

Frank Verhaegen

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.

201
papers

5,473
citations

38
h-index

65
g-index

212
ext. papers

6,313
ext. citations

3.4
avg. IF

5.79
L-index

#	Paper	IF	Citations
201	Inter-observer variability of organ contouring for preclinical studies with cone beam Computed Tomography imaging.. <i>Physics and Imaging in Radiation Oncology</i> , 2022 , 21, 11-17	3.1	2
200	Automatic contouring of normal tissues with deep learning for preclinical radiation studies.. <i>Physics in Medicine and Biology</i> , 2022 ,	3.8	1
199	Deep learning-based segmentation of the thorax in mouse micro-CT scans.. <i>Scientific Reports</i> , 2022 , 12, 1822	4.9	0
198	GEC ESTRO ACROP consensus recommendations for contact brachytherapy for rectal cancer.. <i>Clinical and Translational Radiation Oncology</i> , 2022 , 33, 15-22	4.6	1
197	A scoping review of small animal image-guided radiotherapy research: Advances, impact and future opportunities in translational radiobiology.. <i>Clinical and Translational Radiation Oncology</i> , 2022 , 34, 112-119	4.6	0
196	Automatic dose verification system for breast radiotherapy: Method validation, contour propagation and DVH parameters evaluation.. <i>Physica Medica</i> , 2022 , 97, 44-49	2.7	0
195	Time-resolved QA and brachytherapy applicator commissioning: Towards the clinical implementation. <i>Brachytherapy</i> , 2021 ,	2.4	1
194	Considerations for shoot-through FLASH proton therapy. <i>Physics in Medicine and Biology</i> , 2021 , 66, 06NT08	9.8	5
193	Evaluation of novel AI-based extended field-of-view CT reconstructions. <i>Medical Physics</i> , 2021 , 48, 3583-3594	15.94	1
192	Pharmacological inhibition of 17 β -hydroxysteroid dehydrogenase impairs human endometrial cancer growth in an orthotopic xenograft mouse model. <i>Cancer Letters</i> , 2021 , 508, 18-29	9.9	0
191	Validation of the collapsed cone algorithm for HDR liver brachytherapy against Monte Carlo simulations. <i>Brachytherapy</i> , 2021 , 20, 936-947	2.4	0
190	Operation and calibration of the novel PTW 1600SRS detector for the verification of single isocenter stereotactic radiosurgery treatments of multiple small brain metastases. <i>British Journal of Radiology</i> , 2021 , 94, 20210473	3.4	0
189	Deep Learning Based Automated Orthotopic Lung Tumor Segmentation in Whole-Body Mouse CT-Scans. <i>Cancers</i> , 2021 , 13,	6.6	1
188	The dosimetric impact of replacing the TG-43 algorithm by model based dose calculation for liver brachytherapy. <i>Radiation Oncology</i> , 2020 , 15, 60	4.2	5
187	Use of a Luciferase-Expressing Orthotopic Rat Brain Tumor Model to Optimize a Targeted Irradiation Strategy for Efficacy Testing with Temozolomide. <i>Cancers</i> , 2020 , 12,	6.6	4
186	Advanced design, simulation, and dosimetry of a novel rectal applicator for contact brachytherapy with a conventional HDR Ir source. <i>Brachytherapy</i> , 2020 , 19, 544-553	2.4	1
185	The potential of an optical surface tracking system in non-coplanar single isocenter treatments of multiple brain metastases. <i>Journal of Applied Clinical Medical Physics</i> , 2020 , 21, 63-72	2.3	8

184	Automated CT-derived skeletal muscle mass determination in lower hind limbs of mice using a 3D U-Net deep learning network. <i>Journal of Applied Physiology</i> , 2020 , 128, 42-49	3.7	9
183	Microscopic intramural extension of rectal cancer after neoadjuvant chemoradiation: A meta-analysis based on individual patient data. <i>Radiotherapy and Oncology</i> , 2020 , 144, 37-45	5.3	1
182	Modelling of the focal spot intensity distribution and the off-focal spot radiation in kilovoltage x-ray tubes for imaging. <i>Physics in Medicine and Biology</i> , 2020 , 65, 025002	3.8	2
181	Acuros dose verification of ultrasmall lung lesions with EBT-XD film in a homogeneous and heterogeneous anthropomorphic phantom setup. <i>Medical Physics</i> , 2020 , 47, 5829-5837	4.4	1
180	dosimetry in brachytherapy: Requirements and future directions for research, development, and clinical practice. <i>Physics and Imaging in Radiation Oncology</i> , 2020 , 16, 1-11	3.1	18
179	Identification of treatment error types for lung cancer patients using convolutional neural networks and EPID dosimetry. <i>Radiotherapy and Oncology</i> , 2020 , 153, 243-249	5.3	5
178	External validation of a hidden Markov model for gamma-based classification of anatomical changes in lung cancer patients using EPID dosimetry. <i>Medical Physics</i> , 2020 , 47, 4675-4682	4.4	2
177	In vivo dosimetry in external beam photon radiotherapy: Requirements and future directions for research, development, and clinical practice. <i>Physics and Imaging in Radiation Oncology</i> , 2020 , 15, 108-116	3.1	17
176	Dose painting by dynamic irradiation delivery on an image-guided small animal radiotherapy platform. <i>British Journal of Radiology</i> , 2019 , 92, 20180744	3.4	5
175	Technical Note: Relative proton stopping power estimation from virtual monoenergetic images reconstructed from dual-layer computed tomography. <i>Medical Physics</i> , 2019 , 46, 1821-1828	4.4	7
174	The role of external beam and endoluminal radiation boosting in rectal cancer. <i>Colorectal Cancer</i> , 2019 , 8, CRC07	0.8	1
173	Dual-energy CT for automatic organs-at-risk segmentation in brain-tumor patients using a multi-atlas and deep-learning approach. <i>Scientific Reports</i> , 2019 , 9, 4126	4.9	17
172	Automatic multiatlas based organ at risk segmentation in mice. <i>British Journal of Radiology</i> , 2019 , 92, 20180364	3.4	8
171	On the determination of planning target margins due to motion for mice lung tumours using a four-dimensional MOBY phantom. <i>British Journal of Radiology</i> , 2019 , 92, 20180445	3.4	4
170	Evofosfamide sensitizes esophageal carcinomas to radiation without increasing normal tissue toxicity. <i>Radiotherapy and Oncology</i> , 2019 , 141, 247-255	5.3	13
169	Dose to water versus dose to medium from cavity theory applied to small animal irradiation with kilovolt x-rays. <i>Physics in Medicine and Biology</i> , 2019 , 64, 165001	3.8	5
168	Mechanical evaluation of the Bravos afterloader system for HDR brachytherapy. <i>Brachytherapy</i> , 2019 , 18, 852-862	2.4	5
167	A systematic review comparing radiation toxicity after various endorectal techniques. <i>Brachytherapy</i> , 2019 , 18, 71-86.e5	2.4	6

166	The effect of different image reconstruction techniques on pre-clinical quantitative imaging and dual-energy CT. <i>British Journal of Radiology</i> , 2019 , 92, 20180447	3.4	8
165	An orthotopic non-small cell lung cancer model for image-guided small animal radiotherapy platforms. <i>British Journal of Radiology</i> , 2019 , 92, 20180476	3.4	11
164	Exploring the feasibility of a clinical proton beam with an adaptive aperture for pre-clinical research. <i>British Journal of Radiology</i> , 2019 , 92, 20180446	3.4	4
163	Murine vs human tissue compositions: implications of using human tissue compositions for photon energy absorption in mice. <i>British Journal of Radiology</i> , 2019 , 92, 20180454	3.4	5
162	A novel data management platform to improve image-guided precision preclinical biological research. <i>British Journal of Radiology</i> , 2019 , 92, 20180455	3.4	2
161	Monte Carlo proton dose calculations using a radiotherapy specific dual-energy CT scanner for tissue segmentation and range assessment. <i>Physics in Medicine and Biology</i> , 2018 , 63, 115008	3.8	22
160	The influence of tissue composition uncertainty on dose distributions in brachytherapy. <i>Radiotherapy and Oncology</i> , 2018 , 126, 394-410	5.3	12
159	ESTRO ACROP: Technology for precision small animal radiotherapy research: Optimal use and challenges. <i>Radiotherapy and Oncology</i> , 2018 , 126, 471-478	5.3	62
158	A novel approach to EPID-based 3D volumetric dosimetry for IMRT and VMAT QA. <i>Physics in Medicine and Biology</i> , 2018 , 63, 115002	3.8	12
157	Towards a Clinical Decision Support System for External Beam Radiation Oncology Prostate Cancer Patients: Proton vs. Photon Radiotherapy? A Radiobiological Study of Robustness and Stability. <i>Cancers</i> , 2018 , 10,	6.6	4
156	Altered protein turnover signaling and myogenesis during impaired recovery of inflammation-induced muscle atrophy in emphysematous mice. <i>Scientific Reports</i> , 2018 , 8, 10761	4.9	8
155	Reply to: Comment on: Dual-energy CT quantitative imaging: A comparison study between twin-beam and dual-source CT scanners [Med. Phys. 44(1), 171-179 (2017)] <i>Medical Physics</i> , 2018 , 45, 3997-3998	4.4	1
154	A novel rectal applicator for contact radiotherapy with HDR Ir sources. <i>Brachytherapy</i> , 2018 , 17, 1037-1044	4.4	6
153	Validation and uncertainty analysis of a pre-treatment 2D dose prediction model. <i>Physics in Medicine and Biology</i> , 2018 , 63, 035033	3.8	8
152	Should dose from small fields be limited for dose verification procedures?: uncertainty versus small field dose in VMAT treatments. <i>Physics in Medicine and Biology</i> , 2018 , 63, 20NT01	3.8	8
151	Revisiting the single-energy CT calibration for proton therapy treatment planning: a critical look at the stoichiometric method. <i>Physics in Medicine and Biology</i> , 2018 , 63, 235011	3.8	18
150	Development of an Image-Guided Orthotopic Xenograft Mouse Model of Endometrial Cancer with Controllable Estrogen Exposure. <i>International Journal of Molecular Sciences</i> , 2018 , 19,	6.3	5
149	Automated patient-specific transperineal ultrasound probe setups for prostate cancer patients undergoing radiotherapy. <i>Medical Physics</i> , 2018 , 45, 3185-3195	4.4	3

148	A voxelized single- and dual-energy CT scenario generator for quantitative imaging. <i>Physics and Imaging in Radiation Oncology</i> , 2018 , 6, 47-52	3.1	7
147	The Use of Ultrasound Imaging in the External Beam Radiotherapy Workflow of Prostate Cancer Patients. <i>BioMed Research International</i> , 2018 , 2018, 7569590	3	23
146	Dual-energy CT quantitative imaging: a comparison study between twin-beam and dual-source CT scanners. <i>Medical Physics</i> , 2017 , 44, 171-179	4.4	75
145	Application of single- and dual-energy CT brain tissue segmentation to PET monitoring of proton therapy. <i>Physics in Medicine and Biology</i> , 2017 , 62, 2427-2448	3.8	6
144	Online pretreatment verification of high-dose rate brachytherapy using an imaging panel. <i>Physics in Medicine and Biology</i> , 2017 , 62, 5440-5461	3.8	19
143	Differential regulation of muscle protein turnover in response to emphysema and acute pulmonary inflammation. <i>Respiratory Research</i> , 2017 , 18, 75	7.3	9
142	Small animal image-guided radiotherapy. <i>British Journal of Radiology</i> , 2017 , 90, 20160905	3.4	2
141	The impact of dual energy CT imaging on dose calculations for pre-clinical studies. <i>Radiation Oncology</i> , 2017 , 12, 181	4.2	9
140	Three-dimensional dose evaluation in breast cancer patients to define decision criteria for adaptive radiotherapy. <i>Acta Oncologica</i> , 2017 , 56, 1487-1494	3.2	6
139	A generic TG-186 shielded applicator for commissioning model-based dose calculation algorithms for high-dose-rate Ir brachytherapy. <i>Medical Physics</i> , 2017 , 44, 5961-5976	4.4	17
138	Clinical evaluation of a novel CT image reconstruction algorithm for direct dose calculations. <i>Physics and Imaging in Radiation Oncology</i> , 2017 , 2, 11-16	3.1	7
137	Nintedanib reduces radiation-induced microscopic lung fibrosis but this cannot be monitored by CT imaging: A preclinical study with a high precision image-guided irradiator. <i>Radiotherapy and Oncology</i> , 2017 , 124, 482-487	5.3	24
136	What is the impact of innovation on output in healthcare with a special focus on treatment innovations in radiotherapy? A literature review. <i>British Journal of Radiology</i> , 2017 , 90, 20170251	3.4	7
135	A novel system for commissioning brachytherapy applicators: example of a ring applicator. <i>Physics in Medicine and Biology</i> , 2017 , 62, 8360-8375	3.8	10
134	Detection of anatomical changes in lung cancer patients with 2D time-integrated, 2D time-resolved and 3D time-integrated portal dosimetry: a simulation study. <i>Physics in Medicine and Biology</i> , 2017 , 62, 6044-6061	3.8	5
133	Optimizing dual energy cone beam CT protocols for preclinical imaging and radiation research. <i>British Journal of Radiology</i> , 2017 , 90, 20160480	3.4	14
132	Tumour and normal tissue radiobiology in mouse models: how close are mice to mini-humans?. <i>British Journal of Radiology</i> , 2017 , 90, 20160441	3.4	32
131	The influence of respiratory motion on dose delivery in a mouse lung tumour irradiation using the 4D MOBY phantom. <i>British Journal of Radiology</i> , 2017 , 90, 20160419	3.4	12

130 Dosimetry of Small Animal Precision Irradiators **2017**, 609-624

129 Influence of the jaw tracking technique on the dose calculation accuracy of small field VMAT plans. *Journal of Applied Clinical Medical Physics*, **2017**, 18, 186-195 2.3 13

128 Developing Technologies for Small Animal Radiotherapy. *Imaging in Medical Diagnosis and Therapy*, **2016**, 329-351

127 Treatment Planning for Small Animals. *Imaging in Medical Diagnosis and Therapy*, **2016**, 365-384 1

126 Review of ultrasound image guidance in external beam radiotherapy part II: intra-fraction motion management and novel applications. *Physics in Medicine and Biology*, **2016**, 61, R90-137 3.8 63

125 How efficient is translational research in radiation oncology? The example of a large Dutch academic radiation oncology department. *British Journal of Radiology*, **2016**, 89, 20160129 3.4 6

124 Dose rate mapping of VMAT treatments. *Physics in Medicine and Biology*, **2016**, 61, 4048-60 3.8 2

123 Consequences of Intermodality Registration Errors for Intramodality 3D Ultrasound IGRT. *Technology in Cancer Research and Treatment*, **2016**, 15, 632-8 2.7 3

122 Dual energy CT in radiotherapy: Current applications and future outlook. *Radiotherapy and Oncology*, **2016**, 119, 137-44 5.3 93

121 Improved dose calculation accuracy for low energy brachytherapy by optimizing dual energy CT imaging protocols for noise reduction using sinogram affirmed iterative reconstruction. *Zeitschrift Fur Medizinische Physik*, **2016**, 26, 75-87 7.6 24

120 A comparison of the relative biological effectiveness of low energy electronic brachytherapy sources in breast tissue: a Monte Carlo study. *Physics in Medicine and Biology*, **2016**, 61, 383-99 3.8 18

119 NOTCH blockade combined with radiation therapy and temozolomide prolongs survival of orthotopic glioblastoma. *Oncotarget*, **2016**, 7, 41251-41264 3.3 51

118 Time-resolved versus time-integrated portal dosimetry: the role of an object's position with respect to the isocenter in volumetric modulated arc therapy. *Physics in Medicine and Biology*, **2016**, 61, 3969-84 3.8 10

117 Theoretical versus Ex Vivo Assessment of Radiation Damage Repair: An Investigation in Normal Breast Tissue. *Radiation Research*, **2016**, 185, 393-401 3.1 1

116 What is the degree of innovation routinely implemented in Dutch radiotherapy centres? A multicentre cross-sectional study. *British Journal of Radiology*, **2016**, 89, 20160601 3.4 3

115 Various approaches for pseudo-CT scan creation based on ultrasound to ultrasound deformable image registration between different treatment time points for radiotherapy treatment plan adaptation in prostate cancer patients. *Biomedical Physics and Engineering Express*, **2016**, 2, 035018 1.5 5

114 Comparison of proton therapy treatment planning for head tumors with a pencil beam algorithm on dual and single energy CT images. *Medical Physics*, **2016**, 43, 495 4.4 65

113 Accuracy of dose calculations on kV cone beam CT images of lung cancer patients. *Medical Physics*, **2016**, 43, 5934 4.4 29

112	A validated tumor control probability model based on a meta-analysis of low, intermediate, and high-risk prostate cancer patients treated by photon, proton, or carbon-ion radiotherapy. <i>Medical Physics</i> , 2016 , 43, 734-47	4.4	9
111	Simulation of pseudo-CT images based on deformable image registration of ultrasound images: A proof of concept for transabdominal ultrasound imaging of the prostate during radiotherapy. <i>Medical Physics</i> , 2016 , 43, 1913	4.4	13
110	Monte Carlo calculation of the dose perturbations in a dual-source HDR/PDR afterloader treatment unit. <i>Brachytherapy</i> , 2016 , 15, 524-530	2.4	1
109	Review of ultrasound image guidance in external beam radiotherapy: I. Treatment planning and inter-fraction motion management. <i>Physics in Medicine and Biology</i> , 2015 , 60, R77-114	3.8	69
108	An image guided small animal radiation therapy platform (SmART) to monitor glioblastoma progression and therapy response. <i>Radiotherapy and Oncology</i> , 2015 , 116, 467-72	5.3	15
107	Automated Computed Tomography-Ultrasound Cross-Modality 3-D Contouring Algorithm for Prostate. <i>Ultrasound in Medicine and Biology</i> , 2015 , 41, 2646-62	3.5	1
106	Dose specification for ^{192}Ir high dose rate brachytherapy in terms of dose-to-water-in-medium and dose-to-medium-in-medium. <i>Physics in Medicine and Biology</i> , 2015 , 60, 4565-79	3.8	12
105	Calcifications in low-dose rate prostate seed brachytherapy treatment: post-planning dosimetry and predictive factors. <i>Radiotherapy and Oncology</i> , 2015 , 114, 339-44	5.3	14
104	Measurement of absorbed dose to water around an electronic brachytherapy source. Comparison of two dosimetry systems: lithium formate EPR dosimeters and radiochromic EBT2 film. <i>Physics in Medicine and Biology</i> , 2015 , 60, 3869-82	3.8	3
103	A framework for inverse planning of beam-on times for 3D small animal radiotherapy using interactive multi-objective optimisation. <i>Physics in Medicine and Biology</i> , 2015 , 60, 5681-98	3.8	13
102	What level of accuracy is achievable for preclinical dose painting studies on a clinical irradiation platform?. <i>Radiation Research</i> , 2015 , 183, 501-10	3.1	6
101	Weekly kilovoltage cone-beam computed tomography for detection of dose discrepancies during (chemo)radiotherapy for head and neck cancer. <i>Acta Oncologica</i> , 2015 , 54, 1483-9	3.2	9
100	A simulation study on proton computed tomography (CT) stopping power accuracy using dual energy CT scans as benchmark. <i>Acta Oncologica</i> , 2015 , 54, 1638-42	3.2	47
99	Is integrated transit planar portal dosimetry able to detect geometric changes in lung cancer patients treated with volumetric modulated arc therapy?. <i>Acta Oncologica</i> , 2015 , 54, 1501-7	3.2	12
98	Modern clinical research: How rapid learning health care and cohort multiple randomised clinical trials complement traditional evidence based medicine. <i>Acta Oncologica</i> , 2015 , 54, 1289-300	3.2	47
97	High dose rate and flattening filter free irradiation can be safely implemented in clinical practice. <i>International Journal of Radiation Biology</i> , 2015 , 91, 778-85	2.9	7
96	Preclinical Assessment of Efficacy of Radiation Dose Painting Based on Intratumoral FDG-PET Uptake. <i>Clinical Cancer Research</i> , 2015 , 21, 5511-8	12.9	19
95	HDR ^{192}Ir source speed measurements using a high speed video camera. <i>Medical Physics</i> , 2015 , 42, 412-4	4.4	14

94	Efficient scatter distribution estimation and correction in CBCT using concurrent Monte Carlo fitting. <i>Medical Physics</i> , 2015 , 42, 54-68	4.4	30
93	A generic high-dose rate (192)Ir brachytherapy source for evaluation of model-based dose calculations beyond the TG-43 formalism. <i>Medical Physics</i> , 2015 , 42, 3048-61	4.4	41
92	The influence of gastric filling instructions on dose delivery in patients with oesophageal cancer: A prospective study. <i>Radiotherapy and Oncology</i> , 2015 , 117, 442-7	5.3	7
91	Small animal image-guided radiotherapy: status, considerations and potential for translational impact. <i>British Journal of Radiology</i> , 2015 , 88, 20140634	3.4	41
90	On the sensitivity of Δ prediction to dose calculation methodology in prostate brachytherapy. <i>International Journal of Radiation Oncology Biology Physics</i> , 2014 , 88, 345-50	4	4
89	A medical image-based graphical platform -- features, applications and relevance for brachytherapy. <i>Brachytherapy</i> , 2014 , 13, 632-9	2.4	8
88	Time dependent pre-treatment EPID dosimetry for standard and FFF VMAT. <i>Physics in Medicine and Biology</i> , 2014 , 59, 4749-68	3.8	35
87	A longitudinal evaluation of partial lung irradiation in mice by using a dedicated image-guided small animal irradiator. <i>International Journal of Radiation Oncology Biology Physics</i> , 2014 , 90, 696-704	4	37
86	A review of treatment planning for precision image-guided photon beam pre-clinical animal radiation studies. <i>Zeitschrift Fur Medizinische Physik</i> , 2014 , 24, 323-34	7.6	49
85	Dose perturbation due to catheter materials in high-dose-rate interstitial (192)Ir brachytherapy. <i>Brachytherapy</i> , 2014 , 13, 627-31	2.4	9
84	Complementary use of bioluminescence imaging and contrast-enhanced micro-computed tomography in an orthotopic brain tumor model. <i>Molecular Imaging</i> , 2014 , 13,	3.7	16
83	A novel time dependent gamma evaluation function for dynamic 2D and 3D dose distributions. <i>Physics in Medicine and Biology</i> , 2014 , 59, 5973-85	3.8	14
82	Comparison of TG-43 and TG-186 in breast irradiation using a low energy electronic brachytherapy source. <i>Medical Physics</i> , 2014 , 41, 061701	4.4	25
81	Quantifying the effect of seed orientation in postplanning dosimetry of low-dose-rate prostate brachytherapy. <i>Medical Physics</i> , 2014 , 41, 101704	4.4	7
80	The use of tetrahedral mesh geometries in Monte Carlo simulation of applicator based brachytherapy dose distributions. <i>Physics in Medicine and Biology</i> , 2014 , 59, 5921-35	3.8	5
79	Monte Carlo dosimetry of high dose rate gynecologic interstitial brachytherapy. <i>Radiotherapy and Oncology</i> , 2013 , 109, 425-9	5.3	9
78	A simplified analytical dose calculation algorithm accounting for tissue heterogeneity for low-energy brachytherapy sources. <i>Physics in Medicine and Biology</i> , 2013 , 58, 6299-315	3.8	12
77	Active breathing control in combination with ultrasound imaging: a feasibility study of image guidance in stereotactic body radiation therapy of liver lesions. <i>International Journal of Radiation Oncology Biology Physics</i> , 2013 , 85, 1096-102	4	17

76	Development and validation of a treatment planning system for small animal radiotherapy: SmART-Plan. <i>Radiotherapy and Oncology</i> , 2013 , 109, 361-6	5.3	87
75	Deriving effective atomic numbers from DECT based on a parameterization of the ratio of high and low linear attenuation coefficients. <i>Physics in Medicine and Biology</i> , 2013 , 58, 6851-66	3.8	100
74	First clinical results of adaptive radiotherapy based on 3D portal dosimetry for lung cancer patients with atelectasis treated with volumetric-modulated arc therapy (VMAT). <i>Acta Oncologica</i> , 2013 , 52, 1484-9	3.2	32
73	Critical assessment of intramodality 3D ultrasound imaging for prostate IGRT compared to fiducial markers. <i>Medical Physics</i> , 2013 , 40, 071707	4.4	37
72	Deriving concentrations of oxygen and carbon in human tissues using single- and dual-energy CT for ion therapy applications. <i>Physics in Medicine and Biology</i> , 2013 , 58, 5029-48	3.8	46
71	On the use of an analytic source model for dose calculations in precision image-guided small animal radiotherapy. <i>Physics in Medicine and Biology</i> , 2013 , 58, 3377-95	3.8	24
70	A speed of sound aberration correction algorithm for curvilinear ultrasound transducers in ultrasound-based image-guided radiotherapy. <i>Physics in Medicine and Biology</i> , 2013 , 58, 1341-60	3.8	12
69	ImaSim, a software tool for basic education of medical x-ray imaging in radiotherapy and radiology. <i>Frontiers in Physics</i> , 2013 , 1,	3.9	11
68	Results of a multicentric in silico clinical trial (ROCOCO): comparing radiotherapy with photons and protons for non-small cell lung cancer. <i>Journal of Thoracic Oncology</i> , 2012 , 7, 165-76	8.9	73
67	Evaluation of a novel triple-channel radiochromic film analysis procedure using EBT2. <i>Physics in Medicine and Biology</i> , 2012 , 57, 4353-68	3.8	53
66	Influence of trace elements in human tissue in low-energy photon brachytherapy dosimetry. <i>Physics in Medicine and Biology</i> , 2012 , 57, 3585-96	3.8	18
65	Layered mass geometry: a novel technique to overlay seeds and applicators onto patient geometry in Geant4 brachytherapy simulations. <i>Physics in Medicine and Biology</i> , 2012 , 57, 6269-77	3.8	27
64	In vivo dosimetry for gynaecological brachytherapy using a novel position sensitive radiation detector: feasibility study. <i>Medical Physics</i> , 2012 , 39, 1925-35	4.4	22
63	Consequences of dose heterogeneity on the biological efficiency of ^{102}Pd permanent breast seed implants. <i>Physics in Medicine and Biology</i> , 2012 , 57, 809-23	3.8	7
62	Measured vs simulated portal images for low MU fields on three accelerator types: possible consequences for 2D portal dosimetry. <i>Medical Physics</i> , 2012 , 39, 7470-9	4.4	22
61	On the significance of density-induced speed of sound variations on US-guided radiotherapy. <i>Medical Physics</i> , 2012 , 39, 6316-23	4.4	11
60	Magnitude of speed of sound aberration corrections for ultrasound image guided radiotherapy for prostate and other anatomical sites. <i>Medical Physics</i> , 2012 , 39, 5286-92	4.4	15
59	Time-of-flight neutron rejection to improve prompt gamma imaging for proton range verification: a simulation study. <i>Physics in Medicine and Biology</i> , 2012 , 57, 6429-44	3.8	61

58	Dose to tissue medium or water cavities as surrogate for the dose to cell nuclei at brachytherapy photon energies. <i>Physics in Medicine and Biology</i> , 2012 , 57, 4489-500	3.8	19
57	Report of the Task Group 186 on model-based dose calculation methods in brachytherapy beyond the TG-43 formalism: current status and recommendations for clinical implementation. <i>Medical Physics</i> , 2012 , 39, 6208-36	4.4	302
56	A combined dose calculation and verification method for a small animal precision irradiator based on onboard imaging. <i>Medical Physics</i> , 2012 , 39, 4155-66	4.4	37
55	Dose reduction in LDR brachytherapy by implanted prostate gold fiducial markers. <i>Medical Physics</i> , 2012 , 39, 1410-7	4.4	6
54	Tissue modeling schemes in low energy breast brachytherapy. <i>Physics in Medicine and Biology</i> , 2011 , 56, 7045-60	3.8	13
53	Small animal radiotherapy research platforms. <i>Physics in Medicine and Biology</i> , 2011 , 56, R55-83	3.8	183
52	Extracting atomic numbers and electron densities from a dual source dual energy CT scanner: experiments and a simulation model. <i>Radiotherapy and Oncology</i> , 2011 , 100, 375-9	5.3	71
51	Patient-specific Monte Carlo-based dose-kernel approach for inverse planning in afterloading brachytherapy. <i>International Journal of Radiation Oncology Biology Physics</i> , 2011 , 81, 1582-9	4	7
50	Technical note: cone beam CT imaging for 3D image guided brachytherapy for gynecological HDR brachytherapy. <i>Medical Physics</i> , 2011 , 38, 2762-7	4.4	4
49	A CT based correction method for speed of sound aberration for ultrasound based image guided radiotherapy. <i>Medical Physics</i> , 2011 , 38, 2665-73	4.4	26
48	An algorithm for efficient metal artifact reductions in permanent seed. <i>Medical Physics</i> , 2011 , 38, 47-56	4.4	30
47	Simulation study on potential accuracy gains from dual energy CT tissue segmentation for low-energy brachytherapy Monte Carlo dose calculations. <i>Physics in Medicine and Biology</i> , 2011 , 56, 6257-68	3.8	51
46	A fast three-dimensional gamma evaluation using a GPU utilizing texture memory for on-the-fly interpolations. <i>Medical Physics</i> , 2011 , 38, 4032-5	4.4	30
45	The difference of scoring dose to water or tissues in Monte Carlo dose calculations for low energy brachytherapy photon sources. <i>Medical Physics</i> , 2011 , 38, 1526-33	4.4	31
44	The effects of compensator and imaging geometry on the distribution of x-ray scatter in CBCT. <i>Medical Physics</i> , 2011 , 38, 897-914	4.4	38
43	Range and density variations monitoring during proton therapy based on time-of-flight detection of prompt gamma radiation 2011 ,		1
42	Do we have enough evidence to implement particle therapy as standard treatment in lung cancer? A systematic literature review. <i>Oncologist</i> , 2010 , 15, 93-103	5.7	20
41	Sensitivity of low energy brachytherapy Monte Carlo dose calculations to uncertainties in human tissue composition. <i>Medical Physics</i> , 2010 , 37, 5188-98	4.4	71

40	Dosimetric evolution of the breast electron boost target using 3D ultrasound imaging. <i>Radiotherapy and Oncology</i> , 2010 , 96, 185-91	5.3	13
39	Design of and technical challenges involved in a framework for multicentric radiotherapy treatment planning studies. <i>Radiotherapy and Oncology</i> , 2010 , 97, 567-71	5.3	30
38	Influence of breast composition and interseed attenuation in dose calculations for post-implant assessment of permanent breast 103Pd seed implant. <i>Physics in Medicine and Biology</i> , 2010 , 55, 4547-61	3.8	33
37	Dosimetric consequences of misalignment and realignment in prostate 3DCRT using intramodality ultrasound image guidance. <i>Medical Physics</i> , 2010 , 37, 2787-95	4.4	14
36	Clinical implementation of a digital tomosynthesis-based seed reconstruction algorithm for intraoperative postimplant dose evaluation in low dose rate prostate brachytherapy. <i>Medical Physics</i> , 2009 , 36, 5235-44	4.4	17
35	Monte Carlo study of LDR seed dosimetry with an application in a clinical brachytherapy breast implant. <i>Medical Physics</i> , 2009 , 36, 1848-58	4.4	31
34	A CT-based analytical dose calculation method for HDR 192Ir brachytherapy. <i>Medical Physics</i> , 2009 , 36, 3982-94	4.4	18
33	Development of a scatter correction technique and its application to HDR 192Ir multicatheter breast brachytherapy. <i>Medical Physics</i> , 2009 , 36, 3703-13	4.4	22
32	Tissue segmentation in Monte Carlo treatment planning: a simulation study using dual-energy CT images. <i>Radiotherapy and Oncology</i> , 2008 , 86, 93-8	5.3	48
31	Calculation of relative biological effectiveness of a low-energy electronic brachytherapy source. <i>Physics in Medicine and Biology</i> , 2008 , 53, 7125-35	3.8	37
30	Spectroscopic characterization of a novel electronic brachytherapy system. <i>Physics in Medicine and Biology</i> , 2008 , 53, 61-75	3.8	219
29	A Monte Carlo study on the effect of seed design on the interseed attenuation in permanent prostate implants. <i>Medical Physics</i> , 2008 , 35, 3671-81	4.4	31
28	Comparison of dose calculation algorithms for colorectal cancer brachytherapy treatment with a shielded applicator. <i>Medical Physics</i> , 2008 , 35, 4824-30	4.4	8
27	Dual-energy CT-based material extraction for tissue segmentation in Monte Carlo dose calculations. <i>Physics in Medicine and Biology</i> , 2008 , 53, 2439-56	3.8	142
26	Anniversary paper: Role of medical physicists and the AAPM in improving geometric aspects of treatment accuracy and precision. <i>Medical Physics</i> , 2008 , 35, 828-39	4.4	11
25	Patient-specific Monte Carlo dose calculations for high-dose-rate endorectal brachytherapy with shielded intracavitary applicator. <i>International Journal of Radiation Oncology Biology Physics</i> , 2008 , 72, 1259-66	4	30
24	Prostate postbrachytherapy seed distribution: comparison of high-resolution, contrast-enhanced, T1- and T2-weighted endorectal magnetic resonance imaging versus computed tomography: initial experience: in regard to BLOCH et al. (Int J Radiat Oncol Biol Phys 2007;69:70-78). <i>International Journal of Radiation Oncology Biology Physics</i> , 2008 , 71, 1289; author reply 1289-90	4	1
23	High-resolution, small animal radiation research platform with x-ray tomographic guidance capabilities. <i>International Journal of Radiation Oncology Biology Physics</i> , 2008 , 71, 1591-9	4	265

22	Postimplant dosimetry using a Monte Carlo dose calculation engine: a new clinical standard. <i>International Journal of Radiation Oncology Biology Physics</i> , 2007 , 68, 1190-8	4	64
21	Monte Carlo simulation of a computed tomography x-ray tube. <i>Physics in Medicine and Biology</i> , 2007 , 52, 5945-55	3.8	43
20	Design and dosimetry of a few leaf electron collimator for energy modulated electron therapy. <i>Medical Physics</i> , 2007 , 34, 4782-91	4.4	26
19	Patient-specific dosimetry of conventional and intensity modulated radiation therapy using a novel full Monte Carlo phase space reconstruction method from electronic portal images. <i>Physics in Medicine and Biology</i> , 2007 , 52, 2277-99	3.8	26
18	Image-guided high dose rate endorectal brachytherapy. <i>Medical Physics</i> , 2007 , 34, 4451-8	4.4	21
17	Evaluation of a prototype 3D ultrasound system for multimodality imaging of cervical nodes for adaptive radiation therapy 2007 ,		3
16	Correction of CT artifacts and its influence on Monte Carlo dose calculations. <i>Medical Physics</i> , 2007 , 34, 2119-32	4.4	88
15	RadSim: a program to simulate individual particle interactions for educational purposes. <i>Physics in Medicine and Biology</i> , 2006 , 51, N157-61	3.8	2
14	Dosimetric characterization of a novel intracavitary mold applicator for ¹⁹² Ir high dose rate endorectal brachytherapy treatment. <i>Medical Physics</i> , 2006 , 33, 4515-26	4.4	32
13	Characterization of scattered radiation in kV CBCT images using Monte Carlo simulations. <i>Medical Physics</i> , 2006 , 33, 4320-9	4.4	129
12	Ultrasound-based image guided radiotherapy for prostate cancer: comparison of cross-modality and intramodality methods for daily localization during external beam radiotherapy. <i>International Journal of Radiation Oncology Biology Physics</i> , 2006 , 66, 1562-7	4	48
11	Accuracy of the photon and electron physics in GEANT4 for radiotherapy applications. <i>Medical Physics</i> , 2005 , 32, 1696-711	4.4	94
10	Sensitivity study for CT image use in Monte Carlo treatment planning. <i>Physics in Medicine and Biology</i> , 2005 , 50, 937-46	3.8	73
9	Energy modulated electron therapy using a few leaf electron collimator in combination with IMRT and 3D-CRT: Monte Carlo-based planning and dosimetric evaluation. <i>Medical Physics</i> , 2005 , 32, 2976-86	4.4	33
8	Dosimetric and microdosimetric study of contrast-enhanced radiotherapy with kilovolt x-rays. <i>Physics in Medicine and Biology</i> , 2005 , 50, 3555-69	3.8	57
7	Relative biologic effectiveness in terms of tumor response of ¹²⁵ I implants compared with ⁶⁰ Co gamma rays. <i>International Journal of Radiation Oncology Biology Physics</i> , 2005 , 63, 224-9	4	14
6	Validation of Monte Carlo calculated surface doses for megavoltage photon beams. <i>Medical Physics</i> , 2005 , 32, 286-98	4.4	50
5	Interface perturbation effects in high-energy electron beams. <i>Physics in Medicine and Biology</i> , 2003 , 48, 687-705	3.8	30

4	Monte Carlo modelling of external radiotherapy photon beams. <i>Physics in Medicine and Biology</i> , 2003 , 48, R107-64	3.8	275
3	A systematic Monte Carlo study of secondary electron fluence perturbation in clinical proton beams (70-250 MeV) for cylindrical and spherical ion chambers. <i>Medical Physics</i> , 2001 , 28, 2088-95	4.4	22
2	Water calorimetry and ionization chamber dosimetry in an 85-MeV clinical proton beam. <i>Medical Physics</i> , 1996 , 23, 643-50	4.4	34
1	Dependence of overall correction factor of a cylindrical ionization chamber on field size and depth in medium-energy x-ray beams. <i>Medical Physics</i> , 1996 , 23, 1789-96	4.4	30