Mannudeep K Kalra

List of Publications by Citations

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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	Strategies for CT radiation dose optimization. *Radiology*, **2004**, 230, 619-28	20.5	776
134	Low-Dose CT With a Residual Encoder-Decoder Convolutional Neural Network. *IEEE Transactions on Medical Imaging*, **2017**, 36, 2524-2535	11.7	580
133	Techniques and applications of automatic tube current modulation for CT. *Radiology*, **2004**, 233, 649-57	20.5	552
132	Low-Dose CT Image Denoising Using a Generative Adversarial Network With Wasserstein Distance and Perceptual Loss. *IEEE Transactions on Medical Imaging*, **2018**, 37, 1348-1357	11.7	546
131	Adaptive statistical iterative reconstruction technique for radiation dose reduction in chest CT: a pilot study. *Radiology*, **2011**, 259, 565-73	20.5	313
130	CT angiography of pulmonary embolism: diagnostic criteria and causes of misdiagnosis. *Radiographics*, **2004**, 24, 1219-38	5.4	244
129	3-D Convolutional Encoder-Decoder Network for Low-Dose CT via Transfer Learning From a 2-D Trained Network. *IEEE Transactions on Medical Imaging*, **2018**, 37, 1522-1534	11.7	160
128	Automatic patient centering for MDCT: effect on radiation dose. *American Journal of Roentgenology*, **2007**, 188, 547-52	5.4	147
127	Radiation dose reduction with Sinogram Affirmed Iterative Reconstruction technique for abdominal computed tomography. *Journal of Computer Assisted Tomography*, **2012**, 36, 339-46	2.2	137
126	CT radiation dose and iterative reconstruction techniques. *American Journal of Roentgenology*, **2015**, 204, W384-92	5.4	134
125	Competitive performance of a modularized deep neural network compared to commercial algorithms for low-dose CT image reconstruction. *Nature Machine Intelligence*, **2019**, 1, 269-276	22.5	131
124	Low-dose CT of the abdomen: evaluation of image improvement with use of noise reduction filters pilot study. *Radiology*, **2003**, 228, 251-6	20.5	117
123	Radiation dose reduction with hybrid iterative reconstruction for pediatric CT. *Radiology*, **2012**, 263, 537-46	20.5	113
122	Detection and characterization of lesions on low-radiation-dose abdominal CT images postprocessed with noise reduction filters. *Radiology*, **2004**, 232, 791-7	20.5	87
121	Deep learning in chest radiography: Detection of findings and presence of change. *PLoS ONE*, **2018**, 13, e0204155	3.7	82
120	Image Quality and Lesion Detection on Deep Learning Reconstruction and Iterative Reconstruction of Submillisievert Chest and Abdominal CT. *American Journal of Roentgenology*, **2020**, 214, 566-573	5.4	69
119	Dual-Energy CT: Spectrum of Thoracic Abnormalities. *Radiographics*, **2016**, 36, 38-52	5.4	68

118	CT Radiation: Key Concepts for Gentle and Wise Use. *Radiographics*, **2015**, 35, 1706-21	5.4	67
117	The 10 Pillars of Lung Cancer Screening: Rationale and Logistics of a Lung Cancer Screening Program. *Radiographics*, **2015**, 35, 1893-908	5.4	63
116	Standardization and optimization of CT protocols to achieve low dose. *Journal of the American College of Radiology*, **2014**, 11, 271-278	3.5	61
115	Sinogram-affirmed iterative reconstruction of low-dose chest CT: effect on image quality and radiation dose. *American Journal of Roentgenology*, **2013**, 201, W235-44	5.4	58
114	In-plane shielding for CT: effect of off-centering, automatic exposure control and shield-to-surface distance. *Korean Journal of Radiology*, **2009**, 10, 156-63	6.9	53
113	Cardiac computed tomography angiography with automatic tube potential selection: effects on radiation dose and image quality. *Journal of Thoracic Imaging*, **2013**, 28, 40-8	5.6	42
112	Tube potential and CT radiation dose optimization. *American Journal of Roentgenology*, **2015**, 204, W4-10	3.4	41
111	Dose reduction in pediatric abdominal CT: use of iterative reconstruction techniques across different CT platforms. *Pediatric Radiology*, **2015**, 45, 1046-55	2.8	40
110	Chest CT practice and protocols for COVID-19 from radiation dose management perspective. *European Radiology*, **2020**, 30, 6554-6560	8	35
109	Integrative analysis for COVID-19 patient outcome prediction. *Medical Image Analysis*, **2021**, 67, 101844	15.4	35
108	CT Radiomics, Radiologists, and Clinical Information in Predicting Outcome of Patients with COVID-19 Pneumonia. *Radiology: Cardiothoracic Imaging*, **2020**, 2, e200322	8.3	31
107	CovidCTNet: an open-source deep learning approach to diagnose covid-19 using small cohort of CT images. *Npj Digital Medicine*, **2021**, 4, 29	15.7	29
106	Informatics in radiology: Render: an online searchable radiology study repository. *Radiographics*, **2009**, 29, 1233-46	5.4	28
105	Advanced CT Techniques for Decreasing Radiation Dose, Reducing Sedation Requirements, and Optimizing Image Quality in Children. *Radiographics*, **2019**, 39, 709-726	5.4	25
104	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. *Medical Physics*, **2020**, 47, 2526-2536	4.4	25
103	Shape and margin-aware lung nodule classification in low-dose CT images via soft activation mapping. *Medical Image Analysis*, **2020**, 60, 101628	15.4	25
102	Predicting malignant potential of subsolid nodules: can radiomics preempt longitudinal follow up CT?. *Cancer Imaging*, **2019**, 19, 36	5.6	24
101	Quadratic Autoencoder (Q-AE) for Low-Dose CT Denoising. *IEEE Transactions on Medical Imaging*, **2020**, 39, 2035-2050	11.7	24

100	CT texture analysis of histologically proven benign and malignant lung lesions. *Medicine (United States)*, **2018**, 97, e11172	1.8	24
99	Deep learning-enabled system for rapid pneumothorax screening on chest CT. *European Journal of Radiology*, **2019**, 120, 108692	4.7	20
98	Validation of a Deep Learning Algorithm for the Detection of Malignant Pulmonary Nodules in Chest Radiographs. *JAMA Network Open*, **2020**, 3, e2017135	10.4	20
97	Variations in CT Utilization, Protocols, and Radiation Doses in COVID-19 Pneumonia: Results from 28 Countries in the IAEA Study. *Radiology*, **2021**, 298, E141-E151	20.5	20
96	Multislice CT: update on radiation and screening. *European Radiology*, **2003**, 13 Suppl 5, M129-33	8	19
95	Dose reduction for chest CT: comparison of two iterative reconstruction techniques. *Acta Radiologica*, **2015**, 56, 688-95	2	17
94	Size-specific dose estimates: Localizer or transverse abdominal computed tomography images?. *World Journal of Radiology*, **2014**, 6, 210-7	2.9	17
93	Iterative image reconstruction and its role in cardiothoracic computed tomography. *Journal of Thoracic Imaging*, **2013**, 28, 355-67	5.6	17
92	Current status and future directions in technical developments of cardiac computed tomography. *Journal of Cardiovascular Computed Tomography*, **2008**, 2, 71-80	2.8	17
91	Entrance skin dosimetry and size-specific dose estimate from pediatric chest CTA. *Journal of Cardiovascular Computed Tomography*, **2014**, 8, 97-107	2.8	15
90	Artificial intelligence in image reconstruction: The change is here. *Physica Medica*, **2020**, 79, 113-125	2.7	15
89	Computed Tomography Radiomics Can Predict Disease Severity and Outcome in Coronavirus Disease 2019 Pneumonia. *Journal of Computer Assisted Tomography*, **2020**, 44, 640-646	2.2	14
88	Semiautomatic Segmentation and Radiomics for Dual-Energy CT: A Pilot Study to Differentiate Benign and Malignant Hepatic Lesions. *American Journal of Roentgenology*, **2020**, 215, 398-405	5.4	13
87	Severity and Consolidation Quantification of COVID-19 From CT Images Using Deep Learning Based on Hybrid Weak Labels. *IEEE Journal of Biomedical and Health Informatics*, **2020**, 24, 3529-3538	7.2	13
86	Deep metric learning-based image retrieval system for chest radiograph and its clinical applications in COVID-19. *Medical Image Analysis*, **2021**, 70, 101993	15.4	13
85	Artificial intelligence matches subjective severity assessment of pneumonia for prediction of patient outcome and need for mechanical ventilation: a cohort study. *Scientific Reports*, **2021**, 11, 858	4.9	13
84	Reducing Radiation Dose and Contrast Medium Volume With Application of Dual-Energy CT in Children and Young Adults. *American Journal of Roentgenology*, **2020**, 214, 1199-1205	5.4	12
83	Imaging cardiac tumors. *Cancer Treatment and Research*, **2008**, 143, 177-96	3.5	12

82	A new technique to characterize CT scanner bow-tie filter attenuation and applications in human cadaver dosimetry simulations. *Medical Physics*, **2015**, 42, 6274-82	4.4	11
81	Development and validation of image quality scoring criteria (IQSC) for pediatric CT: a preliminary study. *Insights Into Imaging*, **2019**, 10, 95	5.6	11
80	Deep learning predicts cardiovascular disease risks from lung cancer screening low dose computed tomography. *Nature Communications*, **2021**, 12, 2963	17.4	11
79	Knowledge-Based Analysis for Mortality Prediction From CT Images. *IEEE Journal of Biomedical and Health Informatics*, **2020**, 24, 457-464	7.2	11
78	Assessment of chest CT at CTDI less than 1 mGy with iterative reconstruction techniques. *British Journal of Radiology*, **2017**, 90, 20160625	3.4	10
77	Hybrid Imaging System for Simultaneous Spiral MR and X-ray (MRX) Scans. *IEEE Access*, **2017**, 5, 1050-1061	3.5	10
76	Recent advances in cardiac computed tomography dose reduction strategies: a review of scientific evidence and technical developments. *Journal of Medical Imaging*, **2017**, 4, 031211	2.6	10
75	Pointers for optimizing radiation dose in chest CT protocols. *Journal of the American College of Radiology*, **2011**, 8, 663-5	3.5	10
74	CT of the urinary tract: turning attention to radiation dose. *Radiologic Clinics of North America*, **2008**, 46, 1-9, v	2.3	10
73	Association of AI quantified COVID-19 chest CT and patient outcome. *International Journal of Computer Assisted Radiology and Surgery*, **2021**, 16, 435-445	3.9	10
72	Quantitative lobar pulmonary perfusion assessment on dual-energy CT pulmonary angiography: applications in pulmonary embolism. *European Radiology*, **2020**, 30, 2535-2542	8	9
71	In vitro dose measurements in a human cadaver with abdomen/pelvis CT scans. *Medical Physics*, **2014**, 41, 091911	4.4	9
70	Assessment of sub-milli-sievert abdominal computed tomography with iterative reconstruction techniques of different vendors. *World Journal of Radiology*, **2016**, 8, 618-27	2.9	9
69	A multi-center study of COVID-19 patient prognosis using deep learning-based CT image analysis and electronic health records. *European Journal of Radiology*, **2021**, 139, 109583	4.7	9
68	Radiation Dose for Multiregion CT Protocols: Challenges and Limitations. *American Journal of Roentgenology*, **2019**, 213, 1100-1106	5.4	8
67	Understanding the bias in machine learning systems for cardiovascular disease risk assessment: The first of its kind review.. *Computers in Biology and Medicine*, **2022**, 142, 105204	7	8
66	Multifactorial Analysis of Mortality in Screening Detected Lung Cancer. *Journal of Oncology*, **2018**, 2018, 1296246	4.5	8
65	Case 30-2019: A 65-Year-Old Woman with Lung Cancer and Chest Pain. *New England Journal of Medicine*, **2019**, 381, 1268-1277	59.2	7

64	CT protocols and radiation doses for hematuria and urinary stones: Comparing practices in 20 countries. *European Journal of Radiology*, **2020**, 126, 108923	4.7	7
63	Contrast Administration in CT: A Patient-Centric Approach. *Journal of the American College of Radiology*, **2019**, 16, 295-301	3.5	7
62	Pointers for optimizing radiation dose in abdominal CT protocols. *Journal of the American College of Radiology*, **2011**, 8, 731-4	3.5	7
61	Clinical and imaging features predict mortality in COVID-19 infection in Iran. *PLoS ONE*, **2020**, 15, e0239519	3.7	7
60	Quantifying and leveraging predictive uncertainty for medical image assessment. *Medical Image Analysis*, **2021**, 68, 101855	15.4	7
59	Deploying Clinical Process Improvement Strategies to Reduce Motion Artifacts and Expiratory Phase Scanning in Chest CT. *Scientific Reports*, **2019**, 9, 11858	4.9	6
58	Accuracy of radiomics for differentiating diffuse liver diseases on non-contrast CT. *International Journal of Computer Assisted Radiology and Surgery*, **2020**, 15, 1727-1736	3.9	6
57	Can fully iterative reconstruction technique enable routine abdominal CT at less than 1 mSv?. *European Journal of Radiology Open*, **2019**, 6, 225-230	2.6	6
56	Bias Investigation in Artificial Intelligence Systems for Early Detection of Parkinson's Disease: A Narrative Review.. *Diagnostics*, **2022**, 12,	3.8	6
55	Inter-Variability Study of COVLIAS 1.0: Hybrid Deep Learning Models for COVID-19 Lung Segmentation in Computed Tomography. *Diagnostics*, **2021**, 11,	3.8	6
54	Radiation dose monitoring in computed tomography: Status, options and limitations. *Physica Medica*, **2020**, 79, 1-15	2.7	6
53	AI-based improvement in lung cancer detection on chest radiographs: results of a multi-reader study in NLST dataset. *European Radiology*, **2021**, 31, 9664-9674	8	6
52	Can Dual-Energy Computed Tomography Quantitative Analysis and Radiomics Differentiate Normal Liver From Hepatic Steatosis and Cirrhosis?. *Journal of Computer Assisted Tomography*, **2020**, 44, 223-229	2.2	5
51	Reliability of body size measurements obtained at autopsy: impact on the pathologic assessment of the heart. *Forensic Science, Medicine, and Pathology*, **2016**, 12, 139-45	1.5	5
50	Quantification of interstitial fluid on whole body CT: comparison with whole body autopsy. *Forensic Science, Medicine, and Pathology*, **2015**, 11, 488-96	1.5	5
49	Accurate model-based high resolution cardiac image reconstruction in dual source CT **2009**,		5
48	Upper-Bound on Dose Reduction in CT Reconstruction for Nodule Detection. *IEEE Access*, **2016**, 4, 4247-4253	3.5	4
47	Comparison of Measured and Estimated CT Organ Doses for Modulated and Fixed Tube Current:: A Human Cadaver Study. *Academic Radiology*, **2016**, 23, 634-42	4.3	4

46	Submillisievert chest dual energy computed tomography: a pilot study. *British Journal of Radiology*, **2018**, 91, 20170735	3.4	4
45	A variational approach for reconstructing low dose images in clinical helical CT **2010**,		4
44	Artificial intelligence-based vessel suppression for detection of sub-solid nodules in lung cancer screening computed tomography. *Quantitative Imaging in Medicine and Surgery*, **2021**, 11, 1134-1143	3.6	4
43	Multicenter Assessment of CT Pneumonia Analysis Prototype for Predicting Disease Severity and Patient Outcome. *Journal of Digital Imaging*, **2021**, 34, 320-329	5.3	4
42	COVLIAS 1.0 vs. MedSeg: Artificial Intelligence-Based Comparative Study for Automated COVID-19 Computed Tomography Lung Segmentation in Italian and Croatian Cohorts.. *Diagnostics*, **2021**, 11,	3.8	4
41	Point Organ Radiation Dose in Abdominal CT: Effect of Patient Off-Centering in an Experimental Human Cadaver Study. *Radiation Protection Dosimetry*, **2017**, 175, 440-449	0.9	3
40	Low-Dose Computed Tomography for Lung Cancer Screening: The Protocol and The Dose. *Seminars in Roentgenology*, **2017**, 52, 132-136	0.8	3
39	Multiphase abdomen-pelvis CT in women of childbearing potential (WOCBP): Justification and radiation dose. *Medicine (United States)*, **2020**, 99, e18485	1.8	3
38	Allergic-like contrast reactions in the ED: Incidence, management, and impact on patient disposition. *American Journal of Emergency Medicine*, **2018**, 36, 825-828	2.9	3
37	Radiomic features of primary tumor by lung cancer stage: analysis in mutated non-small cell lung cancer. *Translational Lung Cancer Research*, **2020**, 9, 1441-1451	4.4	3
36	Prediction of burden and management of renal calculi from whole kidney radiomics: a multicenter study. *Abdominal Radiology*, **2021**, 46, 2097-2106	3	3
35	Implications of iodinated contrast media extravasation in the emergency department. *American Journal of Emergency Medicine*, **2018**, 36, 294-296	2.9	3
34	Correction for 3D Convolutional Encoder-Decoder Network for Low-Dose CT via Transfer Learning From a 2D Trained Network[Jun 18 1522-1534]. *IEEE Transactions on Medical Imaging*, **2018**, 37, 2750-2750	11.7	3
33	Bedside Chest Radiographs in the Intensive care Setting: Wireless Direct Radiography Compared to Computed Radiography. *Current Problems in Diagnostic Radiology*, **2018**, 47, 397-403	1.6	2
32	Cause determination of missed lung nodules and impact of reader training and education: Simulation study with nodule insertion software. *Journal of Cancer Research and Therapeutics*, **2020**, 16, 780-787	1.2	2
31	A mixed reality approach for stereo-tomographic quantification of lung nodules. *Journal of X-Ray Science and Technology*, **2016**, 24, 615-25	2.1	2
30	Low contrast volume dual-energy CT of the chest: Quantitative and qualitative assessment. *Clinical Imaging*, **2021**, 69, 305-310	2.7	2
29	Process improvement for reducing side discrepancies in radiology reports. *Acta Radiologica Open*, **2018**, 7, 2058460118794727	1.2	2

28	Comparison of deep learning, radiomics and subjective assessment of chest CT findings in SARS-CoV-2 pneumonia. *Clinical Imaging*, **2021**, 80, 58-66	2.7	2
27	Current status of multidetector computed tomography urography in imaging of the urinary tract. *Current Problems in Diagnostic Radiology*, **2002**, 31, 210-21	1.6	2
26	Four Types of Multiclass Frameworks for Pneumonia Classification and Its Validation in X-ray Scans Using Seven Types of Deep Learning Artificial Intelligence Models.. *Diagnostics*, **2022**, 12,	3.8	2
25	Cardiovascular disease detection using machine learning and carotid/femoral arterial imaging frameworks in rheumatoid arthritis patients.. *Rheumatology International*, **2022**, 42, 215	3.6	1
24	Evaluation of GPU-Based CT Reconstruction for Morbidly Obese Patients **2017**, 4,		1
23	Complex Relationship Between Artificial Intelligence and CT Radiation Dose. *Academic Radiology*, **2021**,	4.3	1
22	Accuracy of radiomics for differentiating diffuse liver diseases on non-contrast CT **2020**, 15, 1727		1
21	Relation between age and CT radiation doses: Dose trends in 705 pediatric head CT. *European Journal of Radiology*, **2020**, 130, 109138	4.7	1
20	Quantitative Chest CT in COPD: Can Deep Learning Enable the Transition?. *Radiology: Cardiothoracic Imaging*, **2021**, 3, e210044	8.3	1
19	Investigating centering, scan length, and arm position impact on radiation dose across 4 countries from 4 continents during pandemic: Mitigating key radioprotection issues. *Physica Medica*, **2021**, 84, 125-131	2.7	1
18	Deep Interactive Denoiser (DID) for X-Ray Computed Tomography. *IEEE Transactions on Medical Imaging*, **2021**, 40, 2965-2975	11.7	1
17	Use of radiomics to differentiate left atrial appendage thrombi and mixing artifacts on single-phase CT angiography. *International Journal of Cardiovascular Imaging*, **2021**, 37, 2071-2078	2.5	1
16	Radiation Dose Reduction in Kidney Stone CT: A Randomized, Facility-Based Intervention. *Journal of the American College of Radiology*, **2021**, 18, 1394-1404	3.5	1
15	National reference levels of CT procedures dedicated for treatment planning in radiation oncology.. *Physica Medica*, **2022**, 96, 123-129	2.7	1
14	Accurate auto-labeling of chest X-ray images based on quantitative similarity to an explainable AI model.. *Nature Communications*, **2022**, 13, 1867	17.4	1
13	Predictive values of AI-based triage model in suboptimal CT pulmonary angiography.. *Clinical Imaging*, **2022**, 86, 25-30	2.7	1
12	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. *IEEE Transactions on Instrumentation and Measurement*, **2022**, 1-1	5.2	1
11	Potentials of the Potential: The "Lower, Slower, and Brighter" Mantra. *Journal of the American College of Radiology*, **2018**, 15, 998-999	3.5	

List of Publications

10	Response to Letter to the Editor: Acute abdominal pain: value of non-contrast enhanded ultra-low-dose multi-detector row CT as a substitute for abdominal radiographs (N. Buls, K. Nieboer, J. de Mey). *Emergency Radiology*, **2010**, 17, 167-168	3
9	Radiation Dose Considerations in Cardiac CT31-42	
8	Protocols for Multislice Helical Computed Tomography: The Fundamentals. *American Journal of Roentgenology*, **2006**, 187, W560-W560	5.4
7	Cardiovascular MRI: Physical Principles to Practical Protocols. *American Journal of Roentgenology*, **2006**, 187, W443-W443	5.4
6	Optimization of paranasal sinus CT procedure: Ultra-low dose CT as a roadmap for pre-functional endoscopic sinus surgery. *Physica Medica*, **2020**, 78, 195-200	2.7
5	Reply to "Quality Control of Radiomics Study to Differentiate Benign and Malignant Hepatic Lesions". *American Journal of Roentgenology*, **2021**, 216, W13	5.4
4	PRACTICAL CHALLENGES WITH IMAGING COVID-19 IN BRAZIL: MITIGATION IN AND BEYOND THE PANDEMIC. *Radiation Protection Dosimetry*, **2021**, 195, 92-98	0.9
3	Viewing Imaging Studies: How Patient Location and Imaging Site Affect Referring Physicians. *Journal of Digital Imaging*, **2020**, 33, 334-340	5.3
2	Cardiovascular Disease Risk Improves COVID-19 Patient Outcome Prediction. *Lecture Notes in Computer Science*, **2021**, 467-476	0.9
1	Practical issues in abdominal PET/CT8-18	