Jakob Nikolas Kather

List of Publications by Year
in descending order

96 papers	5,587 citations	145106 33 h-index	111975 67 g-index
119 all docs	119 docs citations	119 times ranked	5721 citing authors

#	Article	IF	Citations
1	Diagnostic performance of artificial intelligence for histologic melanoma recognition compared to 18 international expert pathologists. Journal of the American Academy of Dermatology, 2022, 86, 640-642.	0.6	35
2	Artificial Intelligenceâ€"based Detection of FGFR3 Mutational Status Directly from Routine Histology in Bladder Cancer: A Possible Preselection for Molecular Testing?. European Urology Focus, 2022, 8, 472-479.	1.6	47
3	Weakly supervised annotationâ€free cancer detection and prediction of genotype in routine histopathology. Journal of Pathology, 2022, 256, 50-60.	2.1	48
4	Deep learning identifies inflamed fat as a risk factor for lymph node metastasis in early colorectal cancer. Journal of Pathology, 2022, 256, 269-281.	2.1	39
5	Deep learning-based classification of kidney transplant pathology: a retrospective, multicentre, proof-of-concept study. The Lancet Digital Health, 2022, 4, e18-e26.	5.9	43
6	Integration of deep learning-based image analysis and genomic data in cancer pathology: A systematic review. European Journal of Cancer, 2022, 160, 80-91.	1.3	37
7	Artificial intelligence in liver diseases: Improving diagnostics, prognostics and response prediction. JHEP Reports, 2022, 4, 100443.	2.6	60
8	Artificial intelligence predicts immune and inflammatory gene signatures directly from hepatocellular carcinoma histology. Journal of Hepatology, 2022, 77, 116-127.	1.8	40
9	Classical mathematical models for prediction of response to chemotherapy and immunotherapy. PLoS Computational Biology, 2022, 18, e1009822.	1.5	36
10	The influence of computer-aided polyp detection systems on reaction time for polyp detection and eye gaze. Endoscopy, 2022, 54, 1009-1014.	1.0	23
11	Artificial intelligence to identify genetic alterations in conventional histopathology. Journal of Pathology, 2022, 257, 430-444.	2.1	49
12	An Introduction to Deep Learning in Pathology. , 2022, , 137-151.		0
13	Weakly supervised end-to-end artificial intelligence in gastrointestinal endoscopy. Scientific Reports, 2022, 12, 4829.	1.6	4
14	The future of artificial intelligence in digital pathologyâ€‰â€"â€‰results of a survey across stakeholder groups. Histopathology, 2022, 80, 1121-1127.	1.6	16
15	Artificial intelligence for detection of microsatellite instability in colorectal cancerâ€"a multicentric analysis of a pre-screening tool for clinical application. ESMO Open, 2022, 7, 100400.	2.0	47
16	Explainable artificial intelligenceÂin skin cancer recognition: A systematic review. European Journal of Cancer, 2022, 167, 54-69.	1.3	42
17	Spatial structure governs the mode of tumour evolution. Nature Ecology and Evolution, 2022, 6, 207-217.	3.4	47
18	Swarm learning for decentralized artificial intelligence in cancer histopathology. Nature Medicine, 2022, 28, 1232-1239.	15.2	77

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19	Benchmarking weakly-supervised deep learning pipelines for whole slide classification in computational pathology. Medical Image Analysis, 2022, 79, 102474.	7.0	64
20	Clinical relevance of biomarkers in cholangiocarcinoma: critical revision and future directions. Gut, 2022, , gutjnl-2022-327099.	6.1	11
21	Response to letter entitled: Re: Integration of deep learning-based image analysis and genomic data in cancer pathology: A systematic review. European Journal of Cancer, 2022, , .	1.3	0
22	Second-line therapy with nivolumab plus ipilimumab for older patients with oesophageal squamous cell cancer (RAMONA): a multicentre, open-label phase 2 trial. The Lancet Healthy Longevity, 2022, 3, e417-e427.	2.0	11
23	Deep learning in cancer pathology: a new generation of clinical biomarkers. British Journal of Cancer, 2021, 124, 686-696.	2.9	291
24	Nerve fibers in the tumor microenvironment in neurotropic cancerâ€"pancreatic cancer and cholangiocarcinoma. Oncogene, 2021, 40, 899-908.	2.6	53
25	Artificial intelligence-based pathology for gastrointestinal and hepatobiliary cancers. Gut, 2021, 70, 1183-1193.	6.1	63
26	Response to neoadjuvant treatment among rectal cancer patients in a population-based cohort. International Journal of Colorectal Disease, 2021, 36, 177-185.	1.0	1
27	Deep learning detects genetic alterations in cancer histology generated by adversarial networks. Journal of Pathology, 2021, 254, 70-79.	2.1	31
28	Hidden Variables in Deep Learning Digital Pathology and Their Potential to Cause Batch Effects: Prediction Model Study. Journal of Medical Internet Research, 2021, 23, e23436.	2.1	36
29	Robustness of convolutional neural networks in recognition of pigmented skin lesions. European Journal of Cancer, 2021, 145, 81-91.	1.3	32
30	Deep Transfer Learning Approach for Automatic Recognition of Drug Toxicity and Inhibition of SARS-CoV-2. Viruses, 2021, 13, 610.	1.5	10
31	Serum Levels of Soluble Urokinase Plasminogen Activator Receptor Predict Tumor Response and Outcome to Immune Checkpoint Inhibitor Therapy. Frontiers in Oncology, 2021, 11, 646883.	1.3	7
32	Nerve Fibers in the Tumor Microenvironment as a Novel Biomarker for Oncological Outcome in Patients Undergoing Surgery for Perihilar Cholangiocarcinoma. Liver Cancer, 2021, 10, 260-274.	4.2	14
33	Combining CNN-based histologic whole slide image analysis and patient data to improve skin cancer classification. European Journal of Cancer, 2021, 149, 94-101.	1.3	57
34	Serum levels of soluble B and T lymphocyte attenuator predict overall survival in patients undergoing immune checkpoint inhibitor therapy for solid malignancies. International Journal of Cancer, 2021, 149, 1189-1198.	2.3	17
35	Artificial Intelligence Can Cut Costs While Maintaining Accuracy in Colorectal Cancer Genotyping. Frontiers in Oncology, 2021, 11, 630953.	1.3	31
36	The Presence of Small Nerve Fibers in the Tumor Microenvironment as Predictive Biomarker of Oncological Outcome Following Partial Hepatectomy for Intrahepatic Cholangiocarcinoma. Cancers, 2021, 13, 3661.	1.7	10

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37	The impact of site-specific digital histology signatures on deep learning model accuracy and bias. Nature Communications, 2021, 12, 4423.	5.8	111
38	Gastrointestinal cancer classification and prognostication from histology using deep learning: Systematic review. European Journal of Cancer, 2021, 155, 200-215.	1.3	70
39	Deep learning approach to predict sentinel lymph node status directly from routine histology of primary melanoma tumours. European Journal of Cancer, 2021, 154, 227-234.	1.3	36
40	A benchmark for neural network robustness in skin cancer classification. European Journal of Cancer, 2021, 155, 191-199.	1.3	34
41	Skin cancer classification via convolutional neural networks: systematic review of studies involving human experts. European Journal of Cancer, 2021, 156, 202-216.	1.3	115
42	Development and validation of deep learning classifiers to detect Epstein-Barr virus and microsatellite instability status in gastric cancer: a retrospective multicentre cohort study. The Lancet Digital Health, 2021, 3, e654-e664.	5.9	69
43	Nerve Fibers in the Tumor Microenvironment Are Co-Localized with Lymphoid Aggregates in Pancreatic Cancer. Journal of Clinical Medicine, 2021, 10, 490.	1.0	12
44	Integrating Patient Data Into Skin Cancer Classification Using Convolutional Neural Networks: Systematic Review. Journal of Medical Internet Research, 2021, 23, e20708.	2.1	35
45	Deep learning can predict lymph node status directly from histology in colorectal cancer. European Journal of Cancer, 2021, 157, 464-473.	1.3	32
46	Predicting Mutational Status of Driver and Suppressor Genes Directly from Histopathology With Deep Learning: A Systematic Study Across 23 Solid Tumor Types. Frontiers in Genetics, 2021, 12, 806386.	1.1	14
47	Deep learning for the detection of microsatellite instability from histology images in colorectal cancer: A systematic literature review. ImmunoInformatics, 2021, 3-4, 100008.	1.2	21
48	Experimental Assessment of Color Deconvolution and Color Normalization for Automated Classification of Histology Images Stained with Hematoxylin and Eosin. Cancers, 2020, 12, 3337.	1.7	17
49	Deep learning detects actionable molecular and clinical features directly from head/neck squamous cell carcinoma histopathology slides. International Journal of Radiation Oncology Biology Physics, 2020, 106, 1165.	0.4	0
50	Pan-cancer image-based detection of clinically actionable genetic alterations. Nature Cancer, 2020, 1, 789-799.	5.7	343
51	Different scaling of linear models and deep learning in UKBiobank brain images versus machine-learning datasets. Nature Communications, 2020, 11, 4238.	5.8	156
52	Skeletal Muscle Composition Predicts Outcome in Critically Ill Patients. , 2020, 2, e0171.		34
53	P-288 Nerve fibers in the tumour microenvironment are co-localized with tertiary lymphoid structures and is associated with better survival in pancreatic cancer patients. Annals of Oncology, 2020, 31, S183-S184.	0.6	0
54	DEEPGRAFT, A DEEP LEARNING ALGORITHM TO CLASSIFY KIDNEY TRANSPLANT DISEASES FROM DIGITAL WHOLE SLIDE BIOPSY IMAGES. Transplantation, 2020, 104, S14-S15.	0.5	0

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55	Clinical-Grade Detection of Microsatellite Instability in Colorectal Tumors by Deep Learning. Gastroenterology, 2020, 159, 1406-1416.e11.	0.6	209
56	Development of AI-based pathology biomarkers in gastrointestinal and liver cancer. Nature Reviews Gastroenterology and Hepatology, 2020, 17, 591-592.	8.2	51
57	Circulating levels of soluble urokinase plasminogen activator receptor predict outcome after resection of biliary tract cancer. JHEP Reports, 2020, 2, 100080.	2.6	17
58	Next Generation Imaging Techniques to Define Immune Topographies in Solid Tumors. Frontiers in Immunology, 2020, 11, 604967.	2.2	12
59	Classification of Tissue Regions in Histopathological Images: Comparison Between Pre-trained Convolutional Neural Networks and Local Binary Patterns Variants. Intelligent Systems Reference Library, 2020, , 95-115.	1.0	2
60	Completion rate and impact on physicianâ€"patient relationship of video consultations in medical oncology: a randomised controlled open-label trial. ESMO Open, 2020, 5, e000912.	2.0	19
61	Effects of Label Noise on Deep Learning-Based Skin Cancer Classification. Frontiers in Medicine, 2020, 7, 177.	1.2	33
62	Prediction of histologic and molecular subsets of soft tissue sarcoma using deep learning.. Journal of Clinical Oncology, 2020, 38, e23529-e23529.	0.8	0
63	CCR5 status and metastatic progression in colorectal cancer. OncoImmunology, 2019, 8, e1626193.	2.1	30
64	Aryl hydrocarbon receptor nuclear translocator-like (ARNTL/BMAL1) is associated with bevacizumab resistance in colorectal cancer via regulation of vascular endothelial growth factor A. EBioMedicine, 2019, 45, 139-154.	2.7	36
65	Evaluation of Colour Pre-processing on Patch-Based Classification ofÂH&E-Stained Images. Lecture Notes in Computer Science, 2019, , 56-64.	1.0	12
66	CD163+ immune cell infiltrates and presence of CD54+ microvessels are prognostic markers for patients with embryonal rhabdomyosarcoma. Scientific Reports, 2019, 9, 9211.	1.6	38
67	SAT-470-Circulating levels of soluble urokinase plasminogen activator receptor (suPAR) predict outcome after resection of cholangiocarcinoma. Journal of Hepatology, 2019, 70, e840-e841.	1.8	0
68	Serum levels of miR-29, miR-122, miR-155 and miR-192 are elevated in patients with cholangiocarcinoma. PLoS ONE, 2019, 14, e0210944.	1.1	43
69	Predicting survival from colorectal cancer histology slides using deep learning: A retrospective multicenter study. PLoS Medicine, 2019, 16, e1002730.	3.9	563
70	Deep learning can predict microsatellite instability directly from histology in gastrointestinal cancer. Nature Medicine, 2019, 25, 1054-1056.	15.2	773
71	Lipid-storing, tumor-associated macrophages orchestrate a tumor-excluded immune landscape in omentum metastases of epithelial ovarian cancer. European Journal of Cancer, 2019, 110, S11-S12.	1.3	0
72	Harnessing the innate immune system and local immunological microenvironment to treat colorectal cancer. British Journal of Cancer, 2019, 120, 871-882.	2.9	62

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73	Nuclear Translocation of RELB Is Increased in Diseased Human Liver and Promotes Ductular Reaction and Biliary Fibrosis in Mice. Gastroenterology, 2019, 156, 1190-1205.e14.	0.6	19
74	High baseline soluble urokinase plasminogen activator receptor (suPAR) serum levels indicate adverse outcome after resection of pancreatic adenocarcinoma. Carcinogenesis, 2019, 40, 947-955.	1.3	19
75	Abstract A114: Omental fat in ovarian cancer induces metabolic and immune alterations. , 2019, , .		0
76	Abstract A171: A fully human tissue-based ex vivo cell migration analysis model to study T-cell infiltration and distribution in colorectal cancer liver metastases. , 2019, , .		0
77	Large-scale database mining reveals hidden trends and future directions for cancer immunotherapy. OncoImmunology, 2018, 7, e1444412.	2.1	11
78	Genomics and emerging biomarkers for immunotherapy of colorectal cancer. Seminars in Cancer Biology, 2018, 52, 189-197.	4.3	112
79	Genetics and Immunology: Tumor-Specific Genetic Alterations as a Target for Immune Modulating Therapies. , 2018, , 231-246.		0
80	Spatial profiling and functional phenotyping of mast cell distribution in human cancer tissues. European Journal of Cancer, 2018, 92, S8-S9.	1.3	0
81	Automatic evaluation of tumor budding in immunohistochemically stained colorectal carcinomas and correlation to clinical outcome. Diagnostic Pathology, 2018, 13, 64.	0.9	38
82	High-Throughput Screening of Combinatorial Immunotherapies with Patient-Specific <i>In Silico</i> Models of Metastatic Colorectal Cancer. Cancer Research, 2018, 78, 5155-5163.	0.4	35
83	Dimensionality Reduction Strategies for CNN-Based Classification of Histopathological Images. Smart Innovation, Systems and Technologies, 2018, , 21-30.	0.5	30
84	Prognostic value of histopathological tumor-stroma ratio and a stromal gene expression signature in human solid tumors.. Journal of Clinical Oncology, 2018, 36, e24113-e24113.	0.8	1
85	Topography of cancer-associated immune cells in human solid tumors. ELife, 2018, 7, .	2.8	206
86	Color-coded visualization of magnetic resonance imaging multiparametric maps. Scientific Reports, 2017, 7, 41107.	1.6	15
87	Polyphonic sonification of electrocardiography signals for diagnosis of cardiac pathologies. Scientific Reports, 2017, 7, 44549.	1.6	15
88	<i>In Silico</i> Modeling of Immunotherapy and Stroma-Targeting Therapies in Human Colorectal Cancer. Cancer Research, 2017, 77, 6442-6452.	0.4	90
89	Identification of a characteristic vascular belt zone in human colorectal cancer. PLoS ONE, 2017, 12, e0171378.	1.1	14
90	Multi-class texture analysis in colorectal cancer histology. Scientific Reports, 2016, 6, 27988.	1.6	305

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91	Continuous representation of tumor microvessel density and detection of angiogenic hotspots in histological whole-slide images. Oncotarget, 2015, 6, 19163-19176.	0.8	53
92	New Colors for Histology: Optimized Bivariate Color Maps Increase Perceptual Contrast in Histological Images. PLoS ONE, 2015, 10, e0145572.	1.1	18
93	Transgenic Mouse Models of Corneal Neovascularization: New Perspectives for Angiogenesis Research. , 2014, 55, 7637.		25
94	Angiopoietin-1 Is Regulated by miR-204 and Contributes to Corneal Neovascularization in KLEIP-Deficient Mice. , 2014, 55, 4295.		24
95	Rho guanine exchange factors in blood vessels: Fine-tuners of angiogenesis and vascular function. Experimental Cell Research, 2013, 319, 1289-1297.	1.2	15
96	BMAL1 Links Bevacizumab Resistance in Colorectal Cancer to Circadian Rhythm and Heme Receptor REVERBA. SSRN Electronic Journal, 0, , .	0.4	0