




Olivier Gevaert

Associate Professor of Medicine (Biomedical Informatics) and of Biomedical Data Science

Medicine - Biomedical Informatics Research

 NIH Biosketch available Online

 Curriculum Vitae available Online

Bio

ACADEMIC APPOINTMENTS

- Associate Professor, Medicine - Biomedical Informatics Research
- Associate Professor, Biomedical Data Science
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Wu Tsai Human Performance Alliance
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

HONORS AND AWARDS

- Faculty Fellow at the Stanford Center at Peking University, SCPKU (September-October 2016)
- Henri Benedictus Fellow, King Baudouin Foundation (June 2009)
- Honorary Fellow, Belgian American Educational Foundation (BAEF) (June 2009)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, International Society for Computational Biology (ISCB) (2006 - present)
- Member, American Association for Cancer Research (AACR) (2010 - present)

PROFESSIONAL EDUCATION

- Certificate, Stanford Business School , Stanford Ignite (2012)
- Ph.D, University of Leuven, Belgium , Bioinformatics (2008)
- M.S., University of Leuven, Belgium , Artificial Intelligence (2004)
- M.S., University College, Ghent, Belgium , Electrical Engineering/Computer Science (2003)

LINKS

- Homepage: <http://med.stanford.edu/gevaertlab.html>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My lab focuses on biomedical data fusion: the development of machine learning methods for biomedical decision support using multi-scale biomedical data. Previously we pioneered data fusion work using Bayesian and kernel methods studying breast and ovarian cancer. Additionally, we developed computational algorithms for the identification of driver genes using multi-omics data. Furthermore, we are working on multi-scale biomedical data fusion methods, bridging the molecular using omics data, cellular using pathology data and tissue using medical imaging data.

CLINICAL TRIALS

- Liquid Biopsy With PET/CT Versus PET/CT Alone in Diagnosis of Small Lung Nodules, Recruiting

Teaching

COURSES

2023-24

- BIOMEDICAL DATA SCIENCE: BIODS 202, BIOMEDIN 202 (Win)
- Machine Learning Approaches for Data Fusion in Biomedicine: BIODS 221, BIOMEDIN 221 (Aut)

2022-23

- BIOMEDICAL DATA SCIENCE: BIODS 202, BIOMEDIN 202 (Win)
- Machine Learning Approaches for Data Fusion in Biomedicine: BIODS 221, BIOMEDIN 221 (Aut)

2021-22

- Machine Learning Approaches for Data Fusion in Biomedicine: BIODS 221, BIOMEDIN 221 (Aut)

2020-21

- Machine Learning Approaches for Data Fusion in Biomedicine: BIOMEDIN 221 (Aut)

STANFORD ADVISEES

Med Scholar Project Advisor

Ank Agarwal, Saachi Datta, Josselyn Vergara Cobos

Doctoral Dissertation Reader (AC)

Daisy Ding, Tiffany Eulalio

Postdoctoral Faculty Sponsor

Humaira Noor, Qinmei Xu, Yuanning Zheng

Master's Program Advisor

Thomas Savage

Doctoral Dissertation Co-Advisor (AC)

Xianghao Zhan

Postdoctoral Research Mentor

Qinmei Xu

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biomedical Informatics (Phd Program)

- Biophysics (Phd Program)

Publications

PUBLICATIONS

- **Generation of synthetic whole-slide image tiles of tumours from RNA-sequencing data via cascaded diffusion models.** *Nature biomedical engineering*
Carrillo-Perez, F., Pizurica, M., Zheng, Y., Nandi, T. N., Madduri, R., Shen, J., Gevaert, O.
2024
- **GeNNius: An ultrafast drug-target interaction inference method based on graph neural networks.** *Bioinformatics (Oxford, England)*
Veleiro, U., de la Fuente, J., Serrano, G., Pizurica, M., Casals, M., Pineda-Lucena, A., Vicent, S., Ochoa, I., Gevaert, O., Hernaez, M.
2023
- **Synthetic whole-slide image tile generation with gene expression profile-infused deep generative models.** *Cell reports methods*
Carrillo-Perez, F., Pizurica, M., Ozawa, M. G., Vogel, H., West, R. B., Kong, C. S., Herrera, L. J., Shen, J., Gevaert, O.
2023; 3 (8): 100534
- **EpiMix is an integrative tool for epigenomic subtyping using DNA methylation.** *Cell reports methods*
Zheng, Y., Jun, J., Brennan, K., Gevaert, O.
2023; 3 (7): 100515
- **Spatial cellular architecture predicts prognosis in glioblastoma.** *Nature communications*
Zheng, Y., Carrillo-Perez, F., Pizurica, M., Heiland, D. H., Gevaert, O.
2023; 14 (1): 4122
- **SCOPE: predicting future diagnoses in office visits using electronic health records.** *Scientific reports*
Mukherjee, P., Humbert-Droz, M., Chen, J. H., Gevaert, O.
2023; 13 (1): 11005
- **Machine learning with multimodal data for COVID-19.** *Heliyon*
Chen, W., Sá, R. C., Bai, Y., Napel, S., Gevaert, O., Lauderdale, D. S., Giger, M. L.
2023; 9 (7): e17934
- **Whole slide imaging-based prediction of TP53 mutations identifies an aggressive disease phenotype in prostate cancer.** *Cancer research*
Pizurica, M., Larmuseau, M., Van der Eecken, K., de Schaetzen van Brienen, L., Carrillo-Perez, F., Isphording, S., Lumen, N., Van Dorpe, J., Ost, P., Verbeke, S., Gevaert, O., Marchal, K.
2023
- **Augmenting digital twins with federated learning in medicine.** *The Lancet. Digital health*
Nagaraj, D., Khandelwal, P., Steyaert, S., Gevaert, O.
2023; 5 (5): e251-e253
- **Augmenting digital twins with federated learning in medicine** *LANCET DIGITAL HEALTH*
Nagaraj, D., Khandelwal, P., Steyaert, S., Gevaert, O.
2023; 5 (5): E251-E253
- **Multimodal data fusion for cancer biomarker discovery with deep learning** *NATURE MACHINE INTELLIGENCE*
Steyaert, S., Pizurica, M., Nagaraj, D., Khandelwal, P., Hernandez-Boussard, T., Gentles, A. J., Gevaert, O.
2023
- **Multimodal data fusion for cancer biomarker discovery with deep learning.** *Nature machine intelligence*
Steyaert, S., Pizurica, M., Nagaraj, D., Khandelwal, P., Hernandez-Boussard, T., Gentles, A. J., Gevaert, O.
2023; 5 (4): 351-362
- **Multimodal deep learning to predict prognosis in adult and pediatric brain tumors.** *Communications medicine*
Steyaert, S., Qiu, Y. L., Zheng, Y., Mukherjee, P., Vogel, H., Gevaert, O.
2023; 3 (1): 44
- **A deep-learning algorithm to classify skin lesions from mpox virus infection.** *Nature medicine*

- Thieme, A. H., Zheng, Y., Machiraju, G., Sadee, C., Mittermaier, M., Gertler, M., Salinas, J. L., Srinivasan, K., Gyawali, P., Carrillo-Perez, F., Capodici, A., Uhlig, M., Habenicht, et al
2023
- **Identifying key multifunctional components shared by critical cancer and normal liver pathways via SparseGMM** *CELL REPORTS METHODS*
Bakr, S., Brennan, K., Mukherjee, P., Argemi, J., Hernaez, M., Gevaert, O.
2023; 3 (1): 100392
 - **Imaging genomics: data fusion in uncovering disease heritability.** *Trends in molecular medicine*
Hartmann, K., Sadée, C. Y., Satwah, I., Carrillo-Perez, F., Gevaert, O.
2022
 - **Accurate detection of benign and malignant renal tumor subtypes with MethylBoostER: An epigenetic marker-driven learning framework.** *Science advances*
Rossi, S. H., Newsham, I., Pita, S., Brennan, K., Park, G., Smith, C. G., Lach, R. P., Mitchell, T., Huang, J., Babbage, A., Warren, A. Y., Leppert, J. T., Stewart, et al
2022; 8 (39): eabn9828
 - **Disparities in dermatology AI performance on a diverse, curated clinical image set.** *Science advances*
Daneshjou, R., Vodrahalli, K., Novoa, R. A., Jenkins, M., Liang, W., Rotemberg, V., Ko, J., Swetter, S. M., Bailey, E. E., Gevaert, O., Mukherjee, P., Phung, M., Yekrang, et al
2022; 8 (32): eabq6147
 - **A web-based app to provide personalized recommendations for COVID-19.** *Nature medicine*
Thieme, A. H., Gertler, M., Mittermaier, M., Groschel, M. I., Chen, J. H., Piening, B., Benzler, J., Habenicht, D., Budach, V., Gevaert, O.
2022
 - **Strategies to Address the Lack of Labeled Data for Supervised Machine Learning Training With Electronic Health Records: Case Study for the Extraction of Symptoms From Clinical Notes.** *JMIR medical informatics*
Humbert-Droz, M., Mukherjee, P., Gevaert, O.
2022; 10 (3): e32903
 - **Exploring approaches for predictive cancer patient digital twins: Opportunities for collaboration and innovation.** *Frontiers in digital health*
Stahlberg, E. A., Abdel-Rahman, M., Aguilar, B., Asadpoure, A., Beckman, R. A., Borkon, L. L., Bryan, J. N., Cebulla, C. M., Chang, Y. H., Chatterjee, A., Deng, J., Dolatshahi, S., Gevaert, et al
2022; 4: 1007784
 - **AI-based analysis of CT images for rapid triage of COVID-19 patients.** *NPJ digital medicine*
Xu, Q., Zhan, X., Zhou, Z., Li, Y., Xie, P., Zhang, S., Li, X., Yu, Y., Zhou, C., Zhang, L., Gevaert, O., Lu, G.
2021; 4 (1): 75
 - **CT-based Radiomic Signatures for Predicting Histopathologic Features in Head and Neck Squamous Cell Carcinoma.** *Radiology. Imaging cancer*
Mukherjee, P., Cintra, M., Huang, C., Zhou, M., Zhu, S., Colevas, A. D., Fischbein, N., Gevaert, O.
2020; 2 (3): e190039
 - **A Shallow Convolutional Neural Network Predicts Prognosis of Lung Cancer Patients in Multi-Institutional CT-Image Data.** *Nature machine intelligence*
Mukherjee, P., Zhou, M., Lee, E., Schicht, A., Balagurunathan, Y., Napel, S., Gillies, R., Wong, S., Thieme, A., Leung, A., Gevaert, O.
2020; 2 (5): 274-282
 - **A meta-learning approach for genomic survival analysis.** *Nature communications*
Qiu, Y. L., Zheng, H. n., Devos, A. n., Selby, H. n., Gevaert, O. n.
2020; 11 (1): 6350
 - **Genomic data imputation with variational auto-encoders.** *GigaScience*
Qiu, Y. L., Zheng, H. n., Gevaert, O. n.
2020; 9 (8)
 - **A shallow convolutional neural network predicts prognosis of lung cancer patients in multi-institutional computed tomography image datasets** *Nature Machine Intelligence*
Mukherjee, P., Zhou, M., Lee, E., Schicht, A., Balagurunathan, Y., Napel, S., Gillies, R., Wong, S., Thieme, A., Leung, A., Gevaert, O.
2020; 2 (5): 274-282

- **Imaging-AMARETTO: An Imaging Genomics Software Tool to Interrogate Multiomics Networks for Relevance to Radiography and Histopathology Imaging Biomarkers of Clinical Outcomes.** *JCO clinical cancer informatics*
Gevaert, O. n., Nabian, M. n., Bakr, S. n., Everaert, C. n., Shinde, J. n., Manukyan, A. n., Liefeld, T. n., Tabor, T. n., Xu, J. n., Lupberger, J. n., Haas, B. J., Baumert, T. F., Hernaez, et al
2020; 4: 421–35
- **Development of a DNA Methylation-Based Diagnostic Signature to Distinguish Benign Oncocytoma From Renal Cell Carcinoma.** *JCO precision oncology*
Brennan, K. n., Metzner, T. J., Kao, C. S., Massie, C. E., Stewart, G. D., Haile, R. W., Brooks, J. D., Hitchins, M. P., Leppert, J. T., Gevaert, O. n.
2020; 4
- **Whole slide images reflect DNA methylation patterns of human tumors.** *NPJ genomic medicine*
Zheng, H. n., Momeni, A. n., Cedoz, P. L., Vogel, H. n., Gevaert, O. n.
2020; 5: 11
- **The impact of DNA methylation on the cancer proteome.** *PLoS computational biology*
Magzoub, M. M., Prunello, M., Brennan, K., Gevaert, O.
2019; 15 (7): e1007245
- **Deep learning with multimodal representation for pancancer prognosis prediction.** *Bioinformatics (Oxford, England)*
Cheerla, A., Gevaert, O.
2019; 35 (14): i446-i454
- **Development and validation of radiomic signatures of head and neck squamous cell carcinoma molecular features and subtypes.** *EBioMedicine*
Huang, C. n., Cintra, M. n., Brennan, K. n., Zhou, M. n., Colevas, A. D., Fischbein, N. n., Zhu, S. n., Gevaert, O. n.
2019
- **Benchmark of long non-coding RNA quantification for RNA sequencing of cancer samples.** *GigaScience*
Zheng, H. n., Brennan, K. n., Hernaez, M. n., Gevaert, O. n.
2019; 8 (12)
- **MethylMix 2.0: an R package for identifying DNA methylation genes.** *Bioinformatics (Oxford, England)*
Cedoz, P., Prunello, M., Brennan, K., Gevaert, O.
2018
- **Machine Learning Identifies Stemness Features Associated with Oncogenic Dedifferentiation** *CELL*
Malta, T. M., Sokolov, A., Gentles, A. J., Burzykowski, T., Poisson, L., Weinstein, J. N., Kaminska, B., Huelsken, J., Omberg, L., Gevaert, O., Colaprico, A., Czerwinska, P., Mazurek, et al
2018; 173 (2): 338+
- **Genomic, Pathway Network, and Immunologic Features Distinguishing Squamous Carcinomas** *CELL REPORTS*
Campbell, J. D., Yau, C., Bowlby, R., Liu, Y., Brennan, K., Fan, H., Taylor, A. M., Wang, C., Walter, V., Akbani, R., Byers, L., Creighton, C. J., Coarfa, et al
2018; 23 (1): 194+
- **Module Analysis Captures Pancancer Genetically and Epigenetically Deregulated Cancer Driver Genes for Smoking and Antiviral Response.** *EBioMedicine*
Champion, M. n., Brennan, K. n., Croonenborghs, T. n., Gentles, A. J., Pochet, N. n., Gevaert, O. n.
2018; 27: 156–66
- **Intestinal Enteroendocrine Lineage Cells Possess Homeostatic and Injury-Inducible Stem Cell Activity.** *Cell stem cell*
Yan, K. S., Gevaert, O., Zheng, G. X., Anchang, B., Probert, C. S., Larkin, K. A., Davies, P. S., Cheng, Z. F., Kaddis, J. S., Han, A., Roelf, K., Calderon, R. I., Cynn, et al
2017; 21 (1): 78-90.e6
- **Identification of an atypical etiological head and neck squamous carcinoma subtype featuring the CpG island methylator phenotype.** *EBioMedicine*
Brennan, K., Koenig, J. L., Gentles, A. J., Sunwoo, J. B., Gevaert, O.
2017; 17: 223-236
- **Noninvasive radiomics signature based on quantitative analysis of computed tomography images as a surrogate for microvascular invasion in hepatocellular carcinoma: a pilot study.** *Journal of medical imaging (Bellingham, Wash.)*
Bakr, S. n., Echegaray, S. n., Shah, R. n., Kamaya, A. n., Louie, J. n., Napel, S. n., Kothary, N. n., Gevaert, O. n.

2017; 4 (4): 041303

- **Magnetic resonance image features identify glioblastoma phenotypic subtypes with distinct molecular pathway activities.** *Science translational medicine*
Itakura, H., Achrol, A. S., Mitchell, L. A., Loya, J. J., Liu, T., Westbroek, E. M., Feroze, A. H., Rodriguez, S., Echegaray, S., Azad, T. D., Yeom, K. W., Napel, S., Rubin, et al
2015; 7 (303): 303ra138-?
- **Pancancer analysis of DNA methylation-driven genes using MethylMix** *GENOME BIOLOGY*
Gevaert, O., Tibshirani, R., Plevritis, S. K.
2015; 16
- **CaMoDi: a new method for cancer module discovery** *BMC GENOMICS*
Manolakos, A., Ochoa, I., Venkat, K., Goldsmith, A. J., Gevaert, O.
2014; 15
- **Glioblastoma Multiforme: Exploratory Radiogenomic Analysis by Using Quantitative Image Features** *RADIOLOGY*
Gevaert, O., Mitchell, L. A., Achrol, A. S., Xu, J., Echegaray, S., Steinberg, G. K., Cheshier, S. H., Napel, S., Zaharchuk, G., Plevritis, S. K.
2014; 273 (1): 168-174
- **Identifying master regulators of cancer and their downstream targets by integrating genomic and epigenomic features.** *Pacific Symposium on Biocomputing. Pacific Symposium on Biocomputing*
Gevaert, O., Plevritis, S.
2013: 123-134
- **Non-Small Cell Lung Cancer: Identifying Prognostic Imaging Biomarkers by Leveraging Public Gene Expression Microarray Data-Methods and Preliminary Results** *RADIOLOGY*
Gevaert, O., Xu, J., Hoang, C. D., Leung, A. N., Xu, Y., Quon, A., Rubin, D. L., Napel, S., Plevritis, S. K.
2012; 264 (2): 387-396
- **Multimodal data fusion using sparse canonical correlation analysis and cooperative learning: a COVID-19 cohort study.** *NPJ digital medicine*
Er, A. G., Ding, D. Y., Er, B., Uzun, M., Cakmak, M., Sadee, C., Durhan, G., Ozmen, M. N., Tanriover, M. D., Topeli, A., Aydin Son, Y., Tibshirani, R., Unal, et al
2024; 7 (1): 117
- **Multimodal Machine Learning in Image-Based and Clinical Biomedicine: Survey and Prospects** *INTERNATIONAL JOURNAL OF COMPUTER VISION*
Warner, E., Lee, J., Hsu, W., Syeda-Mahmood, T., Kahn Jr, C. E., Gevaert, O., Rao, A.
2024
- **Foundation metrics for evaluating effectiveness of healthcare conversations powered by generative AI.** *NPJ digital medicine*
Abbasian, M., Khatibi, E., Azimi, I., Oniani, D., Shakeri Hossein Abad, Z., Thieme, A., Sriram, R., Yang, Z., Wang, Y., Lin, B., Gevaert, O., Li, L. J., Jain, et al
2024; 7 (1): 82
- **A 3D lung lesion variational autoencoder.** *Cell reports methods*
Li, Y., Sadée, C. Y., Carrillo-Perez, F., Selby, H. M., Thieme, A. H., Gevaert, O.
2024: 100695
- **Natural language processing system for rapid detection and intervention of mental health crisis chat messages.** *NPJ digital medicine*
Swaminathan, A., Lopez, I., Mar, R. A., Heist, T., McClintock, T., Caoili, K., Grace, M., Rubashkin, M., Boggs, M. N., Chen, J. H., Gevaert, O., Mou, D., Nock, et al
2023; 6 (1): 213
- **Multimodal Biomedical Data Fusion Using Sparse Canonical Correlation Analysis and Cooperative Learning: A Cohort Study on COVID-19.** *Research square*
Er, A. G., Ding, D. Y., Er, B., Uzun, M., Cakmak, M., Sadee, C., Durhan, G., Ozmen, M. N., Tanriover, M. D., Topeli, A., Son, Y. A., Tibshirani, R., Unal, et al
2023
- **Loss of p53-DREAM-mediated repression of cell cycle genes as a driver of lymph node metastasis in head and neck cancer.** *Genome medicine*
Brennan, K., Espin-Perez, A., Chang, S., Bedi, N., Saumyaa, S., Shin, J. H., Plevritis, S. K., Gevaert, O., Sunwoo, J. B., Gentles, A. J.
2023; 15 (1): 98
- **Digital profiling of cancer transcriptomes from histology images with grouped vision attention.** *bioRxiv : the preprint server for biology*
Zheng, Y., Pizurica, M., Carrillo-Perez, F., Noor, H., Yao, W., Wohlfart, C., Marchal, K., Vladimirova, A., Gevaert, O.

2023

- **Selective prediction for extracting unstructured clinical data.** *Journal of the American Medical Informatics Association : JAMIA*
Swaminathan, A., Lopez, I., Wang, W., Srivastava, U., Tran, E., Bhargava-Shah, A., Wu, J. Y., Ren, A. L., Caoili, K., Bui, B., Alkhani, L., Lee, S., Mohit, et al
2023
- **Performance of alternative manual and automated deep learning segmentation techniques for the prediction of benign and malignant lung nodules.** *Journal of medical imaging (Bellingham, Wash.)*
Selby, H. M., Mukherjee, P., Parham, C., Malik, S. B., Gevaert, O., Napel, S., Shah, R. P.
2023; 10 (4): 044006
- **Best Practices for Clinical Skin Image Acquisition in Translational Artificial Intelligence Research.** *The Journal of investigative dermatology*
Phung, M., Muralidharan, V., Rotemberg, V., Novoa, R. A., Chiou, A. S., Sadée, C. Y., Rapaport, B., Yekrang, K., Bitz, J., Gevaert, O., Ko, J. M., Daneshjou, R.
2023; 143 (7): 1127-1132
- **Targeting KDM2A Enhances T Cell Infiltration in NSD1-Deficient Head and Neck Squamous Cell Carcinoma.** *Cancer research*
Chen, C., Shin, J. H., Fang, Z., Brennan, K., Horowitz, N. B., Pfaff, K. L., Welsh, E. L., Rodig, S. J., Gevaert, O., Gozani, O., Uppaluri, R., Sunwoo, J. B.
2023
- **Toward more accurate and generalizable brain deformation estimators for traumatic brain injury detection with unsupervised domain adaptation.** *ArXiv*
Zhan, X., Sun, J., Liu, Y., Cecchi, N. J., Le Flao, E., Gevaert, O., Zeineh, M. M., Camarillo, D. B.
2023
- **AI-based radiomic biomarkers to predict PD-(L)1 immune checkpoint inhibitor response within PD-L1 high/low/negative expression categories in stage IV NSCLC**
Simon, G. R., Jordan, P., Sako, C., Beasley, R., Owen, D., Patel, A., Curti, B. D., Weerasinghe, R. K., Lee, S., Amini, A., Liu, A., Page, R. D., Swalduz, et al
LIPPINCOTT WILLIAMS & WILKINS.2023
- **Multi-center real-world data curation and assessment of tumor growth rate and overall survival in advanced NSCLC treated with PD-(L)1 immune checkpoint inhibitor therapy**
Sako, C., Jordan, P., McCall, R., Patel, A., Owen, D., Amini, A., Liu, A., Curti, B. D., Weerasinghe, R. K., Lee, S., Page, R. D., Swalduz, A., Beregi, et al
LIPPINCOTT WILLIAMS & WILKINS.2023
- **Generative Editing via Convolutional Obscuring (GECO): A Generative Adversarial Network for MRI de-artifacting**
Bagley, B., Petrov, S., Cheng, G., Armanasu, M., Fischbein, N., Jiang, B., Iv, M., Tranvinh, E., Zeineh, M., Gevaert, O.
LIPPINCOTT WILLIAMS & WILKINS.2023
- **A Large-scale Synthetic Pathological Dataset for Deep Learning-enabled Segmentation of Breast Cancer.** *Scientific data*
Ding, K., Zhou, M., Wang, H., Gevaert, O., Metaxas, D., Zhang, S.
2023; 10 (1): 231
- **Machine-learning-based head impact subtyping based on the spectral densities of the measurable head kinematics.** *Journal of sport and health science*
Zhan, X., Li, Y., Liu, Y., Cecchi, N. J., Raymond, S. J., Zhou, Z., Alizadeh, H. V., Ruan, J., Barbat, S., Tiernan, S., Gevaert, O., Zeineh, M. M., Grant, et al
2023
- **Early Detection of Lung Cancer in the NLST Dataset.** *medRxiv : the preprint server for health sciences*
Mukherjee, P., Brezhneva, A., Napel, S., Gevaert, O.
2023
- **Machine intelligence for radiation science: summary of the Radiation Research Society 67th annual meeting symposium.** *International journal of radiation biology*
Wilson, L. J., Kiffer, F. C., Berrios, D. C., Bryce-Atkinson, A., Costes, S. V., Gevaert, O., Matarese, B. F., Miller, J., Mukherjee, P., Peach, K., Schofield, P. N., Slater, L. T., Langen, et al
2023: 1-14
- **Topological data analysis of thoracic radiographic images shows improved radiomics-based lung tumor histology prediction.** *Patterns (New York, N.Y.)*
Vandaele, R., Mukherjee, P., Selby, H. M., Shah, R. P., Gevaert, O.
2023; 4 (1): 100657
- **EpiMix: an integrative tool for epigenomic subtyping using DNA methylation.** *bioRxiv : the preprint server for biology*
Zheng, Y., Jun, J., Brennan, K., Gevaert, O.

2023

- **RNA-to-image multi-cancer synthesis using cascaded diffusion models** *bioRxiv*
Carrillo-Perez, F., Pizurica, M., Zheng, Y., Shen, J., Gevaert, O.
2023
- **Development and validation of MedDRA Tagger: a tool for extraction and structuring medical information from clinical notes.** *medRxiv : the preprint server for health sciences*
Humbert-Droz, M., Corley, J., Tamang, S., Gevaert, O.
2022
- **RADIOMICS-BASED MULTI-MODAL PREDICTION OF TREATMENT RESPONSE TO PD-1/PD-L1 IMMUNE CHECKPOINT INHIBITOR (ICI) THERAPY IN STAGE IV NON-SMALL CELL LUNG CARCINOMA (MNSCLC)**
Parikh, R., Jordan, P., Ciaravino, R., Beasley, R., Patel, A., Owen, D., Amini, A., Curti, B., Page, R., Swalduz, A., Beregi, J., Chrusciel, J., Snyder, et al
BMJ PUBLISHING GROUP.2022: A1346
- **Piecewise Multivariate Linearity Between Kinematic Features and Cumulative Strain Damage Measure (CSDM) Across Different Types of Head Impacts.** *Annals of biomedical engineering*
Zhan, X., Li, Y., Liu, Y., Cecchi, N. J., Gevaert, O., Zeineh, M. M., Grant, G. A., Camarillo, D. B.
2022
- **Reliably Filter Drug-induced Liver Injury Literature with Natural Language Processing and Conformal Prediction.** *IEEE journal of biomedical and health informatics*
Zhan, X., Wang, F., Gevaert, O.
2022; PP
- **Peripheral blood DNA methylation profiles predict future development of B-cell Non-Hodgkin Lymphoma.** *NPJ precision oncology*
Espin-Perez, A., Brennan, K., Ediriwickrema, A. S., Gevaert, O., Lossos, I. S., Gentles, A. J.
2022; 6 (1): 53
- **Preparing for the next pandemic via transfer learning from existing diseases with hierarchical multi-modal BERT: a study on COVID-19 outcome prediction.** *Scientific reports*
Agarwal, K., Choudhury, S., Tipirneni, S., Mukherjee, P., Ham, C., Tamang, S., Baker, M., Tang, S., Kocaman, V., Gevaert, O., Rallo, R., Reddy, C. K.
2022; 12 (1): 10748
- **ImaGene: A robust AI-based software platform for tumor radiogenomic evaluation and reporting**
Sukhadia, S. S., Tyagi, A., Venkatraman, V., Mukherjee, P., Prathosh, A. P., Divate, M., Gevaert, O., Nagaraj, S. H.
AMER ASSOC CANCER RESEARCH.2022
- **ImaGene: A robust AI-based software platform for tumor radiogenomic evaluation and reporting.**
Sukhadia, S. S., Tyagi, A., Venkatraman, V., Mukherjee, P., Prathosh, A. P., Divate, M., Gevaert, O., Nagaraj, S. H.
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