

# Igor Shuryak

## List of Publications by Year in descending order

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Version: 2024-02-01

92  
papers

2,903  
citations

218592

26  
h-index

189801

50  
g-index

102  
all docs

102  
docs citations

102  
times ranked

3381  
citing authors

#	ARTICLE	IF	CITATIONS
1	Machine learning analysis of <sup>137</sup> Cs contamination of terrestrial plants after the Fukushima accident using the random forest algorithm. <i>Journal of Environmental Radioactivity</i> , 2022, 241, 106772.	0.9	8
2	A practical approach for continuous in situ characterization of radiation quality factors in space. <i>Scientific Reports</i> , 2022, 12, 1453.	1.6	2
3	Small-Molecule Mn Antioxidants in <i>Caenorhabditis elegans</i> and <i>Deinococcus radiodurans</i> Supplant MnSOD Enzymes during Aging and Irradiation. <i>MBio</i> , 2022, 13, e0339421.	1.8	12
4	Inactivation Rates for Airborne Human Coronavirus by Low Doses of 222 nm Far-UVC Radiation. <i>Viruses</i> , 2022, 14, 684.	1.5	13
5	Accounting for overdispersion of lethal lesions in the linear quadratic model improves performance at both high and low radiation doses. <i>International Journal of Radiation Biology</i> , 2021, 97, 50-59.	1.0	3
6	Adverse outcome pathways, key events, and radiation risk assessment. <i>International Journal of Radiation Biology</i> , 2021, 97, 804-814.	1.0	17
7	Development of a Model to Estimate the Association Between Delay in Cancer Treatment and Local Tumor Control and Risk of Metastases. <i>JAMA Network Open</i> , 2021, 4, e2034065.	2.8	13
8	Machine learning methodology for high throughput personalized neutron dose reconstruction in mixed neutron+photon exposures. <i>Scientific Reports</i> , 2021, 11, 4022.	1.6	5
9	Quantitative modeling of multigenerational effects of chronic ionizing radiation using targeted and nontargeted effects. <i>Scientific Reports</i> , 2021, 11, 4776.	1.6	5
10	Modeling space radiation induced cognitive dysfunction using targeted and non-targeted effects. <i>Scientific Reports</i> , 2021, 11, 8845.	1.6	8
11	Robbing Peter to Pay Paul: Competition for Radiogenic Breaks During Rejoining Diminishes Curvature in the Dose Response for Simple Chromosome Exchanges. <i>Radiation Research</i> , 2021, 196, 147-155.	0.7	2
12	Quantitative modeling of radioactive cesium concentrations in large omnivorous mammals after the Fukushima nuclear power plant accident. <i>Scientific Reports</i> , 2021, 11, 10049.	1.6	1
13	Lung Cancer and Heart Disease Risks Associated With Low-Dose Pulmonary Radiotherapy to COVID-19 Patients With Different Background Risks. <i>International Journal of Radiation Oncology Biology Physics</i> , 2021, 111, 233-239.	0.4	10
14	In Reply to Welsh et al.. <i>International Journal of Radiation Oncology Biology Physics</i> , 2021, 111, 576-577.	0.4	1
15	Quantitative modeling of carcinogenesis induced by single beams or mixtures of space radiations using targeted and non-targeted effects. <i>Scientific Reports</i> , 2021, 11, 23467.	1.6	5
16	Estimating cancer risk from <sup>99m</sup> Tc pyrophosphate imaging for transthyretin cardiac amyloidosis. <i>Journal of Nuclear Cardiology</i> , 2020, 27, 215-224.	1.4	7
17	DNA damage response in peripheral mouse blood leukocytes in vivo after variable, low-dose rate exposure. <i>Radiation and Environmental Biophysics</i> , 2020, 59, 89-98.	0.6	8
18	Review of resistance to chronic ionizing radiation exposure under environmental conditions in multicellular organisms. <i>Journal of Environmental Radioactivity</i> , 2020, 212, 106128.	0.9	14

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19	Development of the FAST-DOSE assay system for high-throughput biodosimetry and radiation triage. <i>Scientific Reports</i> , 2020, 10, 12716.	1.6	11
20	Far-UVC light (222â€%nm) efficiently and safely inactivates airborne human coronaviruses. <i>Scientific Reports</i> , 2020, 10, 10285.	1.6	421
21	A High Throughput Approach to Reconstruct Partial-Body and Neutron Radiation Exposures on an Individual Basis. <i>Scientific Reports</i> , 2020, 10, 2899.	1.6	15
22	Cytogenetically-based biodosimetry after high doses of radiation. <i>PLoS ONE</i> , 2020, 15, e0228350.	1.1	14
23	The Transcriptomic and Phenotypic Response of the Melanized Yeast <i>Exophiala dermatitidis</i> to Ionizing Particle Exposure. <i>Frontiers in Microbiology</i> , 2020, 11, 609996.	1.5	3
24	REVIEW OF QUANTITATIVE MECHANISTIC MODELS OF RADIATION-INDUCED NON-TARGETED EFFECTS (NTE). <i>Radiation Protection Dosimetry</i> , 2020, 192, 236-252.	0.4	11
25	Dose and Dose-Rate Effects in a Mouse Model of Internal Exposure from <sup>137</sup> Cs. Part 2: Integration of Gamma-H2AX and Gene Expression Biomarkers for Retrospective Radiation Biodosimetry. <i>Radiation Research</i> , 2020, 196, 491-500.	0.7	8
26	The RABiT-II DCA in the Rhesus Macaque Model. <i>Radiation Research</i> , 2020, 196, 501-509.	0.7	10
27	Enhancing low-dose risk assessment using mechanistic mathematical models of radiation effects. <i>Journal of Radiological Protection</i> , 2019, 39, S1-S13.	0.6	5
28	Development of a high-throughput <sup>3</sup> H2AX assay based on imaging flow cytometry. <i>Radiation Oncology</i> , 2019, 14, 150.	1.2	68
29	Chronic gamma radiation resistance in fungi correlates with resistance to chromium and elevated temperatures, but not with resistance to acute irradiation. <i>Scientific Reports</i> , 2019, 9, 11361.	1.6	29
30	In Reply to Penagaricano. <i>International Journal of Radiation Oncology Biology Physics</i> , 2019, 105, 232-233.	0.4	0
31	Effect of dose and dose rate on temporal <sup>3</sup> H2AX kinetics in mouse blood and spleen mononuclear cells in vivo following Cesium-137 administration. <i>BMC Molecular and Cell Biology</i> , 2019, 20, 13.	1.0	15
32	Optimized Hypofractionation Can Markedly Improve Tumor Control and Decrease Late Effects for Head and Neck Cancer. <i>International Journal of Radiation Oncology Biology Physics</i> , 2019, 104, 272-278.	0.4	25
33	Transcriptomic analysis reveals the relationship of melanization to growth and resistance to gamma radiation in <i>Cryptococcus neoformans</i> . <i>Environmental Microbiology</i> , 2019, 21, 2613-2628.	1.8	15
34	Usefulness of continuous probability distributions of rates for modelling radionuclide biokinetics in humans and animals. <i>Scientific Reports</i> , 2019, 9, 1218.	1.6	1
35	Discordant gene responses to radiation in humans and mice and the role of hematopoietically humanized mice in the search for radiation biomarkers. <i>Scientific Reports</i> , 2019, 9, 19434.	1.6	26
36	New Approaches for Quantitative Reconstruction of Radiation Dose in Human Blood Cells. <i>Scientific Reports</i> , 2019, 9, 18441.	1.6	19

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37	MECHANISTIC MODELING PREDICTS NO SIGNIFICANT DOSE RATE EFFECT ON HEAVY-ION CARCINOGENESIS AT DOSE RATES RELEVANT FOR SPACE EXPLORATION. <i>Radiation Protection Dosimetry</i> , 2019, 183, 203-212.	0.4	10
38	Development of electronic training and telesoring tools to increase the surge capacity of dicentric chromosome scorers for radiological/nuclear mass casualty incidents. <i>Applied Radiation and Isotopes</i> , 2019, 144, 111-117.	0.7	3
39	Review of microbial resistance to chronic ionizing radiation exposure under environmental conditions. <i>Journal of Environmental Radioactivity</i> , 2019, 196, 50-63.	0.9	46
40	The effect of protracted X-ray exposure on cell survival and metabolic activity of fast and slow growing fungi capable of melanogenesis. <i>Environmental Microbiology Reports</i> , 2018, 10, 255-263.	1.0	25
41	Dose dependence of accelerated repopulation in head and neck cancer: Supporting evidence and clinical implications. <i>Radiotherapy and Oncology</i> , 2018, 127, 20-26.	0.3	15
42	Far-UVC light: A new tool to control the spread of airborne-mediated microbial diseases. <i>Scientific Reports</i> , 2018, 8, 2752.	1.6	244
43	Effects of High- and Low-LET Radiation on Human Hematopoietic System Reconstituted in Immunodeficient Mice. <i>Radiation Research</i> , 2018, 191, 162.	0.7	7
44	Survival and redox activity of <i>Friedmanniomyces endolithicus</i> , an Antarctic endemic black meristematic fungus, after gamma rays exposure. <i>Fungal Biology</i> , 2018, 122, 1222-1227.	1.1	16
45	Candidate protein markers for radiation biodosimetry in the hematopoietically humanized mouse model. <i>Scientific Reports</i> , 2018, 8, 13557.	1.6	35
46	Effect of far ultraviolet light emitted from an optical diffuser on methicillin-resistant <i>Staphylococcus aureus</i> in vitro. <i>PLoS ONE</i> , 2018, 13, e0202275.	1.1	18
47	Investigation of Spatial Organization of Chromosome Territories in Chromosome Exchange Aberrations After Ionizing Radiation Exposure. <i>Health Physics</i> , 2018, 115, 77-89.	0.3	15
48	Modeling species richness and abundance of phytoplankton and zooplankton in radioactively contaminated water bodies. <i>Journal of Environmental Radioactivity</i> , 2018, 192, 14-25.	0.9	11
49	Whole thorax irradiation of non-human primates induces persistent nuclear damage and gene expression changes in peripheral blood cells. <i>PLoS ONE</i> , 2018, 13, e0191402.	1.1	32
50	Far-UVC light prevents MRSA infection of superficial wounds in vivo. <i>PLoS ONE</i> , 2018, 13, e0192053.	1.1	47
51	Survival, DNA Integrity, and Ultrastructural Damage in Antarctic Cryptoendolithic Eukaryotic Microorganisms Exposed to Ionizing Radiation. <i>Astrobiology</i> , 2017, 17, 126-135.	1.5	40
52	Effects of Radiation Exposure on the Cost-Effectiveness of CT Angiography and Perfusion Imaging in Aneurysmal Subarachnoid Hemorrhage. <i>American Journal of Neuroradiology</i> , 2017, 38, 462-468.	1.2	11
53	Melanin is effective in protecting fast and slow growing fungi from various types of ionizing radiation. <i>Environmental Microbiology</i> , 2017, 19, 1612-1624.	1.8	86
54	Scaling Human Cancer Risks from Low LET to High LET when Dose-Effect Relationships are Complex. <i>Radiation Research</i> , 2017, 187, 486-492.	0.7	32

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55	Across the tree of life, radiation resistance is governed by antioxidant Mn <sup>2+</sup> , gauged by paramagnetic resonance. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E9253-E9260.	3.3	94
56	Estimating Cancer Risk Associated With Ionizing Radiation Exposure During Atrial Fibrillation Ablation. JACC: Clinical Electrophysiology, 2017, 3, 1200-1201.	1.3	4
57	Estimating the excess lifetime risk of radiation induced secondary malignancy (SMN) in pediatric patients treated with craniospinal irradiation (CSI): Conventional radiation therapy versus helical intensity modulated radiation therapy. Practical Radiation Oncology, 2017, 7, 35-41.	1.1	11
58	Straightening Beta: Overdispersion of Lethal Chromosome Aberrations following Radiotherapeutic Doses Leads to Terminal Linearity in the Alpha-Beta Model. Frontiers in Oncology, 2017, 7, 318.	1.3	13
59	Is there Unmeasured Indication Bias in Radiation-Related Cancer Risk Estimates from Studies of Computed Tomography?. Radiation Research, 2017, 189, 128.	0.7	17
60	Advantages of Synthetic Noise and Machine Learning for Analyzing Radioecological Data Sets. PLoS ONE, 2017, 12, e0170007.	1.1	11
61	Quantitative modeling of responses to chronic ionizing radiation exposure using targeted and non-targeted effects. PLoS ONE, 2017, 12, e0176476.	1.1	10
62	Microbial cells can cooperate to resist high-level chronic ionizing radiation. PLoS ONE, 2017, 12, e0189261.	1.1	52
63	Lethal and nonlethal chromosome aberrations by gamma rays and heavy ions: a cytogenetic perspective on dose fractionation in hadron radiotherapy. Translational Cancer Research, 2017, 6, S769-S778.	0.4	4
64	Three-Color Chromosome Painting as Seen through the Eyes of mFISH: Another Look at Radiation-Induced Exchanges and Their Conversion to Whole-Genome Equivalency. Frontiers in Oncology, 2016, 6, 52.	1.3	12
65	207-nm UV Light: A Promising Tool for Safe Low-Cost Reduction of Surgical Site Infections. II: In-Vivo Safety Studies. PLoS ONE, 2016, 11, e0138418.	1.1	112
66	Mechanistic Modeling of Dose and Dose Rate Dependences of Radiation-Induced DNA Double Strand Break Rejoining Kinetics in Saccharomyces cerevisiae. PLoS ONE, 2016, 11, e0146407.	1.1	2
67	Quantitative Modeling of Microbial Population Responses to Chronic Irradiation Combined with Other Stressors. PLoS ONE, 2016, 11, e0147696.	1.1	6
68	Minimizing second cancer risk following radiotherapy: current perspectives. Cancer Management and Research, 2015, 7, 1.	0.9	57
69	Effects of radiation type and delivery mode on a radioresistant eukaryote Cryptococcus neoformans. Nuclear Medicine and Biology, 2015, 42, 515-523.	0.3	6
70	High-dose and fractionation effects in stereotactic radiation therapy: Analysis of tumor control data from 2965 patients. Radiotherapy and Oncology, 2015, 115, 327-334.	0.3	110
71	New Approaches for Modeling Radiopharmaceutical Pharmacokinetics Using Continuous Distributions of Rates. Journal of Nuclear Medicine, 2015, 56, 1622-1628.	2.8	5
72	New Insight into Quantitative Modeling of DNA Double-Strand Break Rejoining. Radiation Research, 2015, 184, 280.	0.7	4

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73	High Throughput Measurement of $\hat{\beta}$ H2AX DSB Repair Kinetics in a Healthy Human Population. PLoS ONE, 2015, 10, e0121083.	1.1	67
74	$\hat{\beta}$ -H2AX Kinetic Profile in Mouse Lymphocytes Exposed to the Internal Emitters Cesium-137 and Strontium-90. PLoS ONE, 2015, 10, e0143815.	1.1	15
75	Potential for Adult-Based Epidemiological Studies to Characterize Overall Cancer Risks Associated with a Lifetime of CT Scans. Radiation Research, 2014, 181, 584-591.	0.7	13
76	Risk and Risk Reduction of Major Coronary Events Associated With Contemporary Breast Radiotherapy. JAMA Internal Medicine, 2014, 174, 158.	2.6	41
77	Mathematical Modeling Predicts Enhanced Growth of X-Ray Irradiated Pigmented Fungi. PLoS ONE, 2014, 9, e85561.	1.1	15
78	Potential Reduction of Contralateral Second Breast-Cancer Risks by Prophylactic Mammary Irradiation: Validation in a Breast-Cancer-Prone Mouse Model. PLoS ONE, 2013, 8, e85795.	1.1	13
79	Mechanistic Analysis of the Contributions of DNA and Protein Damage to Radiation-Induced Cell Death. Radiation Research, 2012, 178, 17-24.	0.7	9
80	Secondary rectal malignancy risk reduction with IMRT and rectal balloon placement during radiation therapy.. Journal of Clinical Oncology, 2012, 30, e15162-e15162.	0.8	0
81	Predicting the risk of secondary malignancies associated with stereotactic body radiation therapy.. Journal of Clinical Oncology, 2012, 30, e17562-e17562.	0.8	0
82	Impact of Reduced Patient Life Expectancy on Potential Cancer Risks from Radiologic Imaging. Radiology, 2011, 261, 193-198.	3.6	101
83	Radiation-Induced Carcinogenesis: Mechanistically Based Differences between Gamma-Rays and Neutrons, and Interactions with DMBA. PLoS ONE, 2011, 6, e28559.	1.1	30
84	Effects of radiation quality on interactions between oxidative stress, protein and DNA damage in Deinococcus radiodurans. Radiation and Environmental Biophysics, 2010, 49, 693-703.	0.6	17
85	The Balance Between Initiation and Promotion in Radiation-Induced Murine Carcinogenesis. Radiation Research, 2010, 174, 357-366.	0.7	14
86	Cancer Risks After Radiation Exposure in Middle Age. Journal of the National Cancer Institute, 2010, 102, 1628-1636.	3.0	158
87	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
88	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
89	A model of interactions between radiation-induced oxidative stress, protein and DNA damage in Deinococcus radiodurans. Journal of Theoretical Biology, 2009, 261, 305-317.	0.8	28
90	Biophysical Models of Radiation Bystander Effects: 1. Spatial Effects in Three-Dimensional Tissues. Radiation Research, 2007, 168, 741-749.	0.7	53

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91	Second cancers after fractionated radiotherapy: Stochastic population dynamics effects. Journal of Theoretical Biology, 2007, 249, 518-531.	0.8	44
92	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