Kristin R Swanson

List of Publications by Year
in descending order

117	6,976	76326	64796
papers	citations	40 h-index	79 g-index

139	139	139	6522
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Virtual and real brain tumors: using mathematical modeling to quantify glioma growth and invasion. Journal of the Neurological Sciences, 2003, 216, 1-10.	0.6	510
2	Is the bloodâ€“brain barrier really disrupted in all glioblastomas? A critical assessment of existing clinical data. Neuro-Oncology, 2018, 20, 184-191.	1.2	443
3	Continuous growth of mean tumor diameter in a subset of grade II gliomas. Annals of Neurology, 2003, 53, 524-528.	5.3	437
4	A quantitative model for differential motility of gliomas in grey and white matter. Cell Proliferation, 2000, 33, 317-329.	5.3	380
5	The Evolution of Mathematical Modeling of Glioma Proliferation and Invasion. Journal of Neuropathology and Experimental Neurology, 2007, 66, 1-9.	1.7	267
6	Regional Hypoxia in Glioblastoma Multiforme Quantified with [18F]Fluoromisonidazole Positron Emission Tomography before Radiotherapy: Correlation with Time to Progression and Survival. Clinical Cancer Research, 2008, 14, 2623-2630.	7.0	257
7	A mathematical modelling tool for predicting survival of individual patients following resection of glioblastoma: a proof of principle. British Journal of Cancer, 2008, 98, 113-119.	6.4	235
8	Sex differences in GBM revealed by analysis of patient imaging, transcriptome, and survival data. Science Translational Medicine, 2019, 11, .	12.4	230
9	Virtual brain tumours (gliomas) enhance the reality of medical imaging and highlight inadequacies of current therapy. British Journal of Cancer, 2002, 86, 14-18.	6.4	220
10	Quantifying the Role of Angiogenesis in Malignant Progression of Gliomas: In Silico Modeling Integrates Imaging and Histology. Cancer Research, 2011, 71, 7366-7375.	0.9	217
11	Prognostic Significance of Growth Kinetics in Newly Diagnosed Glioblastomas Revealed by Combining Serial Imaging with a Novel Biomathematical Model. Cancer Research, 2009, 69, 9133-9140.	0.9	206
12	Radiogenomics to characterize regional genetic heterogeneity in glioblastoma. Neuro-Oncology, 2017, 19, 128-137.	1.2	170
13	A mathematical model for brain tumor response to radiation therapy. Journal of Mathematical Biology, 2009, 58, 561-78.	1.9	157
14	A General Systems Theory of Marriage: Nonlinear Difference Equation Modeling of Marital Interaction. Personality and Social Psychology Review, 2002, 6, 326-340.	6.0	147
15	Quantitative Metrics of Net Proliferation and Invasion Link Biological Aggressiveness Assessed by MRI with Hypoxia Assessed by FMISO-PET in Newly Diagnosed Glioblastomas. Cancer Research, 2009, 69, 4502-4509.	0.9	147
16	The 2019 mathematical oncology roadmap. Physical Biology, 2019, 16, 041005.	1.8	147
17	Complementary but Distinct Roles for MRI and¹⁸F-Fluoromisonidazole PET in the Assessment of Human Glioblastomas. Journal of Nuclear Medicine, 2009, 50, 36-44.	5.0	137
18	18F-FDG PET of gliomas at delayed intervals: improved distinction between tumor and normal gray matter. Journal of Nuclear Medicine, 2004, 45, 1653-9.	5.0	130

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19	Observing Gay, Lesbian and Heterosexual Couples' Relationships. Journal of Homosexuality, 2003, 45, 65-91.	2.0	125
20	MATHEMATICAL MODELLING OF GLIOBLASTOMA TUMOUR DEVELOPMENT: A REVIEW. Mathematical Models and Methods in Applied Sciences, 2005, 15, 1779-1794.	3.3	117
21	Multi-Parametric MRI and Texture Analysis to Visualize Spatial Histologic Heterogeneity and Tumor Extent in Glioblastoma. PLoS ONE, 2015, 10, e0141506.	2.5	104
22	Quantifying efficacy of chemotherapy of brain tumors with homogeneous and heterogeneous drug delivery. Acta Biotheoretica, 2002, 50, 223-237.	1.5	103
23	Toward Patient-Specific, Biologically Optimized Radiation Therapy Plans for the Treatment of Glioblastoma. PLoS ONE, 2013, 8, e79115.	2.5	101
24	Direct inhibition of myosin II effectively blocks glioma invasion in the presence of multiple motogens. Molecular Biology of the Cell, 2012, 23, 533-542.	2.1	93
25	Patient-Specific Metrics of Invasiveness Reveal Significant Prognostic Benefit of Resection in a Predictable Subset of Gliomas. PLoS ONE, 2014, 9, e99057.	2.5	89
26	Gene therapy enhances chemotherapy tolerance and efficacy in glioblastoma patients. Journal of Clinical Investigation, 2014, 124, 4082-4092.	8.2	83
27	Discriminating Survival Outcomes in Patients with Glioblastoma Using a Simulation-Based, Patient-Specific Response Metric. PLoS ONE, 2013, 8, e51951.	2.5	79
28	Patient-Specific Mathematical Neuro-Oncology: Using a Simple Proliferation and Invasion Tumor Model to Inform Clinical Practice. Bulletin of Mathematical Biology, 2015, 77, 846-856.	1.9	79
29	A spatial model of tumor-host interaction: Application of chemotherapy. Mathematical Biosciences and Engineering, 2009, 6, 521-546.	1.9	79
30	Invasion and proliferation kinetics in enhancing gliomas predict IDH1 mutation status. Neuro-Oncology, 2014, 16, 779-786.	1.2	77
31	A patient-specific computational model of hypoxia-modulated radiation resistance in glioblastoma using ¹⁸ F-FMISO-PET. Journal of the Royal Society Interface, 2015, 12, 20141174.	3.4	73
32	Imaging of intratumoral heterogeneity in high-grade glioma. Cancer Letters, 2020, 477, 97-106.	7.2	66
33	Response Classification Based on a Minimal Model of Glioblastoma Growth Is Prognostic for Clinical Outcomes and Distinguishes Progression from Pseudoprogression. Cancer Research, 2013, 73, 2976-2986.	0.9	62
34	Integrated mapping of pharmacokinetics and pharmacodynamics in a patient-derived xenograft model of glioblastoma. Nature Communications, 2018, 9, 4904.	12.8	62
35	Modeling Tumor-Associated Edema in Gliomas during Anti-Angiogenic Therapy and Its Impact on Imageable Tumor. Frontiers in Oncology, 2013, 3, 66.	2.8	61
36	Integration of machine learning and mechanistic models accurately predicts variation in cell density of glioblastoma using multiparametric MRI. Scientific Reports, 2019, 9, 10063.	3.3	59

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37	Magnetic Resonance Imaging Characteristics of Glioblastoma Multiforme: Implications for Understanding Glioma Ontogeny. Neurosurgery, 2010, 67, 1319-1328.	1.1	58
38	The role of IDH1 mutated tumour cells in secondary glioblastomas: an evolutionary game theoretical view. Physical Biology, 2011, 8, 015016.	1.8	55
39	A Quantitative Model for the Dynamics of Serum Prostate-Specific Antigen as a Marker for Cancerous Growth. American Journal of Pathology, 2001, 158, 2195-2199.	3.8	54
40	Progress and Opportunities to Advance Clinical Cancer Therapeutics Using Tumor Dynamic Models. Clinical Cancer Research, 2020, 26, 1787-1795.	7.0	51
41	Quantifying glioma cell growth and invasion in vitro. Mathematical and Computer Modelling, 2008, 47, 638-648.	2.0	41
42	Applying a patient-specific bio-mathematical model of glioma growth to develop virtual [18F]-FMISO-PET images. Mathematical Medicine and Biology, 2012, 29, 31-48.	1.2	41
43	Glioblastoma Recurrence and the Role of O6-Methylguanineâ€“DNA Methyltransferase Promoter Methylation. JCO Clinical Cancer Informatics, 2019, 3, 1-12.	2.1	40
44	From cells to tissue: How cell scale heterogeneity impacts glioblastoma growth and treatment response. PLoS Computational Biology, 2020, 16, e1007672.	3.2	35
45	Defining Glioblastoma Resectability Through the Wisdom of the Crowd: A Proof-of-Principle Study. Neurosurgery, 2017, 80, 590-601.	1.1	34
46	Glial progenitor cell recruitment drives aggressive glioma growth: mathematical and experimental modelling. Journal of the Royal Society Interface, 2012, 9, 1757-1766.	3.4	30
47	Sex differences in health and disease: A review of biological sex differences relevant to cancer with a spotlight on glioma. Cancer Letters, 2021, 498, 178-187.	7.2	30
48	Multiparameter MRI Predictors of Long-Term Survival in Glioblastoma Multiforme. Tomography, 2019, 5, 135-144.	1.8	28
49	Quantifying Uncertainty and Robustness in a Biomathematical Modelâ€“Based Patient-Specific Response Metric for Glioblastoma. JCO Clinical Cancer Informatics, 2019, 3, 1-8.	2.1	27
50	Mathematical Oncology: Using Mathematics to Enable Cancer Discoveries. American Mathematical Monthly, 2014, 121, 840-856.	0.3	25
51	Comparative dynamics of microglial and glioma cell motility at the infiltrative margin of brain tumours. Journal of the Royal Society Interface, 2018, 15, 20170582.	3.4	21
52	Simulating PDGF-Driven Glioma Growth and Invasion in an Anatomically Accurate Brain Domain. Bulletin of Mathematical Biology, 2018, 80, 1292-1309.	1.9	21
53	Performance of Standardized Relative CBV for Quantifying Regional Histologic Tumor Burden in Recurrent High-Grade Glioma: Comparison against Normalized Relative CBV Using Image-Localized Stereotactic Biopsies. American Journal of Neuroradiology, 2020, 41, 408-415.	2.4	21
54	Sex-specific impact of patterns of imageable tumor growth on survival of primary glioblastoma patients. BMC Cancer, 2020, 20, 447.	2.6	20

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55	IDHâ€“wild-type glioblastoma cell density and infiltration distribution influence on supramarginal resection and its impact on overall survival: a mathematical model. Journal of Neurosurgery, 2022, 136, 1567-1575.	1.6	20
56	Accurate Patient-Specific Machine Learning Models of Glioblastoma Invasion Using Transfer Learning. American Journal of Neuroradiology, 2019, 40, 418-425.	2.4	19
57	A Deep Convolutional Neural Network for Annotation of Magnetic Resonance Imaging Sequence Type. Journal of Digital Imaging, 2020, 33, 439-446.	2.9	19
58	Molecular omics resources should require sex annotation: a call for action. Nature Methods, 2021, 18, 585-588.	19.0	17
59	Distinct Phenotypic Clusters of Glioblastoma Growth and Response Kinetics Predict Survival. JCO Clinical Cancer Informatics, 2018, 2, 1-14.	2.1	16
60	Challenges in clinical studies with multiple imaging probes. Nuclear Medicine and Biology, 2007, 34, 879-885.	0.6	14
61	Learning Equations from Biological Data with Limited Time Samples. Bulletin of Mathematical Biology, 2020, 82, 119.	1.9	14
62	In silico analysis suggests differential response to bevacizumab and radiation combination therapy in newly diagnosed glioblastoma. Journal of the Royal Society Interface, 2015, 12, 20150388.	3.4	13
63	Improved model prediction of glioma growth utilizing tissue-specific boundary effects. Mathematical Biosciences, 2019, 312, 59-66.	1.9	13
64	Dynamics of a model for brain tumors reveals a small window for therapeutic intervention. Discrete and Continuous Dynamical Systems - Series B, 2003, 4, 289-295.	0.9	13
65	Hemicraniectomy for Ischemic and Hemorrhagic Stroke. Neurosurgery Clinics of North America, 2017, 28, 349-360.	1.7	12
66	On the Use of Quantitative Modeling to Help Understand Prostate-Specific Antigen Dynamics and Other Medical Problems. American Journal of Clinical Pathology, 2003, 119, 14-17.	0.7	11
67	Assessment of Prognostic Value of Cystic Features in Glioblastoma Relative to Sex and Treatment With Standard-of-Care. Frontiers in Oncology, 2020, 10, 580750.	2.8	11
68	Modeling Diffusely Invading Brain Tumors An Individualized Approach to Quantifying Glioma Evolution and Response to Therapy. Modeling and Simulation in Science, Engineering and Technology, 2008, , 1-15.	0.6	11
69	Shape matters: morphological metrics of glioblastoma imaging abnormalities as biomarkers of prognosis. Scientific Reports, 2021, 11, 23202.	3.3	11
70	MetaMarker: a pipeline for de novo discovery of novel metagenomic biomarkers. Bioinformatics, 2019, 35, 3812-3814.	4.1	10
71	Image-based metric of invasiveness predicts response to adjuvant temozolomide for primary glioblastoma. PLoS ONE, 2020, 15, e0230492.	2.5	10
72	Using mathematical modeling to predict survival of low-grade gliomas. Annals of Neurology, 2007, 61, 496-496.	5.3	8

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73	Awake Surgery for Brain Vascular Malformations and Moyamoya Disease. World Neurosurgery, 2017, 105, 659-671.	1.3	8
74	Quantifying Glioblastoma Drug Response Dynamics Incorporating Treatment Sensitivity and Blood Brain Barrier Penetrance From Experimental Data. Frontiers in Physiology, 2020, 11, 830.	2.8	8
75	Speed Switch in Glioblastoma Growth Rate due to Enhanced Hypoxia-Induced Migration. Bulletin of Mathematical Biology, 2020, 82, 43.	1.9	7
76	Identifying the spatial and temporal dynamics of molecularly-distinct glioblastoma sub-populations. Mathematical Biosciences and Engineering, 2020, 17, 4905-4941.	1.9	7
77	Lesion Dynamics Under Varying Paracrine PDGF Signaling in Brain Tissue. Bulletin of Mathematical Biology, 2019, 81, 1645-1664.	1.9	6
78	Mathematical model of perineural tumor spread: a pilot study. Acta Neurochirurgica, 2018, 160, 655-661.	1.7	5
79	A Mechanistic Investigation into Ischemia-Driven Distal Recurrence of Glioblastoma. Bulletin of Mathematical Biology, 2020, 82, 143.	1.9	5
80	Roadmap for the clinical integration of radiomics in neuro-oncology. Neuro-Oncology, 2020, 22, 743-745.	1.2	5
81	Knowledge-Infused Global-Local Data Fusion for Spatial Predictive Modeling in Precision Medicine. IEEE Transactions on Automation Science and Engineering, 2022, 19, 2203-2215.	5.2	5
82	MODELING THE GROWTH AND INVASION OF GLIOMAS, FROM SIMPLE TO COMPLEX: THE GOLDIE LOCKS PARADIGM. Biophysical Reviews and Letters, 2008, 03, 111-123.	0.8	4
83	Education and Outreach in Physical Sciences in Oncology. Trends in Cancer, 2021, 7, 3-9.	7.4	4
84	NIMG-21. SEX DIFFERENCES IN EXTREME SURVIVORSHIP AMONG PRIMARY GLIOBLASTOMA PATIENTS. Neuro-Oncology, 2018, 20, vi180-vi180.	1.2	3
85	ENvironmental Dynamics Underlying Responsive Extreme Survivors (ENDURES) of Glioblastoma. American Journal of Clinical Oncology: Cancer Clinical Trials, 2019, 42, 655-661.	1.3	3
86	On the Use of Quantitative Modeling to Help Understand Prostate-Specific Antigen Dynamics and Other Medical Problems. American Journal of Clinical Pathology, 2003, 119, 14-17.	0.7	3
87	NIMG-74. RADIOMICS OF TUMOR INVASION 2.0: COMBINING MECHANISTIC TUMOR INVASION MODELS WITH MACHINE LEARNING MODELS TO ACCURATELY PREDICT TUMOR INVASION IN HUMAN GLIOBLASTOMA PATIENTS. Neuro-Oncology, 2017, 19, vi159-vi159.	1.2	2
88	NIMG-68. ACCURATE PATIENT-SPECIFIC MACHINE LEARNING MODELS OF GLIOBLASTOMA INVASION USING TRANSFER LEARNING. Neuro-Oncology, 2017, 19, vi157-vi158.	1.2	2
89	PATH-12. CHARACTERISTICS OF GIANT CELL MORPHOLOGY IN LONG-TERM SURVIVORS OF GLIOBLASTOMA: CONSIDERATION OF SEX DIFFERENCES. Neuro-Oncology, 2018, 20, vi160-vi160.	1.2	2
90	Letter: Surgical Decision Making From Image-Based Biophysical Modeling of Glioblastoma: Not Ready for Primetime. Neurosurgery, 2018, 82, E17-E18.	1.1	2

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91	Prostate-Specific Antigen. American Journal of Clinical Pathology, 2006, 125, 331-333.	0.7	1
92	A digital reference object for the 3D Hoffman brain phantom for characterization of PET neuroimaging quality. , 2013, , .		1
93	Defining the Immune Phenotype for Glioblastoma Multiforme: One Step Closer to Understanding Our Enemy. World Neurosurgery, 2016, 95, 576-577.	1.3	1
94	TMOD-07. LOCALIZATION OF ERLOTONIB RELATIVE TO MRI-BASED TUMOR EXTENT IN PDX GLIOBLASTOMA MODEL: TOWARDS A MATHEMATICAL MODEL FOR THE INTERFACE BETWEEN MRI AND DRUG DISTRIBUTION. Neuro-Oncology, 2018, 20, vi269-vi270.	1.2	1
95	NIMG-58. SEX DIFFERENCES IN CONTRAST-ENHANCING GLIOMAS AT PRESENTATION. Neuro-Oncology, 2019, 21, vi174-vi174.	1.2	1
96	ANGI-11. SEX DIFFERENCES IN IMAGING-BASED ASSESSMENT OF GLIOBLASTOMA INVASION. Neuro-Oncology, 2019, 21, vi32-vi32.	1.2	1
97	Days gained response discriminates treatment response in patients with recurrent glioblastoma receiving bevacizumab-based therapies. Neuro-Oncology Advances, 2020, 2, vdaa085.	0.7	1
98	Simulating magnetic resonance images based on a model of tumor growth incorporating microenvironment. , 2018, , .		1
99	Sex Differences in Predicting Fluid Intelligence of Adolescent Brain from T1-Weighted MRIs. Lecture Notes in Computer Science, 2019, , 150-157.	1.3	1
100	Mathematical Modeling Of Glioma Proliferation And Diffusion. Ethnicity and Disease, 2009, 19, S360-S362.	2.3	1
101	RT-08 * PROTON THERAPY (PT) LARGE-VOLUME RE-IRRADIATION FOR RECURRENT GLIOMA: OVERALL SURVIVAL (OS) AND TOXICITY OUTCOMES. Neuro-Oncology, 2014, 16, v189-v189.	1.2	0
102	War on Glioblastoma Multiforme: 2-Pronged Siege on Glutamine. World Neurosurgery, 2016, 91, 254-256.	1.3	0
103	Bioresorbable Intracranial Sensors: A New Frontier for Neurosurgeons. World Neurosurgery, 2016, 93, 421-422.	1.3	0
104	NIMG-12. RADIOGENOMICS ON VENUS AND MARS: IMPACT OF SEX-DIFFERENCES ON MRI AND GENETIC CORRELATIONS IN GLIOBLASTOMA. Neuro-Oncology, 2018, 20, vi178-vi178.	1.2	0
105	TMOD-11. IMAGING BASED INVASION METRIC PREDICTIVE OF RESPONSE TO ABT414 IN ORTHOTOPIC EGFRviii AMPLIFIED PATIENT DERIVED XENOGRAFTS. Neuro-Oncology, 2018, 20, vi270-vi271.	1.2	0
106	NIMG-19. SEX-SPECIFIC BRAIN MAPS FOR RISK OF SEIZURE AMONG GLIOMA PATIENTS. Neuro-Oncology, 2018, 20, vi179-vi180.	1.2	0
107	NIMG-06. KINETICS-BASED RESPONSE METRIC DISCRIMINATE IMPROVED OUTCOMES FOR PATIENTS RECEIVING BEVACIZUMAB-BASED THERAPIES. Neuro-Oncology, 2018, 20, vi176-vi177.	1.2	0
108	NIMG-17. UTILIZING MACHINE LEARNING FOR PREDICTIVE MODELING OF SEIZURE PRESENTATION IN GLIOMA PATIENTS. Neuro-Oncology, 2018, 20, vi179-vi179.	1.2	0

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109	NIMG-07. DEEP LEARNING DETECTS DIFFERENCES IN THE MRIs OF MALE AND FEMALE GLIOMAS. Neuro-Oncology, 2018, 20, vi177-vi177.	1.2	0
110	NIMG-16. IMPACT OF SEX DIFFERENCES AND TUMOR LOCATION ON SURVIVAL OUTCOMES IN GLIOBLASTOMA PATIENTS. Neuro-Oncology, 2018, 20, vi179-vi179.	1.2	0
111	NIMG-23. DEEP LEARNING FOR ACCURATE, RAPID, FULLY AUTOMATIC MEASUREMENT OF BRAIN TUMOR-ASSOCIATED ABNORMALITY SEEN ON MRI. Neuro-Oncology, 2018, 20, vi180-vi181.	1.2	0
112	MODELING THE GROWTH AND INVASION OF GLIOMAS, FROM SIMPLE TO COMPLEX: THE GOLDIE LOCKS PARADIGM. , 2008, , .		0
113	Simulated Diffusion Weighted Images Based on Model-Predicted Tumor Growth. Lecture Notes in Computer Science, 2020, , 32-40.	1.3	0
114	Title is missing!. , 2020, 15, e0230492.		0
115	Title is missing!. , 2020, 15, e0230492.		0
116	Title is missing!. , 2020, 15, e0230492.		0
117	Title is missing!. , 2020, 15, e0230492.		0