Steffen Löck

List of Publications by Year in descending order

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125	4,835	29	64
papers	citations	h-index	g-index
131	131	131	6420 citing authors
all docs	docs citations	times ranked	

#	Article	IF	CITATIONS
1	The Image Biomarker Standardization Initiative: Standardized Quantitative Radiomics for High-Throughput Image-based Phenotyping. Radiology, 2020, 295, 328-338.	3.6	1,869
2	Assessing robustness of radiomic features by image perturbation. Scientific Reports, 2019, 9, 614.	1.6	166
3	A comparative study of machine learning methods for time-to-event survival data for radiomics risk modelling. Scientific Reports, 2017, 7, 13206.	1.6	163
4	HPV16 DNA status is a strong prognosticator of loco-regional control after postoperative radiochemotherapy of locally advanced oropharyngeal carcinoma: Results from a multicentre explorative study of the German Cancer Consortium Radiation Oncology Group (DKTK-ROG). Radiotherapy and Oncology, 2014, 113, 317-323.	0.3	141
5	HPV status, cancer stem cell marker expression, hypoxia gene signatures and tumour volume identify good prognosis subgroups in patients with HNSCC after primary radiochemotherapy: A multicentre retrospective study of the German Cancer Consortium Radiation Oncology Group (DKTK-ROG). Radiotherapy and Oncology. 2016. 121. 364-373.	0.3	130
6	Low Cancer Stem Cell Marker Expression and Low Hypoxia Identify Good Prognosis Subgroups in HPV(â^') HNSCC after Postoperative Radiochemotherapy: A Multicenter Study of the DKTK-ROG. Clinical Cancer Research, 2016, 22, 2639-2649.	3.2	127
7	Residual tumour hypoxia in head-and-neck cancer patients undergoing primary radiochemotherapy, final results of a prospective trial on repeat FMISO-PET imaging. Radiotherapy and Oncology, 2017, 124, 533-540.	0.3	123
8	Identification of Patient Benefit From Proton Therapy for Advanced Head and Neck Cancer Patients Based on Individual and Subgroup Normal Tissue Complication Probability Analysis. International Journal of Radiation Oncology Biology Physics, 2015, 92, 1165-1174.	0.4	89
9	Dynamical Tunneling in Mushroom Billiards. Physical Review Letters, 2008, 100, 174103.	2.9	81
10	Regular-to-Chaotic Tunneling Rates: From the Quantum to the Semiclassical Regime. Physical Review Letters, 2010, 104, 114101.	2.9	79
11	GLS-driven glutamine catabolism contributes to prostate cancer radiosensitivity by regulating the redox state, stemness and ATG5-mediated autophagy. Theranostics, 2021, 11, 7844-7868.	4.6	70
12	Regular-to-Chaotic Tunneling Rates Using a Fictitious Integrable System. Physical Review Letters, 2008, 100, 104101.	2.9	63
13	Prognostic Value of Pretherapeutic Tumor-to-Blood Standardized Uptake Ratio in Patients with Esophageal Carcinoma. Journal of Nuclear Medicine, 2015, 56, 1150-1156.	2.8	59
14	The CD98 Heavy Chain Is a Marker and Regulator of Head and Neck Squamous Cell Carcinoma Radiosensitivity. Clinical Cancer Research, 2019, 25, 3152-3163.	3.2	53
15	Development and Validation of a Gene Signature for Patients with Head and Neck Carcinomas Treated by Postoperative Radio(chemo)therapy. Clinical Cancer Research, 2018, 24, 1364-1374.	3.2	45
16	Quality factors and dynamical tunneling in annular microcavities. Physical Review A, 2009, 79, .	1.0	44
17	CT imaging during treatment improves radiomic models for patients with locally advanced head and neck cancer. Radiotherapy and Oncology, 2019, 130, 10-17.	0.3	44
18	Impact of radiation, systemic therapy and treatment sequencing on survival of patients with melanoma brain metastases. European Journal of Cancer, 2019, 110, 11-20.	1.3	44

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19	Why validation of prognostic models matters?. Radiotherapy and Oncology, 2018, 127, 370-373.	0.3	43
20	Individual patient data meta-analysis of FMISO and FAZA hypoxia PET scans from head and neck cancer patients undergoing definitive radio-chemotherapy. Radiotherapy and Oncology, 2020, 149, 189-196.	0.3	41
21	An artificial intelligence framework integrating longitudinal electronic health records with real-world data enables continuous pan-cancer prognostication. Nature Cancer, 2021, 2, 709-722.	5.7	41
22	Precise image-guided irradiation of small animals: a flexible non-profit platform. Physics in Medicine and Biology, 2016, 61, 3084-3108.	1.6	39
23	Impact of waiting time after surgery and overall time of postoperative radiochemotherapy on treatment outcome in glioblastoma multiforme. Radiation Oncology, 2015, 10, 172.	1.2	36
24	NTCP reduction for advanced head and neck cancer patients using proton therapy for complete or sequential boost treatment versus photon therapy. Acta Oncol \tilde{A}^3 gica, 2015, 54, 1658-1664.	0.8	36
25	Can Local Ablative Radiotherapy Revert Castration-resistant Prostate Cancer to an Earlier Stage of Disease?. European Urology, 2019, 75, 548-551.	0.9	36
26	2D and 3D convolutional neural networks for outcome modelling of locally advanced head and neck squamous cell carcinoma. Scientific Reports, 2020, 10, 15625.	1.6	34
27	Direct regular-to-chaotic tunneling rates using the fictitious-integrable-system approach. Physical Review E, 2010, 82, 056208.	0.8	33
28	Independent validation of tumour volume, cancer stem cell markers and hypoxia-associated gene expressions for HNSCC after primary radiochemotherapy. Clinical and Translational Radiation Oncology, 2019, 16, 40-47.	0.9	32
29	Intraindividual comparison of [68ÂGa]-Ga-PSMA-11 and [18F]-F-PSMA-1007 in prostate cancer patients: a retrospective single-center analysis. EJNMMI Research, 2021, 11, 109.	1.1	32
30	Potential proton and photon dose degradation in advanced head and neck cancer patients by intratherapy changes. Journal of Applied Clinical Medical Physics, 2017, 18, 104-113.	0.8	31
31	Competing risks in survival data analysis. Radiotherapy and Oncology, 2019, 130, 185-189.	0.3	31
32	The prevalence of extramedullary acute myeloid leukemia detected by ¹⁸ FDG-PET/CT: final results from the prospective PETAML trial. Haematologica, 2020, 105, 1552-1558.	1.7	31
33	Development and validation of NTCP models for acute side-effects resulting from proton beam therapy of brain tumours. Radiotherapy and Oncology, 2019, 130, 164-171.	0.3	27
34	Oct4 confers stemness and radioresistance to head and neck squamous cell carcinoma by regulating the homologous recombination factors PSMC3IP and RAD54L. Oncogene, 2021, 40, 4214-4228.	2.6	27
35	Experimental Observation of Resonance-Assisted Tunneling. Physical Review Letters, 2015, 115, 104101.	2.9	26
36	Electron dose rate and oxygen depletion protect zebrafish embryos from radiation damage. Radiotherapy and Oncology, 2021, 158, 7-12.	0.3	26

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37	Toxicity and Efficacy of Local Ablative, Image-guided Radiotherapy in Gallium-68 Prostate-specific Membrane Antigen Targeted Positron Emission Tomography–staged, Castration-sensitive Oligometastatic Prostate Cancer: The OLI-P Phase 2 Clinical Trial. European Urology Oncology, 2022, 5, 44-51.	2.6	26
38	Beam pulse structure and dose rate as determinants for the flash effect observed in zebrafish embryo. Radiotherapy and Oncology, 2022, 173, 49-54.	0.3	26
39	Impact of robust treatment planning on single- and multi-field optimized plans for proton beam therapy of unilateral head and neck target volumes. Radiation Oncology, 2017, 12, 190.	1.2	25
40	Arginine Deprivation Therapy: Putative Strategy to Eradicate Glioblastoma Cells by Radiosensitization. Molecular Cancer Therapeutics, 2018, 17, 393-406.	1.9	25
41	Repeat FMISO-PET imaging weakly correlates with hypoxia-associated gene expressions for locally advanced HNSCC treated by primary radiochemotherapy. Radiotherapy and Oncology, 2019, 135, 43-50.	0.3	25
42	Neurocognitive function and quality of life after proton beam therapy for brain tumour patients. Radiotherapy and Oncology, 2020, 143, 108-116.	0.3	24
43	Independent validation of the prognostic value of cancer stem cell marker expression and hypoxia-induced gene expression for patients with locally advanced HNSCC after postoperative radiotherapy. Clinical and Translational Radiation Oncology, 2016, 1, 19-26.	0.9	22
44	EGFR-amplification plus gene expression profiling predicts response to combined radiotherapy with EGFR-inhibition: A preclinical trial in 10 HNSCC-tumour-xenograft models. Radiotherapy and Oncology, 2017, 124, 496-503.	0.3	21
45	PRONTOX – proton therapy to reduce acute normal tissue toxicity in locally advanced non-small-cell lung carcinomas (NSCLC): study protocol for a randomised controlled trial. Trials, 2016, 17, 543.	0.7	20
46	Comprehensive Analysis of Tumour Sub-Volumes for Radiomic Risk Modelling in Locally Advanced HNSCC. Cancers, 2020, 12, 3047.	1.7	19
47	Increase in Tumor Control and Normal Tissue Complication Probabilities in Advanced Head-and-Neck Cancer for Dose-Escalated Intensity-Modulated Photon and Proton Therapy. Frontiers in Oncology, 2015, 5, 256.	1.3	18
48	Comparison of detection methods for HPV status as a prognostic marker for loco-regional control after radiochemotherapy in patients with HNSCC. Radiotherapy and Oncology, 2018, 127, 27-35.	0.3	17
49	Concept for individualized patient allocation: ReCompare—remote comparison of particle and photon treatment plans. Radiation Oncology, 2014, 9, 59.	1.2	16
50	Value of PET imaging for radiation therapy. Strahlentherapie Und Onkologie, 2021, 197, 1-23.	1.0	16
51	Analysis of MRI and CT-based radiomics features for personalized treatment in locally advanced rectal cancer and external validation of published radiomics models. Scientific Reports, 2022, 12, .	1.6	16
52	Complex paths for regular-to-chaotic tunnelling rates. Europhysics Letters, 2013, 102, 10005.	0.7	15
53	Potential clinical predictors of outcome after postoperative radiotherapy of non-small cell lung cancer. Strahlentherapie Und Onkologie, 2014, 190, 263-269.	1.0	15
54	Applying Tissue Slice Culture in Cancer Research—Insights from Preclinical Proton Radiotherapy. Cancers, 2020, 12, 1589.	1.7	15

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55	Final Results of the Prospective Biomarker Trial PETra: [11C]-MET-Accumulation in Postoperative PET/MRI Predicts Outcome after Radiochemotherapy in Glioblastoma. Clinical Cancer Research, 2021, 27, 1351-1360.	3.2	15
56	FMISO-PET-based lymph node hypoxia adds to the prognostic value of tumor only hypoxia in HNSCC patients. Radiotherapy and Oncology, 2019, 130, 97-103.	0.3	14
57	Photons or protons for reirradiation in (non-)small cell lung cancer: Results of the multicentric ROCOCO <i>in silico</i>) study. British Journal of Radiology, 2020, 93, 20190879.	1.0	13
58	Increased FDG uptake on late-treatment PET in non-tumour-affected oesophagus is prognostic for pathological complete response and disease recurrence in patients undergoing neoadjuvant radiochemotherapy. European Journal of Nuclear Medicine and Molecular Imaging, 2017, 44, 1813-1822.	3.3	12
59	Pre-clinical imaging for establishment and comparison of orthotopic non-small cell lung carcinoma: in search for models reflecting clinical scenarios. British Journal of Radiology, 2019, 92, 20180539.	1.0	12
60	Dose dependent cerebellar atrophy in glioma patients after radio(chemo)therapy. Radiotherapy and Oncology, 2020, 150, 262-267.	0.3	12
61	Radiotherapy enhances uptake and efficacy of 90Y-cetuximab: A preclinical trial. Radiotherapy and Oncology, 2021, 155, 285-292.	0.3	12
62	Tumor heterogeneity determined with a \hat{I}^3 H2AX foci assay: A study in human head and neck squamous cell carcinoma (hHNSCC) models. Radiotherapy and Oncology, 2017, 124, 379-385.	0.3	11
63	Comparable radiation response of ex vivo and in vivo irradiated tumor samples determined by residual Î ³ H2AX. Radiotherapy and Oncology, 2019, 139, 94-100.	0.3	11
64	Early and late side effects, dosimetric parameters and quality of life after proton beam therapy and IMRT for prostate cancer: a matched-pair analysis. Acta Oncol \tilde{A}^3 gica, 2019, 58, 916-925.	0.8	11
65	Microenvironmentally-driven Plasticity of CD44 isoform expression determines Engraftment and Stem-like Phenotype in CRC cell lines. Theranostics, 2020, 10, 7599-7621.	4.6	11
66	[68Ga]Ga-PSMA-11 PET before and after initial long-term androgen deprivation in patients with newly diagnosed prostate cancer: a retrospective single-center study. EJNMMI Research, 2020, 10, 135.	1.1	11
67	Radiomics-based tumor phenotype determination based on medical imaging and tumor microenvironment in a preclinical setting. Radiotherapy and Oncology, 2022, 169, 96-104.	0.3	11
68	FDG uptake in normal tissues assessed by PET during treatment has prognostic value for treatment results in head and neck squamous cell carcinomas undergoing radiochemotherapy. Radiotherapy and Oncology, 2017, 122, 437-444.	0.3	10
69	Residual gammaH2AX foci in head and neck squamous cell carcinomas as predictors for tumour radiosensitivity: Evaluation in pre-clinical xenograft models and clinical specimens. Radiotherapy and Oncology, 2019, 137, 24-31.	0.3	10
70	Comparison of GeneChip, nCounter, and Real-Time PCR–Based Gene Expressions Predicting Locoregional Tumor Control after Primary and Postoperative Radiochemotherapy in Head and Neck Squamous Cell Carcinoma. Journal of Molecular Diagnostics, 2020, 22, 801-810.	1.2	10
71	Results of aÂrandomized controlled phaseÂlll trial: efficacy of polyphenol-containing cystus® tea mouthwash solution for the reduction of mucositis in head and neck cancer patients undergoing external beam radiotherapy. Strahlentherapie Und Onkologie, 2021, 197, 63-73.	1.0	10
72	Cellular plasticity upon proton irradiation determines tumor cell radiosensitivity. Cell Reports, 2022, 38, 110422.	2.9	10

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73	Fractional-Power-Law Level Statistics Due to Dynamical Tunneling. Physical Review Letters, 2011, 106, 024101.	2.9	9
74	Implementation of a software for REmote COMparison of PARticlE and photon treatment plans: ReCompare. Zeitschrift Fur Medizinische Physik, 2015, 25, 287-294.	0.6	9
75	Co-application of canavanine and irradiation uncouples anticancer potential of arginine deprivation from citrulline availability. Oncotarget, 2016, 7, 73292-73308.	0.8	9
76	Evaluation of a deformable registration algorithm for subsequent lung computed tomography imaging during radiochemotherapy. Medical Physics, 2016, 43, 5028-5039.	1.6	9
77	Sites of recurrent disease and prognostic factors in SCLC patients treated with radiochemotherapy. Clinical and Translational Radiation Oncology, 2017, 7, 36-42.	0.9	9
78	68Ga-RM2 PET in PSMA- positive and -negative prostate cancer patients. Nuklearmedizin - NuclearMedicine, 2019, 58, 352-362.	0.3	9
79	Correlation between FMISO-PET based hypoxia in the primary tumour and in lymph node metastases in locally advanced HNSCC patients. Clinical and Translational Radiation Oncology, 2019, 15, 108-112.	0.9	9
80	Establishment and Characterisation of Heterotopic Patient-Derived Xenografts for Glioblastoma. Cancers, 2020, 12, 871.	1.7	9
81	Impact of pre- and early per-treatment FDG-PET based dose-escalation on local tumour control in fractionated irradiated FaDu xenograft tumours. Radiotherapy and Oncology, 2016, 121, 447-452.	0.3	8
82	The HIV protease and PI3K/Akt inhibitor nelfinavir does not improve the curative effect of fractionated irradiation in PC-3 prostate cancer in vitro and in vivo. Clinical and Translational Radiation Oncology, 2017, 2, 7-12.	0.9	8
83	Definition and validation of a radiomics signature for loco-regional tumour control in patients with locally advanced head and neck squamous cell carcinoma. Clinical and Translational Radiation Oncology, 2021, 26, 62-70.	0.9	8
84	Dual role of ER stress in response to metabolic co-targeting and radiosensitivity in head and neck cancer cells. Cellular and Molecular Life Sciences, 2021, 78, 3021-3044.	2.4	8
85	Radiation oncology in the new virtual and digital era. Radiotherapy and Oncology, 2021, 154, A1-A4.	0.3	8
86	Identification of patient benefit from proton beam therapy in brain tumour patients based on dosimetric and NTCP analyses. Radiotherapy and Oncology, 2021, 160, 69-77.	0.3	8
87	Plasticity within Aldehyde Dehydrogenase–Positive Cells Determines Prostate Cancer Radiosensitivity. Molecular Cancer Research, 2022, 20, 794-809.	1.5	8
88	Experimental validation of 4D log fileâ€based proton dose reconstruction for interplay assessment considering amplitudeâ€sorted 4DCTs. Medical Physics, 2022, 49, 3538-3549.	1.6	8
89	Partial Weyl law for billiards. Europhysics Letters, 2011, 94, 30004.	0.7	7
90	Physical correction model for automatic correction of intensity non-uniformity in magnetic resonance imaging. Physics and Imaging in Radiation Oncology, 2017, 4, 32-38.	1.2	7

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91	Personalised radiation therapy taking both the tumour and patient into consideration. Radiotherapy and Oncology, 2022, 166, A1-A5.	0.3	7
92	Local Control after Locally Ablative, Image-Guided Radiotherapy of Oligometastases Identified by Gallium-68-PSMA-Positron Emission Tomography in Castration-Sensitive Prostate Cancer Patients (OLI-P). Cancers, 2022, 14, 2073.	1.7	7
93	Integrable approximation of regular islands: The iterative canonical transformation method. Physical Review E, 2013, 88, 062901.	0.8	6
94	Specific requirements for translation of biological research into clinical radiation oncology. Molecular Oncology, 2020, 14, 1569-1576.	2.1	6
95	Modelling of late side-effects following cranial proton beam therapy. Radiotherapy and Oncology, 2021, 157, 15-23.	0.3	6
96	Coupling of bouncing-ball modes to the chaotic sea and their counting function. Physical Review E, 2012, 85, 016210.	0.8	5
97	Consequences of flooding on spectral statistics. Physical Review E, 2012, 85, 036213.	0.8	5
98	Modeling tumor control probability for spatially inhomogeneous risk of failure based on clinical outcome data. Zeitschrift Fur Medizinische Physik, 2017, 27, 285-299.	0.6	5
99	Retrospective investigation of the prognostic value of the \hat{l}^21 integrin expression in patients with head and neck squamous cell carcinoma receiving primary radio(chemo)therapy. PLoS ONE, 2018, 13, e0209479.	1.1	5
100	Heterogeneity of \hat{I}^3 H2AX Foci Increases in Ex Vivo Biopsies Relative to In Vivo Tumors. International Journal of Molecular Sciences, 2018, 19, 2616.	1.8	5
101	Dose–volume predictors of early esophageal toxicity in non-small cell lung cancer patients treated with accelerated-hyperfractionated radiotherapy. Radiotherapy and Oncology, 2020, 143, 44-50.	0.3	5
102	Generation of biological hypotheses by functional imaging links tumor hypoxia to radiation induced tissue inflammation/glucose uptake in head and neck cancer. Radiotherapy and Oncology, 2021, 155, 204-211.	0.3	5
103	An Integrative Analysis of Image Segmentation and Survival of Brain Tumour Patients. Lecture Notes in Computer Science, 2020, , 368-378.	1.0	5
104	Analyses of molecular subtypes and their association to mechanisms of radioresistance in patients with HPV-negative HNSCC treated by postoperative radiochemotherapy. Radiotherapy and Oncology, 2022, 167, 300-307.	0.3	5
105	Biomarker signatures for primary radiochemotherapy of locally advanced HNSCC – Hypothesis generation on a multicentre cohort of the DKTK-ROG. Radiotherapy and Oncology, 2022, 169, 8-14.	0.3	5
106	Analysing Tumour Growth Delay Data from Animal Irradiation Experiments with Deviations from the Prescribed Dose. Cancers, 2019, 11, 1281.	1.7	4
107	Sample-size calculation for preclinical dose–response experiments using heterogeneous tumour models. Radiotherapy and Oncology, 2021, 158, 262-267.	0.3	4
108	Molecular Response to Combined Molecular- and External Radiotherapy in Head and Neck Squamous Cell Carcinoma (HNSCC). Cancers, 2021, 13, 5595.	1.7	4

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109	Development and validation of a 6-gene signature for the prognosis of loco-regional control in patients with HPV-negative locally advanced HNSCC treated by postoperative radio(chemo)therapy. Radiotherapy and Oncology, 2022, 171, 91-100.	0.3	4
110	Assessment of gene expressions from squamous cell carcinoma of the head and neck to predict radiochemotherapy-related xerostomia and dysphagia. Acta Oncol \tilde{A}^3 gica, 2022, 61, 856-863.	0.8	4
111	Contact of a tumour with the pleura is not associated with regional recurrence following stereotactic ablative radiotherapy for early stage non-small cell lung cancer. Radiotherapy and Oncology, 2019, 131, 120-126.	0.3	3
112	Value of functional in-vivo endpoints in preclinical radiation research. Radiotherapy and Oncology, 2021, 158, 155-161.	0.3	3
113	Comparison of subjective evaluation versus objective algorithm in the interpretation of follow-up FDG-PET/CT scans after radiochemotherapy in head and neck cancer patients. Nuklearmedizin - NuclearMedicine, 2019, 58, 93-100.	0.3	3
114	Comparison of patient stratification by computed tomography radiomics and hypoxia positron emission tomography in head-and-neck cancer radiotherapy. Physics and Imaging in Radiation Oncology, 2020, 15, 52-59.	1.2	2
115	Pictures worth more than a thousand words: Prediction of survival in medulloblastoma patients. EBioMedicine, 2020, 62, 103136.	2.7	2
116	Do We Need Complex Image Features to Personalize Treatment of Patients with Locally Advanced Rectal Cancer?. Lecture Notes in Computer Science, 2021, , 775-785.	1.0	2
117	Value of PET imaging for radiation therapy. Nuklearmedizin - NuclearMedicine, 2021, 60, 326-343.	0.3	2
118	A Novel 2-Metagene Signature to Identify High-Risk HNSCC Patients amongst Those Who Are Clinically at Intermediate Risk and Are Treated with PORT. Cancers, 2022, 14, 3031.	1.7	2
119	Inter-patient variations of radiation-induced normal-tissue changes in Gd-EOB-DTPA-enhanced hepatic MRI scans during fractionated proton therapy. Clinical and Translational Radiation Oncology, 2019, 18, 113-119.	0.9	1
120	Corrigendum to "HPV16 DNA status is a strong prognosticator of loco-regional control after postoperative radiochemotherapy of locally advanced oropharyngeal carcinoma: Results from a multicentre explorative study of the German Cancer Consortium Radiation Oncology Group (DKTK-ROG)―[Radiother. Oncol. 113 (2014) 317–323]. Radiotherapy and Oncology, 2015, 114, 419.	0.3	O
121	Session 39: Modelling and simulation III. Biomedizinische Technik, 2017, 62, .	0.9	0
122	The Pluripotency Transcription Factor Oct4 Contributes to Head and Neck Squamous Cell Carcinoma Radioresistance via Regulation of DNA Repair and the Stem Cell Phenotype. Medical Sciences Forum, $2021, 3, .$	0.5	0
123	In reply to the Letter to the Editor by Chen and Lui regarding "Radiotherapy enhances uptake and efficacy of 90Y-cetuximab: A preclinical trial―by A Dietrich et al Radiotherapy and Oncology, 2021, 161, 261-262.	0.3	0
124	Response to comment on "Biomarker signatures for primary radiochemotherapy of locally advanced HNSCC― Radiotherapy and Oncology, 2022, , .	0.3	0
125	Subjective memory impairment in glioma patients with curative radiotherapy. Radiotherapy and Oncology, 2022, , .	0.3	0