Rainer K Sachs

List of Publications by Year
in descending order

59 papers	3,426 citations	257357 24 h-index	138417 58 g-index
61 all docs	61 docs citations	61 times ranked	3133 citing authors

#	Article	IF	Citations
1	Cancer risks attributable to low doses of ionizing radiation: Assessing what we really know. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 13761-13766.	3.3	1,466
2	Solid tumor risks after high doses of ionizing radiation. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 13040-13045.	3.3	163
3	Estimating radiation-induced cancer risks at very low doses: rationale for using a linear no-threshold approach. Radiation and Environmental Biophysics, 2006, 44, 253-256.	0.6	141
4	A comparison of mantle versus involved-field radiotherapy for Hodgkin's lymphoma: reduction in normal tissue dose and second cancer risk. Radiation Oncology, 2007, 2, 13.	1.2	128
5	A convenient extension of the linear-quadratic model to include redistribution and reoxygenation. International Journal of Radiation Oncology Biology Physics, 1995, 32, 379-390.	0.4	110
6	Cancer drug resistance: The central role of the karyotypeâ˜†. Drug Resistance Updates, 2007, 10, 51-58.	6.5	94
7	Chromosomes are predominantly located randomly with respect to each other in interphase human cells. Journal of Cell Biology, 2002, 159, 237-244.	2.3	89
8	Radiation-induced chromosome aberrations: Insights gained from biophysical modeling. BioEssays, 2002, 24, 714-723.	1.2	86
9	A new view of radiation-induced cancer: integrating short- and long-term processes. Part II: second cancer risk estimation. Radiation and Environmental Biophysics, 2009, 48, 275-286.	0.6	75
10	A new view of radiation-induced cancer: integrating short- and long-term processes. Part I: Approach. Radiation and Environmental Biophysics, 2009, 48, 263-274.	0.6	66
11	Cancer-causing karyotypes: chromosomal equilibria between destabilizing aneuploidy and stabilizing selection for oncogenic function. Cancer Genetics and Cytogenetics, 2009, 188, 1-25.	1.0	57
12	Optimizing the time course of brachytherapy and other accelerated radiotherapeutic protocols. International Journal of Radiation Oncology Biology Physics, 1994, 29, 893-901.	0.4	55
13	Radiation-Induced Leukemia at Doses Relevant to Radiation Therapy: Modeling Mechanisms and Estimating Risks. Journal of the National Cancer Institute, 2006, 98, 1794-1806.	3.0	52
14	Radiation-produced chromosome aberrations: colourful clues. Trends in Genetics, 2000, 16, 143-146.	2.9	51
15	Joint oxygen-glucose deprivation as the cause of necrosis in a tumor analog. Journal of Cellular Physiology, 1988, 134, 167-178.	2.0	47
16	Intra-Arm and Interarm Chromosome Intrachanges: Tools for Probing the Geometry and Dynamics of Chromatin. Radiation Research, 1997, 148, 330.	0.7	45
17	Second cancers after fractionated radiotherapy: Stochastic population dynamics effects. Journal of Theoretical Biology, 2007, 249, 518-531.	0.8	44
18	DNA damage caused by ionizing radiation. Mathematical Biosciences, 1992, 112, 271-303.	0.9	43

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19	The mechanistic basis of the linear-quadratic formalism. Medical Physics, 1998, 25, 2071-2073.	1.6	41
20	Clusters of DNA Double-Strand Breaks Induced by Different Doses of Nitrogen Ions for Various LETs: Experimental Measurements and Theoretical Analyses. Radiation Research, 2006, 166, 917-927.	0.7	35
21	Triggering-Response Model for Radiation-Induced Bystander Effects. Radiation Research, 2009, 171, 320-331.	0.7	35
22	Scaling Human Cancer Risks from Low LET to High LET when Dose-Effect Relationships are Complex. Radiation Research, 2017, 187, 486-492.	0.7	32
23	Locations of radiation-produced DNA double strand breaks along chromosomes: a stochastic cluster process formalism. Mathematical Biosciences, 1999, 159, 165-187.	0.9	30
24	Quantitative modeling of chronic myeloid leukemia: insights from radiobiology. Blood, 2012, 119, 4363-4371.	0.6	26
25	Modeling Intercellular Interactions during Carcinogenesis. Radiation Research, 2005, 164, 324-331.	0.7	25
26	Computer Simulation of Data on Chromosome Aberrations Produced by X Rays or Alpha Particles and Detected by Fluorescence In Situ Hybridization. Radiation Research, 1997, 148, S93.	0.7	24
27	We Forget at Our Peril the Lessons Built into the Î±/Î² Model. International Journal of Radiation Oncology Biology Physics, 2012, 82, 1312-1314.	0.4	23
28	Misrejoining of Double-Strand Breaks after X Irradiation: Relating Moderate to Very High Doses by a Markov Model. Radiation Research, 1998, 149, 59.	0.7	22
29	Biologically based risk estimation for radiation-induced CML. Radiation and Environmental Biophysics, 2001, 40, 1-9.	0.6	21
30	Republication of: Contributions to the theory of pure gravitational radiation. Exact solutions of the field equations of the general theory of relativity II. General Relativity and Gravitation, 2013, 45, 2691-2753.	0.7	19
31	Dose timing in tumor radiotherapy: Considerations of cell number stochasticity. Mathematical Biosciences, 1996, 138, 131-146.	0.9	18
32	Stochastic Population Dynamic Effects for Lung Cancer Progression. Radiation Research, 2009, 172, 383-393.	0.7	17
33	Why is there so much therapy-related AML and MDS and so little therapy-related CML?. Leukemia Research, 2014, 38, 1162-1164.	0.4	17
34	A Multicellular Basis for the Origination of Blast Crisis in Chronic Myeloid Leukemia. Cancer Research, 2011, 71, 2838-2847.	0.4	16
35	Simulating galactic cosmic ray effects: Synergy modeling of murine tumor prevalence after exposure to two one-ion beams in rapid sequence. Life Sciences in Space Research, 2020, 25, 107-118.	1.2	16
36	Using Graph Theory to Describe and Model Chromosome Aberrations. Radiation Research, 2002, 158, 556-567.	0.7	15

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37	Comparing DNA Damage-Processing Pathways by Computer Analysis of Chromosome Painting Data. Journal of Computational Biology, 2004, 11, 626-641.	0.8	15
38	The Balance Between Initiation and Promotion in Radiation-Induced Murine Carcinogenesis. Radiation Research, 2010, 174, 357-366.	0.7	14
39	Repopulation of interacting tumor cells during fractionated radiotherapy: Stochastic modeling of the tumor control probability. Medical Physics, 2013, 40, 121716.	1.6	14
40	Synergy theory for murine Harderian gland tumours after irradiation by mixtures of high-energy ionized atomic nuclei. Radiation and Environmental Biophysics, 2019, 58, 151-166.	0.6	14
41	Ionizing radiation damage to cells: Effects of cell cycle redistribution. Mathematical Biosciences, 1995, 126, 147-170.	0.9	13
42	Ionizing radiation exposures in treatments of solid neoplasms are not associated with subsequent increased risks of chronic lymphocytic leukemia. Leukemia Research, 2016, 43, 9-12.	0.4	12
43	Synergy Theory in Radiobiology. Radiation Research, 2017, 189, 225.	0.7	12
44	Mixed Beam Murine Harderian Gland Tumorigenesis: Predicted Dose-Effect Relationships if neither Synergism nor Antagonism Occurs. Radiation Research, 2016, 186, 577.	0.7	11
45	Modeling progression in radiation-induced lung adenocarcinomas. Radiation and Environmental Biophysics, 2010, 49, 169-176.	0.6	10
46	A Robust Procedure for Removing Background Damage in Assays of Radiation-Induced DNA Fragment Distributions. Radiation Research, 2006, 166, 908-916.	0.7	8
47	Republication of: Observations in cosmology. General Relativity and Gravitation, 2011, 43, 337-358.	0.7	8
48	On target cell numbers in radiation-induced H4 - RET mediated papillary thyroid cancer. Radiation and Environmental Biophysics, 2001, 40, 191-197.	0.6	6
49	Chromosome aberrations produced by ionizing radiation: Monte Carlo simulations and chromosome painting data. Bioinformatics, 1995, 11, 389-397.	1.8	5
50	Quantitative modeling of carcinogenesis induced by single beams or mixtures of space radiations using targeted and non-targeted effects. Scientific Reports, 2021, 11, 23467.	1.6	5
51	A two-backbone polymer model for interphase chromosome geometry. Bulletin of Mathematical Biology, 1997, 59, 325-337.	0.9	4
52	A two-backbone polymer model for interphase chromosome geometry. Bulletin of Mathematical Biology, 1997, 59, 325-337.	0.9	4
53	Track Structure, Chromosome Geometry and Chromosome Aberrations. , 1994, 63, 93-113.		4
54	A Rapid-Mutation Approximation for Cell Population Dynamics. Bulletin of Mathematical Biology, 2010, 72, 359-374.	0.9	3

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55	Stochastic Process Pharmacodynamics: Dose Timing in Neonatal Gentamicin Therapy as an Example. AAPS Journal, 2015, 17, 447-456.	2.2	2
56	Radiotherapy-Induced Carcinogenesis and Leukemogenesis: Mechanisms and Quantitative Modeling. Medical Radiology, 2014, , 205-226.	0.0	2
57	Interpreting Chromosome Aberration Spectra. Journal of Computational Biology, 2007, 14, 144-155.	0.8	1
58	Commentary onÂ"Simulating galactic cosmic ray effects: Synergy modeling of murine tumor prevalence after exposure to two one-ion beams in rapid sequence". Life Sciences in Space Research, 2020, 26, 173-174.	1.2	1
59	Etiology and Treatment of Hematological Neoplasms: Stochastic Mathematical Models. Advances in Experimental Medicine and Biology, 2014, 844, 317-346.	0.8	0