Heiko Enderling

List of Publications by Year
in descending order

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115	3,620	136740	168136
papers	citations	32 h-index	53 g-index

136	136	136	3519
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A mathematical model of breast cancer development, local treatment and recurrence. Journal of Theoretical Biology, 2007, 246, 245-259.	0.8	176
2	Paradoxical Dependencies of Tumor Dormancy and Progression on Basic Cell Kinetics. Cancer Research, 2009, 69, 8814-8821.	0.4	175
3	The future of personalised radiotherapy for head and neck cancer. Lancet Oncology, The, 2017, 18, e266-e273.	5.1	168
4	The 2019 mathematical oncology roadmap. Physical Biology, 2019, 16, 041005.	0.8	147
5	Mathematical Modeling of Tumor Growth and Treatment. Current Pharmaceutical Design, 2014, 20, 4934-4940.	0.9	145
6	Acute and Fractionated Irradiation Differentially Modulate Glioma Stem Cell Division Kinetics. Cancer Research, 2013, 73, 1481-1490.	0.4	118
7	Migration rules: tumours are conglomerates of self-metastases. British Journal of Cancer, 2009, 100, 1917-1925.	2.9	115
8	Mathematical Models of Cancer: When to Predict Novel Therapies, and When Not to. Bulletin of Mathematical Biology, 2019, 81, 3722-3731.	0.9	110
9	Abscopal Benefits of Localized Radiotherapy Depend on Activated T-cell Trafficking and Distribution between Metastatic Lesions. Cancer Research, 2016, 76, 1009-1018.	0.4	103
10	Mathematical modelling of radiotherapy strategies for early breast cancer. Journal of Theoretical Biology, 2006, 241, 158-171.	0.8	95
11	A proliferation saturation index to predict radiation response and personalize radiotherapy fractionation. Radiation Oncology, 2015, 10, 159.	1.2	93
12	The Tumor Growth Paradox and Immune System-Mediated Selection for Cancer Stem Cells. Bulletin of Mathematical Biology, 2013, 75, 161-184.	0.9	85
13	Quantitative Modeling of Tumor Dynamics and Radiotherapy. Acta Biotheoretica, 2010, 58, 341-353.	0.7	70
14	Evolution and Phenotypic Selection of Cancer Stem Cells. PLoS Computational Biology, 2015, 11, e1004025.	1.5	69
15	Dependence of Invadopodia Function on Collagen Fiber Spacing and Cross-Linking: Computational Modeling and Experimental Evidence. Biophysical Journal, 2008, 95, 2203-2218.	0.2	67
16	A Multicompartment Mathematical Model of Cancer Stem Cell-Driven Tumor Growth Dynamics. Bulletin of Mathematical Biology, 2014, 76, 1762-1782.	0.9	67
17	Prostate-specific antigen dynamics predict individual responses to intermittent androgen deprivation. Nature Communications, 2020, 11, 1750.	5.8	67
18	Neoadjuvant radiotherapy of early-stage breast cancer and long-term disease-free survival. Breast Cancer Research, 2017, 19, 75.	2.2	65

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19	The Importance of Spatial Distribution of Stemness and Proliferation State in Determining Tumor Radioresponse. Mathematical Modelling of Natural Phenomena, 2009, 4, 117-133.	0.9	64
20	Cardiovascular Risks Associated with Low Dose Ionizing Particle Radiation. PLoS ONE, 2014, 9, e110269.	1.1	60
21	Hypofractionated stereotactic re-irradiation with pembrolizumab and bevacizumab in patients with recurrent high-grade gliomas: results from a phase I study. Neuro-Oncology, 2021, 23, 677-686.	0.6	60
22	Cancer Stem Cells: A Minor Cancer Subpopulation that Redefines Global Cancer Features. Frontiers in Oncology, 2013, 3, 76.	1.3	59
23	Cancer stem cells in solid tumors: Is â€˜evading apoptosisâ€™ a hallmark of cancer?. Progress in Biophysics and Molecular Biology, 2011, 106, 391-399.	1.4	57
24	Breaking the â€˜harmonyâ€™ of TNF-Î± signaling for cancer treatment. Oncogene, 2012, 31, 4117-4127.	2.6	56
25	Cancer stem cells: small subpopulation or evolving fraction?. Integrative Biology (United Kingdom), 2015, 7, 14-23.	0.6	56
26	A High-Performance Cellular Automaton Model of Tumor Growth with Dynamically Growing Domains. Applied Mathematics, 2014, 05, 144-152.	0.1	47
27	The Evolution of Tumour Composition During Fractionated Radiotherapy: Implications for Outcome. Bulletin of Mathematical Biology, 2018, 80, 1207-1235.	0.9	45
28	The Optimal Radiation Dose to Induce Robust Systemic Anti-Tumor Immunity. International Journal of Molecular Sciences, 2018, 19, 3377.	1.8	45
29	Non-stem cancer cell kinetics modulate solid tumor progression. Theoretical Biology and Medical Modelling, 2011, 8, 48.	2.1	43
30	Integrating Mathematical Modeling into the Roadmap for Personalized Adaptive Radiation Therapy. Trends in Cancer, 2019, 5, 467-474.	3.8	43
31	Phenotypic transition maps of 3D breast acini obtained by imaging-guided agent-based modeling. Integrative Biology (United Kingdom), 2011, 3, 408.	0.6	41
32	Agent-Based Modeling of Cancer Stem Cell Driven Solid Tumor Growth. Methods in Molecular Biology, 2016, 1516, 335-346.	0.4	38
33	From concept to clinic: Mathematically informed immunotherapy. Current Problems in Cancer, 2016, 40, 68-83.	1.0	36
34	Classical mathematical models for prediction of response to chemotherapy and immunotherapy. PLoS Computational Biology, 2022, 18, e1009822.	1.5	36
35	Immune interconnectivity of anatomically distant tumors as a potential mediator of systemic responses to local therapy. Scientific Reports, 2018, 8, 9474.	1.6	34
36	Immunoediting: evidence of the multifaceted role of the immune system in self-metastatic tumor growth. Theoretical Biology and Medical Modelling, 2012, 9, 31.	2.1	33

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37	Predicting patient-specific response to adaptive therapy in metastatic castration-resistant prostate cancer using prostate-specific antigen dynamics. Neoplasia, 2021, 23, 851-858.	2.3	31
38	Forecasting Individual Patient Response to Radiation Therapy in Head and Neck Cancer With a Dynamic Carrying Capacity Model. International Journal of Radiation Oncology Biology Physics, 2021, 111, 693-704.	0.4	31
39	Predicting Patient-Specific Radiotherapy Protocols Based on Mathematical Model Choice for Proliferation Saturation Index. Bulletin of Mathematical Biology, 2018, 80, 1195-1206.	0.9	28
40	Tumor morphological evolution: directed migration and gain and loss of the self-metastatic phenotype. Biology Direct, 2010, 5, 23.	1.9	27
41	Cancer Stem Cell Plasticity as Tumor Growth Promoter and Catalyst of Population Collapse. Stem Cells International, 2016, 2016, 1-12.	1.2	27
42	Therapeutic Implications from Sensitivity Analysis of Tumor Angiogenesis Models. PLoS ONE, 2015, 10, e0120007.	1.1	26
43	Fighting Cancer with Mathematics and Viruses. Viruses, 2017, 9, 239.	1.5	26
44	Different Sequences of Fractionated Low-Dose Proton and Single Iron-Radiation-Induced Divergent Biological Responses in the Heart. Radiation Research, 2017, 188, 191-203.	0.7	25
45	Temporally feathered intensityâ€modulated radiation therapy: A planning technique to reduce normal tissue toxicity. Medical Physics, 2018, 45, 3466-3474.	1.6	24
46	Proliferation saturation index in an adaptive Bayesian approach to predict patient-specific radiotherapy responses. International Journal of Radiation Biology, 2019, 95, 1421-1426.	1.0	24
47	Simulating Cancer: Computational Models in Oncology. Frontiers in Oncology, 2013, 3, 233.	1.3	23
48	Are all models wrong?. Computational and Systems Oncology, 2021, 1, e1008.	1.1	20
49	Formalizing an Integrative, Multidisciplinary Cancer Therapy Discovery Workflow. Cancer Research, 2013, 73, 6111-6117.	0.4	19
50	Cancer Stem Cells and Tumor Dormancy. Advances in Experimental Medicine and Biology, 2013, 734, 55-71.	0.8	19
51	Quantitative pretreatment CT volumetry: Association with oncologic outcomes in patients with T4a squamous carcinoma of the larynx. Head and Neck, 2017, 39, 1609-1620.	0.9	18
52	Tumor Volume Dynamics as an Early Biomarker for Patient-Specific Evolution of Resistance and Progression in Recurrent High-Grade Glioma. Journal of Clinical Medicine, 2020, 9, 2019.	1.0	18
53	A time-resolved experimentalâ€“mathematical model for predicting the response of glioma cells to single-dose radiation therapy. Integrative Biology (United Kingdom), 2021, 13, 167-183.	0.6	18
54	Therapeutic Non-Toxic Doses of TNF Induce Significant Regression in TNFR2-p75 Knockdown Lewis Lung Carcinoma Tumor Implants. PLoS ONE, 2014, 9, e92373.	1.1	17

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55	The importance of dead material within a tumour on the dynamics in response to radiotherapy. Physics in Medicine and Biology, 2020, 65, 015007.	1.6	17
56	Intermittent radiotherapy as alternative treatment for recurrent high grade glioma: a modeling study based on longitudinal tumor measurements. Scientific Reports, 2021, 11, 20219.	1.6	17
57	Mathematical Modeling of the Effects of Tumor Heterogeneity on the Efficiency of Radiation Treatment Schedule. Bulletin of Mathematical Biology, 2018, 80, 283-293.	0.9	16
58	Immunologic Consequences of Sequencing Cancer Radiotherapy and Surgery. JCO Clinical Cancer Informatics, 2019, 3, 1-16.	1.0	16
59	Dynamics-Adapted Radiotherapy Dose (DARD) for Head and Neck Cancer Radiotherapy Dose Personalization. Journal of Personalized Medicine, 2021, 11, 1124.	1.1	16
60	A three phase model to investigate the effects of dead material on the growth of avascular tumours. Mathematical Modelling of Natural Phenomena, 2020, 15, 22.	0.9	15
61	Tumor-immune ecosystem dynamics define an individual Radiation Immune Score to predict pan-cancer radiocurability. Neoplasia, 2021, 23, 1110-1122.	2.3	15
62	Mathematical modeling of radiotherapy and its impact on tumor interactions with the immune system. Neoplasia, 2022, 28, 100796.	2.3	15
63	TNF-TNFR2/p75 Signaling Inhibits Early and Increases Delayed Nontargeted Effects in Bone Marrow-derived Endothelial Progenitor Cells. Journal of Biological Chemistry, 2014, 289, 14178-14193.	1.6	14
64	Mathematical oncology and itâ€™s application in non melanoma skin cancer â€“ A primer for radiation oncology professionals. Oral Oncology, 2020, 103, 104473.	0.8	14
65	The promoting role of a tumour-secreted chemorepellent in self-metastatic tumour progression. Mathematical Medicine and Biology, 2012, 29, 21-29.	0.8	13
66	Biphasic modulation of cancer stem cellâ€driven solid tumour dynamics in response to reactivated replicative senescence. Cell Proliferation, 2014, 47, 267-276.	2.4	12
67	Heterogeneity analysis of MRI T2 maps for measurement of early tumor response to radiotherapy. NMR in Biomedicine, 2021, 34, e4454.	1.6	12
68	Visualisation of the numerical solution of partial differential equation systems in three space dimensions and its importance for mathematical models in biology. Mathematical Biosciences and Engineering, 2006, 3, 571-582.	1.0	11
69	The Radiosensitivity Index Gene Signature Identifies Distinct Tumor Immune Microenvironment Characteristics Associated With Susceptibility to Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2022, 113, 635-647.	0.4	11
70	CD133 Expression as a Helicobacter pylori-independent Biomarker of Gastric Cancer Progression. Anticancer Research, 2018, 38, 4443-4448.	0.5	10
71	Personalizing Gastric Cancer Screening With Predictive Modeling of Disease Progression Biomarkers. Applied Immunohistochemistry and Molecular Morphology, 2019, 27, 270-277.	0.6	10
72	Early response dynamics predict treatment failure in patients with recurrent and/or metastatic head and neck squamous cell carcinoma treated with cetuximab and nivolumab. Oral Oncology, 2022, 127, 105787.	0.8	10

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73	Bayesian Framework to Augment Tumor Board Decision Making. JCO Clinical Cancer Informatics, 2021, 5, 508-517.	1.0	9
74	Evaluating the potential for maximized T cell redistribution entropy to improve abscopal responses to radiotherapy. Convergent Science Physical Oncology, 2017, 3, 034001.	2.6	8
75	Toward early detection of Helicobacter pylori-associated gastric cancer. Gastric Cancer, 2018, 21, 196-203.	2.7	8
76	The accelerating quest for optimal radiation and immunotherapy combinations for local and systemic tumor control. Therapeutic Radiology and Oncology, 0, 2, 33-33.	0.2	8
77	Rethinking the immunotherapy numbers game. , 2022, 10, e005107.		8
78	Particle Radiation-Induced Nontargeted Effects in Bone-Marrow-Derived Endothelial Progenitor Cells. Stem Cells International, 2015, 2015, 1-15.	1.2	7
79	CT-based volumetric tumor growth velocity: A novel imaging prognostic indicator in oropharyngeal cancer patients receiving radiotherapy. Oral Oncology, 2016, 63, 16-22.	0.8	7
80	Mathematical Modeling of Oncolytic Virotherapy. Methods in Molecular Biology, 2020, 2058, 307-320.	0.4	7
81	A model of breast carcinogenesis and recurrence after radiotherapy. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1121701-1121702.	0.2	6
82	Estimation of probability distributions of parameters using aggregate population data: analysis of a CAR T-cell cancer model. Mathematical Biosciences and Engineering, 2019, 16, 7299-7326.	1.0	5
83	Proliferation Saturation Index Predicts Oropharyngeal Squamous Cell Cancer Gross Tumor Volume Reduction to Prospectively Identify Patients for Adaptive Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2016, 94, 903.	0.4	4
84	High School Internship Program in Integrated Mathematical Oncology (HIP IMO): Five-Year Experience at Moffitt Cancer Center. Bulletin of Mathematical Biology, 2020, 82, 91.	0.9	4
85	Education and Outreach in Physical Sciences in Oncology. Trends in Cancer, 2021, 7, 3-9.	3.8	4
86	A time-resolved experimental-mathematical model for predicting the response of glioma cells to single-dose radiation therapy. Integrative Biology (United Kingdom), 2021, 13, 167-183.	0.6	4
87	Predictive Radiation Oncology â€“ A New NCIâ€“DOE Scientific Space and Community. Radiation Research, 2022, 197, .	0.7	4
88	Stratifying prostate cancer patients by relative lymph node involvement: populationâ€•and modelingâ€based study. Cancer Medicine, 2016, 5, 1850-1855.	1.3	3
89	Report from the SWOG Radiation Oncology Committee: Research Objectives Workshop 2017. Clinical Cancer Research, 2018, 24, 3500-3509.	3.2	3
90	Illuminating the Numbers: Integrating Mathematical Models to Optimize Photomedicine Dosimetry and Combination Therapies. Frontiers in Physics, 2019, 7, .	1.0	3

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91	Parameter estimation using aggregate data. Applied Mathematics Letters, 2020, 100, 105999.	1.5	3
92	Cell-Cell Interactions in Solid Tumors â€" the Role of Cancer Stem Cells. SIMAI Springer Series, 2012, , 191-204.	0.4	2
93	Abstract 4340: Increased cytokine and chemokine expression in U87MG glioblastoma cells after large clinically relevant single doses of ionizing radiation. , 2012, , .		2
94	Harnessing Tumor Immune Ecosystem Dynamics to Personalize Radiation Therapy. SSRN Electronic Journal, 0, , .	0.4	2
95	Unveiling Stem Cell Kinetics: Prime Time for Integrating Experimental and Computational Models. Frontiers in Oncology, 2013, 3, 291.	1.3	1
96	Mathematical Modeling of Acupuncture as Cancer Symptom Therapy: First Steps. JAMS Journal of Acupuncture and Meridian Studies, 2015, 8, 113-114.	0.3	1
97	Modeling Variability in Radiosensitivity and Tumor Immune Contexture to Personalize Radiotherapy. International Journal of Radiation Oncology Biology Physics, 2019, 105, S123-S124.	0.4	1
98	Re: Simulation analysis for tumor radiotherapy based on threeâ€€component mathematical models. Journal of Applied Clinical Medical Physics, 2019, 20, 204-205.	0.8	1
99	Re: Numerical simulation of normal and cancer cellsâ€™ populations with fractional derivative under radiotherapy. Computer Methods and Programs in Biomedicine, 2020, 188, 105417.	2.6	1
100	Mathematical oncology: A new frontier in cancer biology and clinical decision making. Physics of Life Reviews, 2021, , .	1.5	1
101	Reply: Inflammatory breast carcinoma as a model of accelerated self-metastatic expansion by intra-vascular growth. British Journal of Cancer, 2009, 101, 1030-1030.	2.9	0
102	Tu1324 CD133 Protein Expression As a Biomarker for Early Detection of Gastric Cancer. Gastroenterology, 2016, 150, S874-S875.	0.6	0
103	Mathematical Model of Head and Neck Cancer Response to Predict Fractionation Schema for Robust Responses During Radiation Therapy. International Journal of Radiation Oncology Biology Physics, 2017, 99, E656.	0.4	0
104	Abstract 4931: Cancer stem cells in solid tumors: Symmetric division, niche size, and invasive tumor morphology. , 2011, , .		0
105	Asymmetric Cell Division. , 2013, , 47-48.		0
106	Symmetric Cell Division. , 2013, , 2034-2034.		0
107	Cancer Stem Cell Kinetics. , 2013, , 193-195.		0
108	Abstract A18: A systems biology approach to predict immunotherapy augmented abscopal effects. , 2015, , .		0

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109	Abstract A19: Systems biology approach predicts the diagnostic value of T effector: T regulatory cell ratio in clinical response to combined radiation/immunotherapy of high-risk soft tissue sarcoma. , 2015, , .		0
110	Abstract 1523: Cross-disciplinary methods for personalizing screening modalities for early gastric cancer intervention. , 2016, , .		0
111	Abstract 4016: Personalizing the synergy of focal radiation and immunotherapy. , 2016, , .		0
112	Abstract 4543: Local and systemic tumor-immune dynamics in metastatic cancer. , 2017, , .		0
113	Abstract 4544: Computational modeling to suggest patient-specific screening schedules for early detection of gastric cancer. , 2017, , .		0
114	Abstract B014: Simulating prostate cancer stem cell dynamics to predict patient-specific sensitivity or resistance to intermittent androgen-deprivation therapy. , 2018, , .		0
115	Abstract 695: Using PSA dynamics to predict patient-specific responses to intermittent androgen deprivation. , 2019, , .		0