spiral MR and X-ray (MRX) Scans. <i>IEEE Access</i> , 2017 , 5, 1050-1061	5.15	10
48	Recent advances in cardiac computed tomography dose reduction strategies: a review of scientific evidence and technical developments. <i>Journal of Medical Imaging</i> , 2017 , 4, 031211	2.6	10
47	Evaluation of GPU-Based CT Reconstruction for Morbidly Obese Patients 2017 , 4,		1

46	Upper-Bound on Dose Reduction in CT Reconstruction for Nodule Detection. <i>IEEE Access</i> , 2016 , 4, 4247-4253	3.5	4
45	Reliability of body size measurements obtained at autopsy: impact on the pathologic assessment of the heart. <i>Forensic Science, Medicine, and Pathology</i> , 2016 , 12, 139-45	1.5	5
44	Dual-Energy CT: Spectrum of Thoracic Abnormalities. <i>Radiographics</i> , 2016 , 36, 38-52	5.4	68
43	Comparison of Measured and Estimated CT Organ Doses for Modulated and Fixed Tube Current:: A Human Cadaver Study. <i>Academic Radiology</i> , 2016 , 23, 634-42	4.3	4
42	Assessment of sub-milli-sievert abdominal computed tomography with iterative reconstruction techniques of different vendors. <i>World Journal of Radiology</i> , 2016 , 8, 618-27	2.9	9
41	A mixed reality approach for stereo-tomographic quantification of lung nodules. <i>Journal of X-Ray Science and Technology</i> , 2016 , 24, 615-25	2.1	2
40	Dose reduction in pediatric abdominal CT: use of iterative reconstruction techniques across different CT platforms. <i>Pediatric Radiology</i> , 2015 , 45, 1046-55	2.8	40
39	Dose reduction for chest CT: comparison of two iterative reconstruction techniques. <i>Acta Radiologica</i> , 2015 , 56, 688-95	2	17
38	CT radiation dose and iterative reconstruction techniques. <i>American Journal of Roentgenology</i> , 2015 , 204, W384-92	5.4	134
37	The 10 Pillars of Lung Cancer Screening: Rationale and Logistics of a Lung Cancer Screening Program. <i>Radiographics</i> , 2015 , 35, 1893-908	5.4	63
36	CT Radiation: Key Concepts for Gentle and Wise Use. <i>Radiographics</i> , 2015 , 35, 1706-21	5.4	67
35	A new technique to characterize CT scanner bow-tie filter attenuation and applications in human cadaver dosimetry simulations. <i>Medical Physics</i> , 2015 , 42, 6274-82	4.4	11
34	Quantification of interstitial fluid on whole body CT: comparison with whole body autopsy. <i>Forensic Science, Medicine, and Pathology</i> , 2015 , 11, 488-96	1.5	5
33	Tube potential and CT radiation dose optimization. <i>American Journal of Roentgenology</i> , 2015 , 204, W4-10	5.4	41
32	Standardization and optimization of CT protocols to achieve low dose. <i>Journal of the American College of Radiology</i> , 2014 , 11, 271-278	3.5	61
31	Size-specific dose estimates: Localizer or transverse abdominal computed tomography images?. <i>World Journal of Radiology</i> , 2014 , 6, 210-7	2.9	17
30	In vitro dose measurements in a human cadaver with abdomen/pelvis CT scans. <i>Medical Physics</i> , 2014 , 41, 091911	4.4	9
29	Entrance skin dosimetry and size-specific dose estimate from pediatric chest CTA. <i>Journal of Cardiovascular Computed Tomography</i> , 2014 , 8, 97-107	2.8	15

28	Sinogram-affirmed iterative reconstruction of low-dose chest CT: effect on image quality and radiation dose. <i>American Journal of Roentgenology</i> , 2013 , 201, W235-44	5.4	58
27	Iterative image reconstruction and its role in cardiothoracic computed tomography. <i>Journal of Thoracic Imaging</i> , 2013 , 28, 355-67	5.6	17
26	Cardiac computed tomography angiography with automatic tube potential selection: effects on radiation dose and image quality. <i>Journal of Thoracic Imaging</i> , 2013 , 28, 40-8	5.6	42
25	Radiation dose reduction with hybrid iterative reconstruction for pediatric CT. <i>Radiology</i> , 2012 , 263, 537-46	5.5	113
24	Radiation dose reduction with Sinogram Affirmed Iterative Reconstruction technique for abdominal computed tomography. <i>Journal of Computer Assisted Tomography</i> , 2012 , 36, 339-46	2.2	137
23	Pointers for optimizing radiation dose in chest CT protocols. <i>Journal of the American College of Radiology</i> , 2011 , 8, 663-5	3.5	10
22	Pointers for optimizing radiation dose in abdominal CT protocols. <i>Journal of the American College of Radiology</i> , 2011 , 8, 731-4	3.5	7
21	Adaptive statistical iterative reconstruction technique for radiation dose reduction in chest CT: a pilot study. <i>Radiology</i> , 2011 , 259, 565-73	20.5	313
20	A variational approach for reconstructing low dose images in clinical helical CT 2010 ,		4
19	Response to Letter to the Editor: Acute abdominal pain: value of non-contrast enhanced ultra-low-dose multi-detector row CT as a substitute for abdominal radiographs (N. Buls, K. Nieboer, J. de Mey). <i>Emergency Radiology</i> , 2010 , 17, 167-168	3	
18	In-plane shielding for CT: effect of off-centering, automatic exposure control and shield-to-surface distance. <i>Korean Journal of Radiology</i> , 2009 , 10, 156-63	6.9	53
17	Informatics in radiology: Render: an online searchable radiology study repository. <i>Radiographics</i> , 2009 , 29, 1233-46	5.4	28
16	Accurate model-based high resolution cardiac image reconstruction in dual source CT 2009 ,		5
15	CT of the urinary tract: turning attention to radiation dose. <i>Radiologic Clinics of North America</i> , 2008 , 46, 1-9, v	2.3	10
14	Current status and future directions in technical developments of cardiac computed tomography. <i>Journal of Cardiovascular Computed Tomography</i> , 2008 , 2, 71-80	2.8	17
13	Imaging cardiac tumors. <i>Cancer Treatment and Research</i> , 2008 , 143, 177-96	3.5	12
12	Automatic patient centering for MDCT: effect on radiation dose. <i>American Journal of Roentgenology</i> , 2007 , 188, 547-52	5.4	147
11	Protocols for Multislice Helical Computed Tomography: The Fundamentals. <i>American Journal of Roentgenology</i> , 2006 , 187, W560-W560	5.4	

10	Cardiovascular MRI: Physical Principles to Practical Protocols. <i>American Journal of Roentgenology</i> , 2006 , 187, W443-W443	5.4	
9	CT angiography of pulmonary embolism: diagnostic criteria and causes of misdiagnosis. <i>Radiographics</i> , 2004 , 24, 1219-38	5.4	244
8	Detection and characterization of lesions on low-radiation-dose abdominal CT images postprocessed with noise reduction filters. <i>Radiology</i> , 2004 , 232, 791-7	20.5	87
7	Strategies for CT radiation dose optimization. <i>Radiology</i> , 2004 , 230, 619-28	20.5	776
6	Techniques and applications of automatic tube current modulation for CT. <i>Radiology</i> , 2004 , 233, 649-57	20.5	552
5	Low-dose CT of the abdomen: evaluation of image improvement with use of noise reduction filters pilot study. <i>Radiology</i> , 2003 , 228, 251-6	20.5	117
4	Multislice CT: update on radiation and screening. <i>European Radiology</i> , 2003 , 13 Suppl 5, M129-33	8	19
3	Current status of multidetector computed tomography urography in imaging of the urinary tract. <i>Current Problems in Diagnostic Radiology</i> , 2002 , 31, 210-21	1.6	2
2	Radiation Dose Considerations in Cardiac CT31-42		
1	Practical issues in abdominal PET/CT8-18		