Christian P Karger

List of Publications by Year
in descending order

87 papers	3,330 citations	147801 31 h-index	149698 56 g-index
88 all docs	88 docs citations	88 times ranked	2600 citing authors

#	Article	IF	Citations
1	Results of carbon ion radiotherapy in 152 patients. International Journal of Radiation Oncology Biology Physics, 2004, 58, 631-640.	0.8	279
2	Effectiveness of Carbon Ion Radiotherapy in the Treatment of Skull-Base Chordomas. International Journal of Radiation Oncology Biology Physics, 2007, 68, 449-457.	0.8	276
3	Carbon ion radiotherapy of skull base chondrosarcomas. International Journal of Radiation Oncology Biology Physics, 2007, 67, 171-177.	0.8	177
4	Dosimetry for ion beam radiotherapy. Physics in Medicine and Biology, 2010, 55, R193-R234.	3.0	163
5	Therapy strategies for locally advanced adenoid cystic carcinomas using modern radiation therapy techniques. Cancer, 2005, 104, 338-344.	4.1	149
6	RBE and related modeling in carbon-ion therapy. Physics in Medicine and Biology, 2018, 63, 01TR02.	3.0	133
7	Accuracy of a commercial optical 3D surface imaging system for realignment of patients for radiotherapy of the thorax. Physics in Medicine and Biology, 2007, 52, 3949-3963.	3.0	112
8	A system for three-dimensional dosimetric verification of treatment plans in intensity-modulated radiotherapy with heavy ions. Medical Physics, 1999, 26, 2125-2132.	3.0	104
9	Three-dimensional accuracy and interfractional reproducibility of patient fixation and positioning using a stereotactic head mask system. International Journal of Radiation Oncology Biology Physics, 2001, 49, 1493-1504.	0.8	103
10	Carbon Ion Radiotherapy for Chordomas and Low-Grade Chondrosarcomas of the Skull Base. Strahlentherapie Und Onkologie, 2003, 179, 598-605.	2.0	91
11	ESTRO ACROP: Technology for precision small animal radiotherapy research: Optimal use and challenges. Radiotherapy and Oncology, 2018, 126, 471-478.	0.6	88
12	Radiation tolerance of the rat spinal cord after 6 and 18 fractions of photons and carbon ions: Experimental results and clinical implications. International Journal of Radiation Oncology Biology Physics, 2006, 66, 1488-1497.	0.8	84
13	Carbon ion radiation therapy for high-risk meningiomas. Radiotherapy and Oncology, 2010, 95, 54-59.	0.6	75
14	Carbon ion radiotherapy for pediatric patients and young adults treated for tumors of the skull base. Cancer, 2009, 115, 1348-1355.	4.1	73
15	Changes in salivary gland function after radiotherapy of head and neck tumors measured by quantitative pertechnetate scintigraphy: Comparison of intensity-modulated radiotherapy and conventional radiation therapy with and without Amifostine. International Journal of Radiation Oncology Biology Physics, 2007, 67, 651-659.	0.8	72
16	Accuracy of device-specific 2D and 3D image distortion correction algorithms for magnetic resonance imaging of the head provided by a manufacturer. Physics in Medicine and Biology, 2006, 51, N253-N261.	3.0	57
17	The future of heavy ion radiotherapy. Medical Physics, 2008, 35, 5653-5663.	3.0	55
18	Prediction of radiation-induced changes in the lung after stereotactic body radiation therapy of nonâ€“small-cell lung cancer. International Journal of Radiation Oncology Biology Physics, 2007, 67, 768-774.	0.8	53

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19	Determination of the proton RBE in the rat spinal cord: Is there an increase towards the end of the spread-out Bragg peak?. Radiotherapy and Oncology, 2018, 128, 115-120.	0.6	53
20	Radiobiological issues in prospective carbon ion therapy trials. Medical Physics, 2018, 45, e1096-e1110.	3.0	49
21	Molecular Ultrasound Imaging of Early Vascular Response in Prostate Tumors Irradiated with Carbon Ions. Neoplasia, 2009, 11, 856-863.	5.3	48
22	Temporal Lobe Reactions After Radiotherapy With Carbon Ions: Incidence and Estimation of the Relative Biological Effectiveness by the Local Effect Model. International Journal of Radiation Oncology Biology Physics, 2011, 80, 815-823.	0.8	46
23	Relative Biological Effectiveness of Carbon Ions for Local Tumor Control of a Radioresistant Prostate Carcinoma in the Rat. International Journal of Radiation Oncology Biology Physics, 2011, 79, 239-246.	0.8	45
24	Stereotactic imaging for radiotherapy: accuracy of CT, MRI, PET and SPECT. Physics in Medicine and Biology, 2003, 48, 211-221.	3.0	42
25	Carbon ion radiotherapy decreases the impact of tumor heterogeneity on radiation response in experimental prostate tumors. Cancer Letters, 2016, 378, 97-103.	7.2	41
26	Radiation Tolerance of the Rat Spinal Cord after Single and Split Doses of Photons and Carbon Ions1. Radiation Research, 2003, 160, 536-542.	1.5	39
27	Assessment of RBE-Weighted Dose Models for Carbon Ion Therapy Toward Modernization of Clinical Practice at HIT: InÂVitro, inÂVivo, and in Patients. International Journal of Radiation Oncology Biology Physics, 2020, 108, 779-791.	0.8	39
28	Current Status and New Developments in Ion Therapy. Strahlentherapie Und Onkologie, 2007, 183, 295-300.	2.0	38
29	Does the uncertainty in relative biological effectiveness affect patient treatment in proton therapy?. Radiotherapy and Oncology, 2021, 163, 177-184.	0.6	38
30	Carbon Ion Irradiation of the Rat Spinal Cord: Dependence of the Relative Biological Effectiveness on Linear Energy Transfer. International Journal of Radiation Oncology Biology Physics, 2014, 90, 63-70.	0.8	35
31	Single-cell-based computer simulation of the oxygen-dependent tumour response to irradiation. Physics in Medicine and Biology, 2007, 52, 4775-4789.	3.0	34
32	A model to simulate the oxygen distribution in hypoxic tumors for different vascular architectures. Medical Physics, 2013, 40, 081703.	3.0	33
33	Reference dosimetry in MRI-linacs: evaluation of available protocols and data to establish a Code of Practice. Physics in Medicine and Biology, 2021, 66, 05TR02.	3.0	33
34	Quality management of medical physics issues at the German heavy ion therapy project. Medical Physics, 2000, 27, 725-736.	3.0	31
35	Clinical Evaluation of a Laser Surface Scanning System in 120 Patients for Improving Daily Setup Accuracy in Fractionated Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2013, 85, 846-853.	0.8	31
36	Split dose carbon ion irradiation of the rat spinal cord: Dependence of the relative biological effectiveness on dose and linear energy transfer. Radiotherapy and Oncology, 2015, 117, 358-363.	0.6	30

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37	Mobile phones and health: A literature overview. Zeitschrift Fur Medizinische Physik, 2005, 15, 73-85.	1.5	28
38	Doseâ€“Response Curves and Tolerance Doses for Late Functional Changes in the Normal Rat Brain after Stereotactic Radiosurgery Evaluated by Magnetic Resonance Imaging: Influence of End Points and Follow-up Time. Radiation Research, 2002, 157, 617-625.	1.5	27
39	The relative biological effectiveness of carbon ion irradiations of the rat spinal cord increases linearly with LET up to 99â€‰keV/Î¼m. Acta OncolÃ³gica, 2016, 55, 1512-1515.	1.8	25
40	Roadmap: helium ion therapy. Physics in Medicine and Biology, 2022, 67, 15TR02.	3.0	24
41	Relative Biological Effectiveness of Carbon Ions in a Rat Prostate Carcinoma In Vivo: Comparison of 1, 2, and 6 Fractions. International Journal of Radiation Oncology Biology Physics, 2013, 86, 450-455.	0.8	21
42	Carbon ion radiotherapy: impact of tumor differentiation on local control in experimental prostate carcinomas. Radiation Oncology, 2017, 12, 174.	2.7	18
43	Late normal tissue response in the rat spinal cord after carbon ion irradiation. Radiation Oncology, 2018, 13, 5.	2.7	18
44	Photoacoustic imaging to assess pixel-based sO2 distributions in experimental prostate tumors. Journal of Biomedical Optics, 2018, 23, 1.	2.6	17
45	A stochastic approach to estimate the uncertainty of dose mapping caused by uncertainties in bâ€spline registration. Medical Physics, 2012, 39, 2186-2192.	3.0	16
46	Software for quantitative analysis of radiotherapy: Overview, requirement analysis and design solutions. Computer Methods and Programs in Biomedicine, 2013, 110, 528-537.	4.7	15
47	Fractionated carbon ion irradiations of the rat spinal cord: comparison of the relative biological effectiveness with predictions of the local effect model. Radiation Oncology, 2020, 15, 6.	2.7	15
48	The RBE in ion beam radiotherapy: In vivo studies and clinical application. Zeitschrift Fur Medizinische Physik, 2021, 31, 105-121.	1.5	15
49	Doseâ€“Response Curves for Late Functional Changes in the Normal Rat Brain after Single Carbon-Ion Doses Evaluated by Magnetic Resonance Imaging: Influence of Follow-up Time and Calculation of Relative Biological Effectiveness. Radiation Research, 2002, 158, 545-555.	1.5	13
50	Technical performance of a commercial laser surface scanning system for patient setup correction in radiotherapy. Physica Medica, 2011, 27, 224-232.	0.7	13
51	Temporal Lobe Reactions After Carbon Ion Radiation Therapy: Comparison of Relative Biological Effectivenessâ€“Weighted Tolerance Doses Predicted by Local Effect Models I and IV. International Journal of Radiation Oncology Biology Physics, 2014, 88, 1136-1141.	0.8	13
52	Influence of setup errors on spinal cord dose and treatment plan quality for cervical spine tumours: a phantom study for photon IMRT and heavy charged particle radiotherapy. Physics in Medicine and Biology, 2003, 48, 3171-3189.	3.0	12
53	Gel dosimetry provides the optimal endâ€toâ€end quality assurance dosimetry for MRâ€linacs. Medical Physics, 2020, 47, 3259-3262.	3.0	12
54	In Vivo Validation of the BIANCA Biophysical Model: Benchmarking against Rat Spinal Cord RBE Data. International Journal of Molecular Sciences, 2020, 21, 3973.	4.1	12

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55	The history of ion beam therapy in Germany. Zeitschrift Fur Medizinische Physik, 2022, 32, 6-22.	1.5	12
56	Computer simulation of tumour control probabilities after irradiation for varying intrinsic radio-sensitivity using a single cell based model. Acta OncolÃ³gica, 2010, 49, 1354-1362.	1.8	11
57	Doseâ€“response curves for MRI-detected radiation-induced temporal lobe reactions in patients after proton and carbon ion therapy: Does the same RBE-weighted dose lead to the same biological effect?. Radiotherapy and Oncology, 2018, 128, 109-114.	0.6	10
58	Measurement of hypoxia-related parameters in three sublines of a rat prostate carcinoma using dynamic (18)F-FMISO-Pet-Ct and quantitative histology. American Journal of Nuclear Medicine and Molecular Imaging, 2015, 5, 348-62.	1.0	9
59	End-to-end test for fractionated online adaptive MR-guided radiotherapy using a deformable anthropomorphic pelvis phantom. Physics in Medicine and Biology, 2021, , .	3.0	9
60	Quality assurance at the heavy-ion therapy facility at GSI. Strahlentherapie Und Onkologie, 1999, 175, 36-38.	2.0	8
61	A method to visualize the uncertainty of the prediction of radiobiological models. Physica Medica, 2013, 29, 556-561.	0.7	8
62	Impact of Single Dose Photons and Carbon Ions on Perfusion and Vascular Permeability: A Dynamic Contrast-Enhanced MRI Pilot Study in the Anaplastic Rat Prostate Tumor R3327-AT1. Radiation Research, 2019, 193, 34.	1.5	8
63	Impact of different biologically-adapted radiotherapy strategies on tumor control evaluated with a tumor response model. PLoS ONE, 2018, 13, e0196310.	2.5	7
64	Ramipril reduces incidence and prolongates latency time of radiation-induced rat myelopathy after photon and carbon ion irradiation. Journal of Radiation Research, 2020, 61, 791-798.	1.6	7
65	Treatment planning for the heavy-ion facility at GSI. Strahlentherapie Und Onkologie, 1999, 175, 15-17.	2.0	6
66	Correction of ionic recombination for pulsed radiation according to DIN 6800-2 and TRS-398. Zeitschrift Fur Medizinische Physik, 2004, 14, 260-266.	1.5	5
67	Flow cytometric characterization of tumor subpopulations in three sublines of the dunning R3327 rat prostate tumor model. Prostate, 2013, 73, 1710-1720.	2.3	5
68	Photon and Carbon Ion Irradiation of a Rat Prostate Carcinoma: Does a Higher Fraction Number Increase the Metastatic Rate?. Radiation Research, 2014, 181, 623-628.	1.5	5
69	Bolus arrival time estimation in dynamic contrast-enhanced magnetic resonance imaging of small animals based on spline models. Physics in Medicine and Biology, 2019, 64, 045003.	3.0	5
70	Development of phantom materials with independently adjustable CT- and MR-contrast at 0.35, 1.5 and 3 T. Physics in Medicine and Biology, 2021, 66, 045013.	3.0	5
71	An abdominal phantom with anthropomorphic organ motion and multimodal imaging contrast for MR-guided radiotherapy. Physics in Medicine and Biology, 2022, 67, 045009.	3.0	5
72	Relative biological effectiveness of single and split helium ion doses in the rat spinal cord increases strongly with linear energy transfer. Radiotherapy and Oncology, 2022, 170, 224-230.	0.6	5

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73	Results of a prospective randomized trial on long-term effectiveness of protons and carbon ions in prostate cancer: LEM I and Î±/Î²Â=Â2ÂGy overestimates the RBE. Radiotherapy and Oncology, 2022, 173, 223-230.	0.6	5
74	Intrinsic and extrinsic tumor characteristics are of minor relevance for the efficacy of split-dose carbon ion irradiation in three experimental prostate tumors. Radiotherapy and Oncology, 2019, 133, 120-124.	0.6	4
75	Dosimetry in magnetic fields with dedicated MR-compatible ionization chambers. Physica Medica, 2020, 80, 259-266.	0.7	3
76	Longitudinal MRI study after carbon ion and photon irradiation: shorter latency time for myelopathy is not associated with differential morphological changes. Radiation Oncology, 2021, 16, 63.	2.7	3
77	PAGAT gel dosimetry for everyone: gel production, measurement and evaluation. Biomedical Physics and Engineering Express, 2021, 7, 057001.	1.2	3
78	What is the Clinically Relevant Relative Biologic Effectiveness? A Warning for Fractionated Treatments with High Linear Energy Transfer Radiation: In regard to DaÅŸu and Toma-DAÅŸu. (Int J Radiat) Tj ETQq0 0 0 rgBT /Overlock 1 70, 1614.	0.8	2
79	RBE-weighted doses in target volumes of chordoma and chondrosarcoma patients treated with carbon ion radiotherapy: Comparison of local effect models I and IV. Radiotherapy and Oncology, 2019, 141, 234-238.	0.6	2
80	Effectiveness of fractionated carbon ion treatments in three rat prostate tumors differing in growth rate, differentiation and hypoxia. Radiotherapy and Oncology, 2021, 158, 131-137.	0.6	2
81	DCE-MRI detected vascular permeability changes in the rat spinal cord do not explain shorter latency times for paresis after carbon ions relative to photons. Radiotherapy and Oncology, 2021, 165, 126-134.	0.6	2
82	Simulation of hypoxia PET-tracer uptake in tumours: Dependence of clinical uptake-values on transport parameters and arterial input function. Physica Medica, 2020, 70, 109-117.	0.7	2
83	Impact of DNA Repair Kinetics and Dose Rate on RBE Predictions in the UNIVERSE. International Journal of Molecular Sciences, 2022, 23, 6268.	4.1	2
84	Comments to the Forum of M. Goitein. Zeitschrift Fur Medizinische Physik, 2004, 14, 200.	1.5	1
85	High Doses of Photons and Carbon Ions Comparably Increase Vascular Permeability in R3327-HI Prostate Tumors: A Dynamic Contrast-Enhanced MRI Study. Radiation Research, 2020, 194, 465-475.	1.5	1
86	Klinische Strahlenbiologie. , 2018, , 451-472.		1
87	Synergistic effect of cinacalcet and active vitamin D in a dialysis patient with secondary hyperparathyroidism. Dialysis and Transplantation, 2010, 39, 69-71.	0.2	0