Ben J M Heijmen

List of Publications by Year
in descending order

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113 papers	5,574 citations	87401 40 h-index	97045 71 g-index
113 all docs	113 docs citations	113 times ranked	4337 citing authors

#	Article	IF	Citations
1	TBS-BAO: fully automated beam angle optimization for IMRT guided by a total-beam-space reference plan. Physics in Medicine and Biology, 2022, 67, 035004.	1.6	5
2	Automated multi-criterial planning with beam angle optimization to establish non-coplanar VMAT class solutions for nasopharyngeal carcinoma. Physica Medica, 2022, 101, 20-27.	0.4	2
3	Largely reduced OAR doses, and planning and delivery times for challenging robotic SBRT cases, obtained with a novel optimizer. Journal of Applied Clinical Medical Physics, 2021, 22, 35-47.	0.8	10
4	Complementing Prostate SBRT VMAT With a Two-Beam Non-Coplanar IMRT Class Solution to Enhance Rectum and Bladder Sparing With Minimum Increase in Treatment Time. Frontiers in Oncology, 2021, 11, 620978.	1.3	4
5	On the Importance of Individualized, Non-Coplanar Beam Configurations in Mediastinal Lymphoma Radiotherapy, Optimized With Automated Planning. Frontiers in Oncology, 2021, 11, 619929.	1.3	9
6	Towards an updated ESTRO-EFOMP core curriculum for education and training of medical physics experts in radiotherapy â€“ A survey of current education and training practice in Europe. Physica Medica, 2021, 84, 65-71.	0.4	8
7	Pre-clinical validation of a novel system for fully-automated treatment planning. Radiotherapy and Oncology, 2021, 158, 253-261.	0.3	24
8	Model based patient pre-selection for intensity-modulated proton therapy (IMPT) using automated treatment planning and machine learning. Radiotherapy and Oncology, 2021, 158, 224-229.	0.3	14
9	Response to the Letter to the Editor â€œApplication of the RATING score: In regards to Hansen et al.â€• Radiotherapy and Oncology, 2021, 158, 311.	0.3	1
10	Fully automated treatment planning for MLCâ€based robotic radiotherapy. Medical Physics, 2021, 48, 4139-4147.	1.6	9
11	MR-Linac Radiotherapy â€“ The Beam Angle Selection Problem. Frontiers in Oncology, 2021, 11, 717681.	1.3	7
12	Variations in Head and Neck Treatment Plan Quality Assessment Among Radiation Oncologists and Medical Physicists in a Single Radiotherapy Department. Frontiers in Oncology, 2021, 11, 706034.	1.3	1
13	Enhancing Radiotherapy for Locally Advanced Non-Small Cell Lung Cancer Patients with iCE, a Novel System for Automated Multi-Criterial Treatment Planning Including Beam Angle Optimization. Cancers, 2021, 13, 5683.	1.7	8
14	Radiotherapy Treatment plannINg study Guidelines (RATING): A framework for setting up and reporting on scientific treatment planning studies. Radiotherapy and Oncology, 2020, 153, 67-78.	0.3	77
15	Online-adaptive versus robust IMPT for prostate cancer: How much can we gain?. Radiotherapy and Oncology, 2020, 151, 228-233.	0.3	12
16	The role of computational methods for automating and improving clinical target volume definition. Radiotherapy and Oncology, 2020, 153, 15-25.	0.3	31
17	Accurate 3D-dose-based generation of MLC segments for robotic radiotherapy. Physics in Medicine and Biology, 2020, 65, 175011.	1.6	4
18	First system for fully-automated multi-criterial treatment planning for a high-magnetic field MR-Linac applied to rectal cancer. Acta OncolÃ³gica, 2020, 59, 926-932.	0.8	17

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19	Patterns of practice for adaptive and real-time radiation therapy (POP-ART RT) part I: Intra-fraction breathing motion management. Radiotherapy and Oncology, 2020, 153, 79-87.	0.3	34
20	Technologyâ€driven research for radiotherapy innovation. Molecular Oncology, 2020, 14, 1500-1513.	2.1	60
21	Automated Radiotherapy Planning for Patient-Specific Exploration of the Trade-Off Between Tumor Dose Coverage and Predicted Radiation-Induced Toxicityâ€"A Proof of Principle Study for Prostate Cancer. Frontiers in Oncology, 2020, 10, 943.	1.3	8
22	Patterns of practice for adaptive and real-time radiation therapy (POP-ART RT) part II: Offline and online plan adaption for interfractional changes. Radiotherapy and Oncology, 2020, 153, 88-96.	0.3	50
23	Automatic configuration of the reference point method for fully automated multiâ€objective treatment planning applied to oropharyngeal cancer. Medical Physics, 2020, 47, 1499-1508.	1.6	3
24	Local Dose Effects for Late Gastrointestinal Toxicity After Hypofractionated and Conventionally Fractionated Modern Radiotherapy for Prostate Cancer in the HYPRO Trial. Frontiers in Oncology, 2020, 10, 469.	1.3	16
25	Fast and fully-automated multi-criterial treatment planning for adaptive HDR brachytherapy for locally advanced cervical cancer. Radiotherapy and Oncology, 2020, 148, 143-150.	0.3	20
26	Automatic genetic planning for volumetric modulated arc therapy: A large multi-centre validation for prostate cancer. Radiotherapy and Oncology, 2020, 148, 126-132.	0.3	12
27	Plan-library supported automated replanning for online-adaptive intensity-modulated proton therapy of cervical cancer. Acta OncolÃ³gica, 2019, 58, 1440-1445.	0.8	16
28	Fast automated multi-criteria planning for HDR brachytherapy explored for prostate cancer. Physics in Medicine and Biology, 2019, 64, 205002.	1.6	18
29	Adapting training for medical physicists to match future trends in radiation oncology. Physics and Imaging in Radiation Oncology, 2019, 11, 71-75.	1.2	6
30	Advanced treatment planning strategies to enhance quality and efficiency of radiotherapy. Physics and Imaging in Radiation Oncology, 2019, 11, 69-70.	1.2	3
31	Automated prioritised 3D dose-based MLC segment generation for step-and-shoot IMRT. Physics in Medicine and Biology, 2019, 64, 165013.	1.6	6
32	Individualized automated planning for dose bath reduction in robotic radiosurgery for benign tumors. PLoS ONE, 2019, 14, e0210279.	1.1	5
33	Multi-criteria optimization and decision-making in radiotherapy. European Journal of Operational Research, 2019, 277, 1-19.	3.5	55
34	Automatically configuring the reference point method for automated multi-objective treatment planning. Physics in Medicine and Biology, 2019, 64, 035002.	1.6	7
35	Knowledgeâ€based dose prediction models for head and neck cancer are strongly affected by interorgan dependency and dataset inconsistency. Medical Physics, 2019, 46, 934-943.	1.6	9
36	Automated volumetric modulated arc therapy planning for whole pelvic prostate radiotherapy. Strahlentherapie Und Onkologie, 2018, 194, 333-342.	1.0	32

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37	Fast and robust adaptation of organs-at-risk delineations from planning scans to match daily anatomy in pre-treatment scans for online-adaptive radiotherapy of abdominal tumors. Radiotherapy and Oncology, 2018, 127, 332-338.	0.3	9
38	Anatomical robust optimization to account for nasal cavity filling variation during intensity-modulated proton therapy: a comparison with conventional and adaptive planning strategies. Physics in Medicine and Biology, 2018, 63, 025020.	1.6	38
39	Pareto-optimal plans as ground truth for validation of a commercial system for knowledge-based DVH-prediction. Physica Medica, 2018, 55, 98-106.	0.4	22
40	Protocol for the STRONG trial: stereotactic body radiation therapy following chemotherapy for unresectable perihilar cholangiocarcinoma, a phase I feasibility study. BMJ Open, 2018, 8, e020731.	0.8	10
41	Texture analysis of 3D dose distributions for predictive modelling of toxicity rates in radiotherapy. Radiotherapy and Oncology, 2018, 129, 548-553.	0.3	89
42	An individualized strategy to estimate the effect of deformable registration uncertainty on accumulated dose in the upper abdomen. Physics in Medicine and Biology, 2018, 63, 125005.	1.6	5
43	Fully automated, multi-criterial planning for Volumetric Modulated Arc Therapy â€“ An international multi-center validation for prostate cancer. Radiotherapy and Oncology, 2018, 128, 343-348.	0.3	62
44	Statistical motion modelling for robust evaluation of clinically delivered accumulated dose distributions after curative radiotherapy of locally advanced prostate cancer. Radiotherapy and Oncology, 2018, 128, 327-335.	0.3	8
45	First fully automated planning solution for robotic radiosurgery â€“ comparison with automatically planned volumetric arc therapy for prostate cancer. Acta OncolÃ³gica, 2018, 57, 1490-1498.	0.8	24
46	Automation in intensity modulated radiotherapy treatment planningâ€”a review of recent innovations. British Journal of Radiology, 2018, 91, 20180270.	1.0	150
47	An automated planning strategy for near real-time adaptive proton therapy in prostate cancer. Physics in Medicine and Biology, 2018, 63, 135017.	1.6	32
48	Automated VMAT planning for postoperative adjuvant treatment of advanced gastric cancer. Radiation Oncology, 2018, 13, 74.	1.2	18
49	Late toxicity in the randomized multicenter HYPRO trial for prostate cancer analyzed with automated treatment planning. Radiotherapy and Oncology, 2018, 128, 349-356.	0.3	16
50	Institutional experience in the treatment of colorectal liver metastases with stereotactic body radiation therapy. Reports of Practical Oncology and Radiotherapy, 2017, 22, 126-131.	0.3	27
51	The role of technology in clinical trials using stereotactic body radiotherapy. British Journal of Radiology, 2017, 90, 20160930.	1.0	4
52	Fully automated treatment planning of spinal metastases â€“ A comparison to manual planning of Volumetric Modulated Arc Therapy for conventionally fractionated irradiation. Radiation Oncology, 2017, 12, 33.	1.2	28
53	Individualized Selection of Beam Angles and Treatment Isocenter in Tangential Breast Intensity Modulated Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2017, 98, 447-453.	0.4	12
54	Fast and fuzzy multi-objective radiotherapy treatment plan generation for head and neck cancer patients with the lexicographic reference point method (LRPM). Physics in Medicine and Biology, 2017, 62, 4318-4332.	1.6	18

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55	Lexicographic extension of the reference point method applied in radiation therapy treatment planning. European Journal of Operational Research, 2017, 263, 247-257.	3.5	19
56	Near real-time automated dose restoration in IMPT to compensate for daily tissue density variations in prostate cancer. Physics in Medicine and Biology, 2017, 62, 4254-4272.	1.6	37
57	VMAT plus a few computer-optimized non-coplanar IMRT beams (VMAT+) tested for liver SBRT. Radiotherapy and Oncology, 2017, 123, 49-56.	0.3	24
58	Data for TROTS â€“ The Radiotherapy Optimisation Test Set. Data in Brief, 2017, 12, 143-149.	0.5	29
59	Fully automated VMAT treatment planning for advanced-stage NSCLC patients. Strahlentherapie Und Onkologie, 2017, 193, 402-409.	1.0	40
60	CyberKnife with integrated <scp>CT</scp>â€onâ€rails: System description and first clinical application for pancreas <scp>SBRT</scp>. Medical Physics, 2017, 44, 4816-4827.	1.6	26
61	A novel method for subâ€arc <scp>VMAT</scp> dose delivery verification based on portal dosimetry with an <scp>EPID</scp>. Medical Physics, 2017, 44, 5556-5562.	1.6	3
62	An interior-point implementation developed and tuned for radiation therapy treatment planning. Computational Optimization and Applications, 2017, 68, 209-242.	0.9	25
63	Prospective clinical validation of independent DVH prediction for plan QA in automatic treatment planning for prostate cancer patients. Radiotherapy and Oncology, 2017, 125, 500-506.	0.3	20
64	Evaluation of plan quality assurance models for prostate cancer patients based on fully automatically generated Pareto-optimal treatment plans. Physics in Medicine and Biology, 2016, 61, 4268-4282.	1.6	23
65	Characteristics and performance of the first commercial multileaf collimator for a robotic radiosurgery system. Medical Physics, 2016, 43, 2063-2071.	1.6	27
66	The price of robustness; impact of worst-case optimization on organ-at-risk dose and complication probability in intensity-modulated proton therapy for oropharyngeal cancer patients. Radiotherapy and Oncology, 2016, 120, 56-62.	0.3	49
67	Adaptive radiotherapy strategies for pelvic tumors â€“ a systematic review of clinical implementations. Acta OncolÃ³gica, 2016, 55, 943-958.	0.8	58
68	Hypofractionated versus conventionally fractionated radiotherapy for patients with localised prostate cancer (HYPRO): final efficacy results from a randomised, multicentre, open-label, phase 3 trial. Lancet Oncology, The, 2016, 17, 1061-1069.	5.1	385
69	Robustness Recipes for Minimax Robust Optimization in Intensity Modulated Proton Therapy for Oropharyngeal Cancer Patients. International Journal of Radiation Oncology Biology Physics, 2016, 95, 163-170.	0.4	62
70	Hypofractionated versus conventionally fractionated radiotherapy for patients with prostate cancer (HYPRO): late toxicity results from a randomised, non-inferiority, phase 3 trial. Lancet Oncology, The, 2016, 17, 464-474.	5.1	242
71	Validation of Fully Automated VMAT Plan Generation for Library-Based Plan-of-the-Day Cervical Cancer Radiotherapy. PLoS ONE, 2016, 11, e0169202.	1.1	55
72	Improving anatomical mapping of complexly deformed anatomy for external beam radiotherapy and brachytherapy dose accumulation in cervical cancer. Medical Physics, 2015, 42, 206-220.	1.6	22

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73	Quantification of intra-fraction changes during radiotherapy of cervical cancer assessed with pre- and post-fraction Cone Beam CT scans. Radiotherapy and Oncology, 2015, 117, 536-541.	0.3	46
74	Hypofractionated versus conventionally fractionated radiotherapy for patients with prostate cancer (HYPRO): acute toxicity results from a randomised non-inferiority phase 3 trial. Lancet Oncology, The, 2015, 16, 274-283.	5.1	151
75	Shortening Delivery Times of Intensity Modulated Proton Therapy by Reducing Proton Energy Layers During Treatment Plan Optimization. International Journal of Radiation Oncology Biology Physics, 2015, 92, 460-468.	0.4	55
76	Noncoplanar Beam Angle Class Solutions to Replace Time-Consuming Patient-Specific Beam Angle Optimization in Robotic Prostate Stereotactic Body Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2015, 92, 762-770.	0.4	16
77	Comparison of VMAT and IMRT strategies for cervical cancer patients using automated planning. Radiotherapy and Oncology, 2015, 114, 395-401.	0.3	80
78	Inter- and Intrafraction Target Motion in Highly Focused Single Vocal Cord Irradiation of T1a Larynx Cancer Patients. International Journal of Radiation Oncology Biology Physics, 2015, 93, 190-195.	0.4	23
79	Cervix Motion in 50 Cervical Cancer Patients Assessed by Daily Cone Beam Computed Tomographic Imaging of a New Type of Marker. International Journal of Radiation Oncology Biology Physics, 2015, 93, 532-539.	0.4	12
80	Clinical Implementation of an Online Adaptive Plan-of-the-Day Protocol for Nonrigid Motion Management in Locally Advanced Cervical Cancer IMRT. International Journal of Radiation Oncology Biology Physics, 2014, 90, 673-679.	0.4	146
81	Fully Automated Volumetric Modulated Arc Therapy Plan Generation for Prostate Cancer Patients. International Journal of Radiation Oncology Biology Physics, 2014, 88, 1175-1179.	0.4	115
82	Intrafraction Prostate Translations and Rotations During Hypofractionated Robotic Radiation Surgery: Dosimetric Impact of Correction Strategies and Margins. International Journal of Radiation Oncology Biology Physics, 2014, 88, 1154-1160.	0.4	40
83	Treatment simulations with a statistical deformable motion model to evaluate margins for multiple targets in radiotherapy for high-risk prostate cancer. Radiotherapy and Oncology, 2013, 109, 344-349.	0.3	40
84	Accurate IMRT fluence verification for prostate cancer patients using â€˜in-vivoâ€™ measured EPID images and in-room acquired kilovoltage cone-beam CT scans. Radiation Oncology, 2013, 8, 211.	1.2	7
85	Dose Uncertainties in IMPT for Oropharyngeal Cancer in the Presence of Anatomical, Range, and Setup Errors. International Journal of Radiation Oncology Biology Physics, 2013, 87, 888-896.	0.4	96
86	Toward Fully Automated Multicriterial Plan Generation: A Prospective Clinical Study. International Journal of Radiation Oncology Biology Physics, 2013, 85, 866-872.	0.4	128
87	Automated generation of IMRT treatment plans for prostate cancer patients with metal hip prostheses: Comparison of different planning strategies. Medical Physics, 2013, 40, 071704.	1.6	25
88	Accurate CT/MR vesselâ€guided nonrigid registration of largely deformed livers. Medical Physics, 2012, 39, 2463-2477.	1.6	23
89	Comparison of Macroscopic Pathology Measurements With Magnetic Resonance Imaging and Assessment of Microscopic Pathology Extension for Colorectal Liver Metastases. International Journal of Radiation Oncology Biology Physics, 2012, 82, 159-166.	0.4	27
90	Intensity modulated radiation therapy planning for patients with a metal hip prosthesis based on class solutions. Practical Radiation Oncology, 2012, 2, 35-40.	1.1	7

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91	Integrated multicriterial optimization of beam angles and intensity profiles for coplanar and noncoplanar head and neck IMRT and implications for VMAT. Medical Physics, 2012, 39, 4858-4865.	1.6	51
92	iCycle: Integrated, multicriterial beam angle, and profile optimization for generation of coplanar and noncoplanar IMRT plans. Medical Physics, 2012, 39, 951-963.	1.6	256
93	On the beam direction search space in computerized non-coplanar beam angle optimization for IMRTâ€"prostate SBRT. Physics in Medicine and Biology, 2012, 57, 5441-5458.	1.6	56
94	Software-controlled, highly automated intrafraction prostate motion correction with intrafraction stereographic targeting: System description and clinical results. Medical Physics, 2012, 39, 1314-1321.	1.6	3
95	Clinical Validation of Atlas-Based Auto-Segmentation of Multiple Target Volumes and Normal Tissue (Swallowing/Mastication) Structures in the Head and Neck. International Journal of Radiation Oncology Biology Physics, 2011, 81, 950-957.	0.4	162
96	Margin Evaluation in the Presence of Deformation, Rotation, and Translation in Prostate and Entire Seminal Vesicle Irradiation With Daily Marker-Based Setup Corrections. International Journal of Radiation Oncology Biology Physics, 2011, 81, 1160-1167.	0.4	49
97	A symmetric nonrigid registration method to handle large organ deformations in cervical cancer patients. Medical Physics, 2010, 37, 3760-3772.	1.6	66
98	The equivalence of multi-criteria methods for radiotherapy plan optimization. Physics in Medicine and Biology, 2009, 54, 7199-7209.	1.6	99
99	Stereotactic Body Radiation Therapy for Liver Tumors: Impact of Daily Setup Corrections and Day-to-Day Anatomic Variations on Dose in Target and Organs at Risk. International Journal of Radiation Oncology Biology Physics, 2009, 75, 1201-1208.	0.4	48
100	Clinical Accuracy of the Respiratory Tumor Tracking System of the CyberKnife: Assessment by Analysis of Log Files. International Journal of Radiation Oncology Biology Physics, 2009, 74, 297-303.	0.4	304
101	A novel flexible framework with automatic feature correspondence optimization for nonrigid registration in radiotherapy. Medical Physics, 2009, 36, 2848-2859.	1.6	56
102	Deformation of Prostate and Seminal Vesicles Relative to Intraprostatic Fiducial Markers. International Journal of Radiation Oncology Biology Physics, 2008, 72, 1604-1611.e3.	0.4	87
103	Quality of Life After Stereotactic Body Radiation Therapy for Primary and Metastatic Liver Tumors. International Journal of Radiation Oncology Biology Physics, 2008, 70, 1447-1452.	0.4	72
104	Stereographic Targeting in Prostate Radiotherapy: Speed and Precision by Daily Automatic Positioning Corrections Using Kilovoltage/Megavoltage Image Pairs. International Journal of Radiation Oncology Biology Physics, 2008, 71, 1074-1083.	0.4	26
105	Reduction of Respiratory Liver Tumor Motion by Abdominal Compression in Stereotactic Body Frame, Analyzed by Tracking Fiducial Markers Implanted in Liver. International Journal of Radiation Oncology Biology Physics, 2008, 71, 907-915.	0.4	111
106	Inter-fraction bladder filling variations and time trends for cervical cancer patients assessed with a portable 3-dimensional ultrasound bladder scanner. Radiotherapy and Oncology, 2008, 89, 172-179.	0.3	72
107	A novel approach to multi-criteria inverse planning for IMRT. Physics in Medicine and Biology, 2007, 52, 6339-6353.	1.6	97
108	eNAL: An Extension of the NAL Setup Correction Protocol for Effective Use of Weekly Follow-up Measurements. International Journal of Radiation Oncology Biology Physics, 2007, 67, 1586-1595.	0.4	84

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109	Fast, multiple optimizations of quadratic dose objective functions in IMRT. Physics in Medicine and Biology, 2006, 51, 3569-3579.	1.6	39
110	Application of the No Action Level (NAL) protocol to correct for prostate motion based on electronic portal imaging of implanted markers. International Journal of Radiation Oncology Biology Physics, 2005, 61, 969-983.	0.4	98
111	Geometrical uncertainties, radiotherapy planning margins, and the ICRU-62 report. Radiotherapy and Oncology, 2002, 64, 75-83.	0.3	310
112	Detection of organ movement in cervix cancer patients using a fluoroscopic electronic portal imaging device and radiopaque markers. International Journal of Radiation Oncology Biology Physics, 2002, 54, 576-583.	0.4	68
113	Hypofractionation and prostate cancer: A good option for Africa?. South African Journal of Oncology, 0, 1, 3.	0.1	2