Radhe Mohan

List of Publications by Year
in descending order

120 papers	6,403 citations	61984 43 h-index	71685 76 g-index
124 all docs	124 docs citations	124 times ranked	4512 citing authors

#	Article	IF	Citations
1	Proton therapy â€“ Present and future. Advanced Drug Delivery Reviews, 2017, 109, 26-44.	13.7	303
2	Robust optimization of intensity modulated proton therapy. Medical Physics, 2012, 39, 1079-1091.	3.0	282
3	Delta-radiomics features for the prediction of patient outcomes in nonâ€“small cell lung cancer. Scientific Reports, 2017, 7, 588.	3.3	254
4	Bayesian Adaptive Randomization Trial of Passive Scattering Proton Therapy and Intensity-Modulated Photon Radiotherapy for Locally Advanced Nonâ€“Small-Cell Lung Cancer. Journal of Clinical Oncology, 2018, 36, 1813-1822.	1.6	243
5	Use of deformed intensity distributions for on-line modification of image-guided IMRT to account for interfractional anatomic changes. International Journal of Radiation Oncology Biology Physics, 2005, 61, 1258-1266.	0.8	218
6	Clinical evidence of variable proton biological effectiveness in pediatric patients treated for ependymoma. Radiotherapy and Oncology, 2016, 121, 395-401.	0.6	210
7	Report of the <scp>AAPM TG</scp>â€256 on the relative biological effectiveness of proton beams in radiation therapy. Medical Physics, 2019, 46, e53-e78.	3.0	189
8	Intensity-modulated proton beam therapy (IMPT) versus intensity-modulated photon therapy (IMRT) for patients with oropharynx cancer â€“ A case matched analysis. Radiotherapy and Oncology, 2016, 120, 48-55.	0.6	177
9	Risk Factors for Pericardial Effusion in Inoperable Esophageal Cancer Patients Treated With Definitive Chemoradiation Therapy. International Journal of Radiation Oncology Biology Physics, 2008, 70, 707-714.	0.8	171
10	The M. D. Anderson proton therapy system. Medical Physics, 2009, 36, 4068-4083.	3.0	160
11	Randomized Phase IIB Trial of Proton Beam Therapy Versus Intensity-Modulated Radiation Therapy for Locally Advanced Esophageal Cancer. Journal of Clinical Oncology, 2020, 38, 1569-1579.	1.6	158
12	Phase 2 study of highâ€dose proton therapy with concurrent chemotherapy for unresectable stage III nonsmall cell lung cancer. Cancer, 2011, 117, 4707-4713.	4.1	157
13	National Cancer Institute Workshop on Proton Therapy for Children: Considerations Regarding Brainstem Injury. International Journal of Radiation Oncology Biology Physics, 2018, 101, 152-168.	0.8	138
14	Effectiveness of robust optimization in intensityâ€modulated proton therapy planning for head and neck cancers. Medical Physics, 2013, 40, 051711.	3.0	135
15	Parotid Gland Dose in Intensity-Modulated Radiotherapy for Head and Neck Cancer: Is What You Plan What You Get?. International Journal of Radiation Oncology Biology Physics, 2007, 69, 1290-1296.	0.8	130
16	Multifield Optimization Intensity Modulated Proton Therapy for Head and Neck Tumors: A Translation to Practice. International Journal of Radiation Oncology Biology Physics, 2014, 89, 846-853.	0.8	128
17	Four-Dimensional Computed Tomographyâ€“Based Treatment Planning for Intensity-Modulated Radiation Therapy and Proton Therapy for Distal Esophageal Cancer. International Journal of Radiation Oncology Biology Physics, 2008, 72, 278-287.	0.8	123
18	Intensity Modulated Proton Therapy Versus Intensity Modulated Photon Radiation Therapy for Oropharyngeal Cancer: First Comparative Results of Patient-Reported Outcomes. International Journal of Radiation Oncology Biology Physics, 2016, 95, 1107-1114.	0.8	121

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19	Proton Beam Radiotherapy and Concurrent Chemotherapy for Unresectable Stage III Nonâ€"Small Cell Lung Cancer. JAMA Oncology, 2017, 3, e172032.	7.1	119
20	Spatial mapping of the biologic effectiveness of scanned particle beams: towards biologically optimized particle therapy. Scientific Reports, 2015, 5, 9850.	3.3	117
21	Severe lymphopenia during neoadjuvant chemoradiation for esophageal cancer: A propensity matched analysis of the relative risk of proton versus photon-based radiation therapy. Radiotherapy and Oncology, 2018, 128, 154-160.	0.6	109
22	Proton Beam Therapy and Concurrent Chemotherapy for Esophageal Cancer. International Journal of Radiation Oncology Biology Physics, 2012, 83, e345-e351.	0.8	104
23	Analysis of the trackâ€•and doseâ€averaged LET and LET spectra in proton therapy using the <scp>geant</scp>4 Monte Carlo code. Medical Physics, 2015, 42, 6234-6247.	3.0	103
24	Clinical Outcomes and Patterns of Disease Recurrence After Intensity Modulated Proton Therapy for Oropharyngeal Squamous Carcinoma. International Journal of Radiation Oncology Biology Physics, 2016, 95, 360-367.	0.8	88
25	Stereotactic radiotherapy for lung cancer using a flattening filter free Clinac. Journal of Applied Clinical Medical Physics, 2009, 10, 14-21.	1.9	87
26	Proton therapy for adults with mediastinal lymphomas: the International Lymphoma Radiation Oncology Group guidelines. Blood, 2018, 132, 1635-1646.	1.4	86
27	â€œRadiobiology of Proton Therapyâ€• Results of an international expert workshop. Radiotherapy and Oncology, 2018, 128, 56-67.	0.6	85
28	Toward a model-based patient selection strategy for proton therapy: External validation of photon-derived normal tissue complication probability models in a head and neck proton therapy cohort. Radiotherapy and Oncology, 2016, 121, 381-386.	0.6	78
29	Proton therapy reduces the likelihood of high-grade radiation-induced lymphopenia in glioblastoma patients: phase II randomized study of protons vs photons. Neuro-Oncology, 2021, 23, 284-294.	1.2	78
30	Impact of respiratory motion on worst-case scenario optimized intensity modulated proton therapy for lung cancers. Practical Radiation Oncology, 2015, 5, e77-e86.	2.1	75
31	PTV-based IMPT optimization incorporating planning risk volumes vs robust optimization. Medical Physics, 2013, 40, 021709.	3.0	74
32	Robust optimization in intensity-modulated proton therapy to account for anatomy changes in lung cancer patients. Radiotherapy and Oncology, 2015, 114, 367-372.	0.6	72
33	Radiobiological issues in proton therapy. Acta OncolÃ³gica, 2017, 56, 1367-1373.	1.8	71
34	Adaptive/Nonadaptive Proton Radiation Planning and Outcomes in a Phase II Trial for Locally Advanced Non-small Cell Lung Cancer. International Journal of Radiation Oncology Biology Physics, 2012, 84, 1093-1100.	0.8	70
35	Preliminary evaluation of multifield and single-field optimization for the treatment planning of spot-scanning proton therapy of head and neck cancer. Medical Physics, 2013, 40, 081709.	3.0	68
36	High lymphocyte count during neoadjuvant chemoradiotherapy is associated with improved pathologic complete response in esophageal cancer. Radiotherapy and Oncology, 2018, 128, 584-590.	0.6	58

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37	Iterative solution methods for beam angle and fluence map optimization in intensity modulated radiation therapy planning. OR Spectrum, 2008, 30, 289-309.	3.4	57
38	Dosimetric benefits of robust treatment planning for intensity modulated proton therapy for base-of-skull cancers. Practical Radiation Oncology, 2014, 4, 384-391.	2.1	56
39	Empowering Intensity Modulated Proton Therapy Through Physics and Technology: An Overview. International Journal of Radiation Oncology Biology Physics, 2017, 99, 304-316.	0.8	56
40	Therapy-Resistant Cancer Stem Cells Have Differing Sensitivity to Photon versus Proton Beam Radiation. Journal of Thoracic Oncology, 2013, 8, 1484-1491.	1.1	55
41	Phase 2 Study of Stereotactic Body Radiation Therapy and Stereotactic Body Proton Therapy for High-Risk, Medically Inoperable, Early-Stage Non-Small Cell Lung Cancer. International Journal of Radiation Oncology Biology Physics, 2018, 101, 558-563.	0.8	55
42	The impact of the effective dose to immune cells on lymphopenia and survival of esophageal cancer after chemoradiotherapy. Radiotherapy and Oncology, 2020, 146, 180-186.	0.6	54
43	Statistical Assessment of Proton Treatment Plans Under Setup and Range Uncertainties. International Journal of Radiation Oncology Biology Physics, 2013, 86, 1007-1013.	0.8	53
44	The relationship of lymphocyte recovery and prognosis of esophageal cancer patients with severe radiation-induced lymphopenia after chemoradiation therapy. Radiotherapy and Oncology, 2019, 133, 9-15.	0.6	50
45	A review of proton therapy â€“ Current status and future directions. Precision Radiation Oncology, 2022, 6, 164-176.	1.1	45
46	Prediction of Severe Lymphopenia During Chemoradiation Therapy for Esophageal Cancer: Development and Validation of a Pretreatment Nomogram. Practical Radiation Oncology, 2020, 10, e16-e26.	2.1	42
47	Genetic variants of the LIN28B gene predict severe radiation pneumonitis in patients with non-small cell lung cancer treated with definitive radiation therapy. European Journal of Cancer, 2014, 50, 1706-1716.	2.8	38
48	Long-term outcome of phase I/II prospective study of dose-escalated proton therapy for early-stage non-small cell lung cancer. Radiotherapy and Oncology, 2017, 122, 274-280.	0.6	38
49	Oxygen depletion in FLASH ultraâ€high‐doseâ€rate radiotherapy: A molecular dynamics simulation. Medical Physics, 2020, 47, 6551-6561.	3.0	38
50	Spatial Dose Patterns Associated With Radiation Pneumonitis in a Randomized Trial Comparing Intensity-Modulated Photon Therapy With Passive Scattering Proton Therapy for Locally Advanced Non-Small Cell Lung Cancer. International Journal of Radiation Oncology Biology Physics, 2019, 104, 1124-1132.	0.8	37
51	Clinical and Dosimetric Factors Predicting Grade â‰¥2 Radiation Pneumonitis After Postoperative Radiotherapy for Patients With Non-Small Cell Lung Carcinoma. International Journal of Radiation Oncology Biology Physics, 2018, 101, 919-926.	0.8	34
52	RBE Model-Based Biological Dose Optimization for Proton Radiobiology Studies. International Journal of Particle Therapy, 2018, 5, 160-171.	1.8	31
53	Using the Proton Energy Spectrum and Microdosimetry to Model Proton Relative Biological Effectiveness. International Journal of Radiation Oncology Biology Physics, 2019, 104, 316-324.	0.8	28
54	Degradation of proton depth dose distributions attributable to microstructures in lungâ€equivalent material. Medical Physics, 2015, 42, 6425-6432.	3.0	27

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55	Prospective Study of Patient-Reported Symptom Burden in Patients With Nonâ€"Small-Cell Lung Cancer Undergoing Proton or Photon Chemoradiation Therapy. Journal of Pain and Symptom Management, 2016, 51, 832-838.	1.2	27
56	Potential for Improvements in Robustness and Optimality of Intensity-Modulated Proton Therapy for Lung Cancer with 4-Dimensional Robust Optimization. Cancers, 2019, 11, 35.	3.7	27
57	A Critical Review of LET-Based Intensity-Modulated Proton Therapy Plan Evaluation and Optimization for Head and Neck Cancer Management. International Journal of Particle Therapy, 2021, 8, 36-49.	1.8	27
58	Intensity-Modulated Proton Therapy Adaptive Planning for Patients with Oropharyngeal Cancer. International Journal of Particle Therapy, 2017, 4, 26-34.	1.8	26
59	Radiation-induced lymphopenia during chemoradiation therapy for non-small cell lung cancer is linked with age, lung V5, and XRCC1 rs25487 genotypes in lymphocytes. Radiotherapy and Oncology, 2021, 154, 187-193.	0.6	25
60	Roadmap: helium ion therapy. Physics in Medicine and Biology, 2022, 67, 15TR02.	3.0	24
61	Validation of Effective Dose as a Better Predictor of Radiation Pneumonitis Risk Than Mean Lung Dose: Secondary Analysis of a Randomized Trial. International Journal of Radiation Oncology Biology Physics, 2019, 103, 403-410.	0.8	23
62	Nonhomologous End Joining Is More Important Than Proton Linear Energy Transfer in Dictating Cell Death. International Journal of Radiation Oncology Biology Physics, 2019, 105, 1119-1125.	0.8	22
63	NTCP Models for Severe Radiation Induced Dermatitis After IMRT or Proton Therapy for Thoracic Cancer Patients. Frontiers in Oncology, 2020, 10, 344.	2.8	22
64	New Strategies in Radiation Therapy: Exploiting the Full Potential of Protons. Clinical Cancer Research, 2013, 19, 6338-6343.	7.0	21
65	Radiation-Associated Lymphopenia and Outcomes of Patients with Unresectable Hepatocellular Carcinoma Treated with Radiotherapy. Journal of Hepatocellular Carcinoma, 2021, Volume 8, 57-69.	3.7	21
66	Optimization of Monte Carlo particle transport parameters and validation of a novel high throughput experimental setup to measure the biological effects of particle beams. Medical Physics, 2017, 44, 6061-6073.	3.0	20
67	Proton Therapy: Clinical Gains through Current and Future Treatment Programs. Frontiers of Radiation Therapy and Oncology, 2011, 43, 440-464.	1.4	19
68	Evaluating proton stereotactic body radiotherapy to reduce chest wall dose in the treatment of lung cancer. Medical Dosimetry, 2013, 38, 442-447.	0.9	19
69	Comparison of linear and nonlinear programming approaches for â€œworst case doseâ€•and â€œminmaxâ€• robust optimization of intensityâ€modulated proton therapy dose distributions. Journal of Applied Clinical Medical Physics, 2017, 18, 15-25.	1.9	19
70	18F-Fluorodeoxyglucose Positron Emission Tomography Can Quantify and Predict Esophageal Injury During Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2016, 96, 670-678.	0.8	17
71	Differences in lung injury after IMRT or proton therapy assessed by 18FDG PET imaging. Radiotherapy and Oncology, 2018, 128, 147-153.	0.6	17
72	Mixed Effect Modeling of Dose and Linear Energy Transfer Correlations With Brain Image Changes After Intensity Modulated Proton Therapy for Skull Base Head and Neck Cancer. International Journal of Radiation Oncology Biology Physics, 2021, 111, 684-692.	0.8	17

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73	Patterns of Local-Regional Failure After Intensity Modulated Radiation Therapy or Passive Scattering Proton Therapy With Concurrent Chemotherapy for Non-Small Cell Lung Cancer. International Journal of Radiation Oncology Biology Physics, 2019, 103, 123-131.	0.8	16
74	Design and validation of a synchrotron proton beam line for FLASH radiotherapy preclinical research experiments. Medical Physics, 2022, 49, 497-509.	3.0	16
75	On the interplay between dosiomics and genomics in radiation-induced lymphopenia of lung cancer patients. Radiotherapy and Oncology, 2022, 167, 219-225.	0.6	16
76	Objectively Quantifying Radiation Esophagitis With Novel Computed Tomographyâ€“Based Metrics. International Journal of Radiation Oncology Biology Physics, 2016, 94, 385-393.	0.8	15
77	A Novel Methodology using CT Imaging Biomarkers to Quantify Radiation Sensitivity in the Esophagus with Application to Clinical Trials. Scientific Reports, 2017, 7, 6034.	3.3	15
78	Radiation Pneumonitis in Thoracic Cancer Patients: Multi-Center Voxel-Based Analysis. Cancers, 2021, 13, 3553.	3.7	15
79	A novel platform simulating irregular motion to enhance assessment of respiration-correlated radiation therapy procedures. Journal of Applied Clinical Medical Physics, 2005, 6, 13-21.	1.9	14
80	Monte Carlo simulations of ³He ion physical characteristics in a water phantom and evaluation of radiobiological effectiveness. Medical Physics, 2016, 43, 761-776.	3.0	13
81	A model for relative biological effectiveness of therapeutic proton beams based on a global fit of cell survival data. Scientific Reports, 2017, 7, 8340.	3.3	13
82	Mapping the Relative Biological Effectiveness of Proton, Helium and Carbon Ions with High-Throughput Techniques. Cancers, 2020, 12, 3658.	3.7	13
83	An Automatic Approach for Satisfying Dose-Volume Constraints in Linear Fluence Map Optimization for IMPT. Journal of Cancer Therapy, 2014, 05, 198-207.	0.4	13
84	Probing thoracic dose patterns associated to pericardial effusion and mortality in patients treated with photons and protons for locally advanced non-small-cell lung cancer. Radiotherapy and Oncology, 2021, 160, 148-158.	0.6	12
85	A biological effectâ€guided optimization approach using beam distalâ€edge avoidance for intensityâ€modulated proton therapy. Medical Physics, 2020, 47, 3816-3825.	3.0	11
86	Radiation-Induced Lymphopenia Risks of Photon Versus Proton Therapy for Esophageal Cancer Patients. International Journal of Particle Therapy, 2021, 8, 17-27.	1.8	11
87	A framework for voxelâ€based assessment of biological effect after proton radiotherapy in pediatric brain cancer patients using multiâ€modal imaging. Medical Physics, 2021, 48, 4110-4121.	3.0	11
88	The effect of non-ionizing excitations on the diffusion of ion species and inter-track correlations in FLASH ultra-high dose rate radiotherapy. Physics in Medicine and Biology, 2022, 67, 105005.	3.0	11
89	Patient-Specific Lymphocyte Loss Kinetics as Biomarker of Spleen Dose in Patients Undergoing Radiation Therapy for Upper Abdominal Malignancies. Advances in Radiation Oncology, 2021, 6, 100545.	1.2	10
90	Radiation-Induced Esophagitis in Non-Small-Cell Lung Cancer Patients: Voxel-Based Analysis and NTCP Modeling. Cancers, 2022, 14, 1833.	3.7	9

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91	Renormalization of radiobiological response functions by energy loss fluctuations and complexities in chromosome aberration induction: deactivation theory for proton therapy from cells to tumor control. European Physical Journal D, 2019, 73, 1.	1.3	8
92	Assessment of Prognostic Value of High-Sensitivity Cardiac Troponin T for Early Prediction of Chemoradiation Therapy-Induced Cardiotoxicity in Patients with Non-Small Cell Lung Cancer: A Secondary Analysis of a Prospective Randomized Trial. International Journal of Radiation Oncology Biology Physics, 2021, 111, 907-916.	0.8	8
93	Exploring the advantages of intensity-modulated proton therapy: experimental validation of biological effects using two different beam intensity-modulation patterns. Scientific Reports, 2020, 10, 3199.	3.3	7
94	Geometric and dosimetric accuracy of deformable image registration between averageâ€intensity images for 4DCTâ€based adaptive radiotherapy for nonâ€small cell lung cancer. Journal of Applied Clinical Medical Physics, 2021, 22, 156-167.	1.9	7
95	Identifying Individualized Risk Profiles for Radiotherapy-Induced Lymphopenia Among Patients With Esophageal Cancer Using Machine Learning. JCO Clinical Cancer Informatics, 2021, 5, 1044-1053.	2.1	7
96	National Effort to Re-Establish Heavy Ion Cancer Therapy in the United States. Frontiers in Oncology, 0, 12, .	2.8	7
97	Dueling Technologies: In regard to Ling et al. (Int J Radiat Oncol Biol Phys 2008;72:575-581). International Journal of Radiation Oncology Biology Physics, 2009, 75, 6-7.	0.8	6
98	Severe lymphopenia acquired during chemoradiotherapy for esophageal cancer: Incidence and external validation of a prediction model. Radiotherapy and Oncology, 2021, 163, 192-198.	0.6	6
99	A hybrid deep learning model for forecasting lymphocyte depletion during radiation therapy. Medical Physics, 2022, 49, 3507-3522.	3.0	6
100	Impact of respiratory motion on variable relative biological effectiveness in 4D-dose distributions of proton therapy. Acta OncolÃ³gica, 2017, 56, 1420-1427.	1.8	5
101	Differences in Normal Tissue Response in the Esophagus Between Proton and Photon Radiation Therapy for Non-Small Cell Lung Cancer Using InÂVivo Imaging Biomarkers. International Journal of Radiation Oncology Biology Physics, 2017, 99, 1013-1020.	0.8	5
102	The Potential of Heavy-Ion Therapy to Improve Outcomes for Locally Advanced Non-Small Cell Lung Cancer. Frontiers in Oncology, 2017, 7, 201.	2.8	5
103	Using FFF beams to improve the therapeutic ratio of lung SBRT. Journal of Radiotherapy in Practice, 2021, 20, 419-425.	0.5	5
104	A DNA damage multiscale model for NTCP in proton and hadron therapy. Medical Physics, 2020, 47, 2005-2012.	3.0	5
105	Impact of RBE variations on risk estimates of temporal lobe necrosis in patients treated with intensity-modulated proton therapy for head and neck cancer. Acta OncolÃ³gica, 2022, 61, 215-222.	1.8	5
106	Prognostic impact of lymphopenia and neutrophil-lymphocyte ratio for patients with anal squamous cell carcinoma. Journal of Gastrointestinal Oncology, 2021, 12, 2412-2422.	1.4	4
107	Monte Carlo study of the mechanism of protonâ€boron fusion therapy. Medical Physics, 2021, 49, 579.	3.0	4
108	A simple model for calculating relative biological effectiveness of X-rays and gamma radiation in cell survival. British Journal of Radiology, 2020, 93, 20190949.	2.2	3

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109	The Reality of Randomized Controlled Trials for Assessing the Benefit of Proton Therapy: Critically Examining the Intent-to-Treat Principle in the Presence of Insurance Denial. Advances in Radiation Oncology, 2021, 6, 100635.	1.2	3
110	Reflections on beam configuration optimization for intensity-modulated proton therapy. Physics in Medicine and Biology, 2022, , .	3.0	3
111	Comparing 2 Monte Carlo Systems in Use for Proton Therapy Research. International Journal of Particle Therapy, 2019, 6, 18-27.	1.8	2
112	Derivation of Scatter Kernel in CBCT Imaging System. , 2006, , .		1
113	Comment on â€œMonte Carlo evaluations of the absorbed dose and quality dependence of Al₂O₃ in radiotherapy photon beamsâ€•[Med. Phys. 36(10), 4421â€“4424 (2009)]. Medical Physics, 2015, 42, 2648-2649.	3.0	1
114	In Reply to Dahele et al. International Journal of Radiation Oncology Biology Physics, 2018, 101, 493-494.	0.8	1
115	Monte Carlo evaluation of target dose coverage in lung stereotactic body radiation therapy with flattening filter-free beams. Journal of Radiotherapy in Practice, 2022, 21, 81-87.	0.5	1
116	A new approach to modeling the microdosimetry of proton therapy beams. Medical Physics, 2020, 47, 3184-3190.	3.0	1
117	Impact of intra-fractional motion on dose distributions in lung IMRT. Journal of Radiotherapy in Practice, 2021, 20, 12-16.	0.5	1
118	Principles of proton beam therapy. , 2021, , 14-24.e3.		1
119	In Reply to Mihaildis. International Journal of Radiation Oncology Biology Physics, 2014, 88, 754.	0.8	0
120	Dedicating â€œEmpowering Intensity Modulated Proton Therapy Through Physics and Technology: An Overviewâ€•to the Memory of Dr Michael Goitein. International Journal of Radiation Oncology Biology Physics, 2018, 100, 809-810.	0.8	0