

Christian P Karger

List of Publications by Year in descending order

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87
papers

3,330
citations

147786

31
h-index

149686

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 non-small-cell lung cancer. International Journal of Radiation Oncology Biology Physics, 2007, 67, 768-774.	0.8	53

#	ARTICLE	IF	CITATIONS
19	Determination of the proton RBE in the rat spinal cord: Is there an increase towards the end of the spread-out Bragg peak?. <i>Radiotherapy and Oncology</i> , 2018, 128, 115-120.	0.6	53
20	Radiobiological issues in prospective carbon ion therapy trials. <i>Medical Physics</i> , 2018, 45, e1096-e1110.	3.0	49
21	Molecular Ultrasound Imaging of Early Vascular Response in Prostate Tumors Irradiated with Carbon Ions. <i>Neoplasia</i> , 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. <i>International Journal of Radiation Oncology Biology Physics</i> , 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. <i>International Journal of Radiation Oncology Biology Physics</i> , 2011, 79, 239-246.	0.8	45
24	Stereotactic imaging for radiotherapy: accuracy of CT, MRI, PET and SPECT. <i>Physics in Medicine and Biology</i> , 2003, 48, 211-221.	3.0	42
25	Carbon ion radiotherapy decreases the impact of tumor heterogeneity on radiation response in experimental prostate tumors. <i>Cancer Letters</i> , 2016, 378, 97-103.	7.2	41
26	Radiation Tolerance of the Rat Spinal Cord after Single and Split Doses of Photons and Carbon Ions ¹ . <i>Radiation Research</i> , 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: In Vitro, in Vivo, and in Patients. <i>International Journal of Radiation Oncology Biology Physics</i> , 2020, 108, 779-791.	0.8	39
28	Current Status and New Developments in Ion Therapy. <i>Strahlentherapie Und Onkologie</i> , 2007, 183, 295-300.	2.0	38
29	Does the uncertainty in relative biological effectiveness affect patient treatment in proton therapy?. <i>Radiotherapy and Oncology</i> , 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. <i>International Journal of Radiation Oncology Biology Physics</i> , 2014, 90, 63-70.	0.8	35
31	Single-cell-based computer simulation of the oxygen-dependent tumour response to irradiation. <i>Physics in Medicine and Biology</i> , 2007, 52, 4775-4789.	3.0	34
32	A model to simulate the oxygen distribution in hypoxic tumors for different vascular architectures. <i>Medical Physics</i> , 2013, 40, 081703.	3.0	33
33	Reference dosimetry in MRI-linacs: evaluation of available protocols and data to establish a Code of Practice. <i>Physics in Medicine and Biology</i> , 2021, 66, 05TR02.	3.0	33
34	Quality management of medical physics issues at the German heavy ion therapy project. <i>Medical Physics</i> , 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. <i>International Journal of Radiation Oncology Biology Physics</i> , 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. <i>Radiotherapy and Oncology</i> , 2015, 117, 358-363.	0.6	30

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37	Mobile phones and health: A literature overview. <i>Zeitschrift Fur Medizinische Physik</i> , 2005, 15, 73-85.	1.5	28
38	Dose-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. <i>Radiation Research</i> , 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 $99 \text{ keV}/1/4 \text{ m}$. <i>Acta Oncologica</i> , 2016, 55, 1512-1515.	1.8	25
40	Roadmap: helium ion therapy. <i>Physics in Medicine and Biology</i> , 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. <i>International Journal of Radiation Oncology Biology Physics</i> , 2013, 86, 450-455.	0.8	21
42	Carbon ion radiotherapy: impact of tumor differentiation on local control in experimental prostate carcinomas. <i>Radiation Oncology</i> , 2017, 12, 174.	2.7	18
43	Late normal tissue response in the rat spinal cord after carbon ion irradiation. <i>Radiation Oncology</i> , 2018, 13, 5.	2.7	18
44	Photoacoustic imaging to assess pixel-based sO ₂ distributions in experimental prostate tumors. <i>Journal of Biomedical Optics</i> , 2018, 23, 1.	2.6	17
45	A stochastic approach to estimate the uncertainty of dose mapping caused by uncertainties in b-spline registration. <i>Medical Physics</i> , 2012, 39, 2186-2192.	3.0	16
46	Software for quantitative analysis of radiotherapy: Overview, requirement analysis and design solutions. <i>Computer Methods and Programs in Biomedicine</i> , 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. <i>Radiation Oncology</i> , 2020, 15, 6.	2.7	15
48	The RBE in ion beam radiotherapy: In vivo studies and clinical application. <i>Zeitschrift Fur Medizinische Physik</i> , 2021, 31, 105-121.	1.5	15
49	Dose-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. <i>Radiation Research</i> , 2002, 158, 545-555.	1.5	13
50	Technical performance of a commercial laser surface scanning system for patient setup correction in radiotherapy. <i>Physica Medica</i> , 2011, 27, 224-232.	0.7	13
51	Temporal Lobe Reactions After Carbon Ion Radiation Therapy: Comparison of Relative Biological Effectiveness-Weighted Tolerance Doses Predicted by Local Effect Models I and IV. <i>International Journal of Radiation Oncology Biology Physics</i> , 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. <i>Physics in Medicine and Biology</i> , 2003, 48, 3171-3189.	3.0	12
53	Gel dosimetry provides the optimal end-to-end quality assurance dosimetry for MR-linacs. <i>Medical Physics</i> , 2020, 47, 3259-3262.	3.0	12
54	In Vivo Validation of the BIANCA Biophysical Model: Benchmarking against Rat Spinal Cord RBE Data. <i>International Journal of Molecular Sciences</i> , 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 Oncologica, 2010, 49, 1354-1362.	1.8	11
57	Dose-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 $\hat{I}_{\pm}/\hat{I}^2\hat{A}=\hat{A}2\hat{A}\hat{G}y$ 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 Da \hat{A} Yu and Toma-DA \hat{A} Yu. (Int J Radiat) Tj ETQq0,0,0 rgBT \hat{A} Overlock 2 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-H1 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