




## 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

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#### ACADEMIC APPOINTMENTS

- Associate Professor, Medicine - Biomedical Informatics Research
- Associate Professor, Department of 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

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### 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, Not Recruiting

## Teaching

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### COURSES

#### 2024-25

- An overview of Biomedical Data Science: BIODS 202, BIOMEDIN 202 (Win)
- Machine Learning Approaches for Data Fusion in Biomedicine: BIODS 221, BIOMEDIN 221 (Aut)

#### 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)

### STANFORD ADVISEES

#### Med Scholar Project Advisor

Ank Agarwal, Saachi Datta, Josselyn Vergara Cobos

#### Postdoctoral Faculty Sponsor

Humaira Noor, Qinmei Xu, Xianghao Zhan, Yuanning Zheng

#### Doctoral Dissertation Advisor (AC)

Ibrahim Gulluk

#### Postdoctoral Research Mentor

Qinmei Xu

### GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biomedical Data Science (Phd Program)
- Biophysics (Phd Program)

## Publications

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### PUBLICATIONS

- **Revealing cancer driver genes through integrative transcriptomic and epigenomic analyses with Moonlight.** *PLoS computational biology*  
Nourbakhsh, M., Zheng, Y., Noor, H., Chen, H., Akhuli, S., Tiberti, M., Gevaert, O., Papaleo, E.  
2025; 21 (4): e1012999
- **Towards a more inductive world for drug repurposing approaches** *NATURE MACHINE INTELLIGENCE*  
de la Fuente, J., Serrano, G., Veleiro, U., Casals, M., Vera, L., Pizurica, M., Gomez-Cebrian, N., Puchades-Carrasco, L., Pineda-Lucena, A., Ochoa, I., Vicent, S., Gevaert, O., Hernaez, et al  
2025
- **Synthetic multimodal data modelling for data imputation.** *Nature biomedical engineering*  
Carrillo-Perez, F., Pizurica, M., Marchal, K., Gevaert, O.  
2024
- **Digital profiling of gene expression from histology images with linearized attention.** *Nature communications*  
Pizurica, M., Zheng, Y., Carrillo-Perez, F., Noor, H., Yao, W., Wohlfart, C., Vladimirova, A., Marchal, K., Gevaert, O.  
2024; 15 (1): 9886
- **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 Brienens, 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
- **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
- **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
- **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
- **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
- **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 MethyIMix** *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
- **Response to anti-angiogenic therapy is affected by AIMP protein family activity in glioblastoma and lower-grade gliomas.** *bioRxiv : the preprint server for biology*  
Noor, H., Zheng, Y., Itakura, H., Gevaert, O.  
2025
- **Reliability-enhanced data cleaning in biomedical machine learning using inductive conformal prediction.** *PLoS computational biology*  
Zhan, X., Xu, Q., Zheng, Y., Lu, G., Gevaert, O.  
2025; 21 (2): e1012803

- **Interactions Between Ploidy and Resource Availability Shape Clonal Evolution in Glioblastoma.** *Cancer research*  
Nowicka, Z., Rentzeperis, F., Tagal, V., Teer, J. K., Ilter, D., Beck, R. J., Cole, J. P., Forero Pinto, A. M., Tejero, J. D., Scanu, E., Veith, T., Dominguez-Viqueira, W., Maksin, et al  
2025
- **Deep learning uncovers histological patterns of YAP1/TEAD activity related to disease aggressiveness in cancer patients.** *iScience*  
Schmauch, B., Cabeli, V., Domingues, O. D., Le Douget, J. E., Hardy, A., Belbahri, R., Maussion, C., Romagnoni, A., Eckstein, M., Fuchs, F., Swalduz, A., Lantuejoul, S., Crochet, et al  
2025; 28 (1): 111638
- **regionalpcs improve discovery of DNA methylation associations with complex traits.** *Nature communications*  
Eulalio, T., Sun, M. W., Gevaert, O., Greicius, M. D., Montine, T. J., Nachun, D., Montgomery, S. B.  
2025; 16 (1): 368
- **A tri-light warning system for hospitalized COVID-19 patients: Credibility-based risk stratification for future pandemic preparedness.** *European journal of radiology open*  
Xu, C., Xu, Q., Liu, L., Zhou, M., Xing, Z., Zhou, Z., Ren, D., Zhou, C., Zhang, L., Li, X., Zhan, X., Gevaert, O., Lu, et al  
2024; 13: 100603
- **Digital Spatial Profiling identifies distinct patterns of immuno-oncology-related gene expression within oropharyngeal tumours in relation to HPV and p16 status.** *Frontiers in oncology*  
Brooks, J. M., Zheng, Y., Hunter, K., Willcox, B. E., Dunn, J., Nankivell, P., Gevaert, O., Mehanna, H.  
2024; 14: 1428741
- **AI-Based Denoising of Head Impact Kinematics Measurements With Convolutional Neural Network for Traumatic Brain Injury Prediction** *IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING*  
Zhan, X., Liu, Y., Cecchi, N. J., Callan, A. A., Le Flao, E., Gevaert, O., Zeineh, M. M., Grant, G. A., Camarillo, D. B.  
2024; 71 (9): 2759-2770
- **Towards Digital Quantification of Ploidy from Pan-Cancer Digital Pathology Slides using Deep Learning.** *bioRxiv : the preprint server for biology*  
Carrillo-Perez, F., Cramer, E. M., Pizurica, M., Andor, N., Gevaert, O.  
2024
- **Brain Deformation Estimation With Transfer Learning for Head Impact Datasets Across Impact Types** *IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING*  
Zhan, X., Liu, Y., Cecchi, N. J., Gevaert, O., Zeineh, M. M., Grant, G. A., Camarillo, D. B.  
2024; 71 (6): 1853-1863
- **Extraction of Unstructured Electronic Health Records to Evaluate Glioblastoma Treatment Patterns.** *JCO clinical cancer informatics*  
Swaminathan, A., Ren, A. L., Wu, J. Y., Bhargava-Shah, A., Lopez, I., Srivastava, U., Alexopoulos, V., Pizzitola, R., Bui, B., Alkhani, L., Lee, S., Mohit, N., Seo, et al  
2024; 8: e2300091
- **Tumor metabolic activity is associated with subcutaneous adipose tissue radiodensity and survival in non-small cell lung cancer.** *Clinical nutrition (Edinburgh, Scotland)*  
Sun, Y., Deng, M., Gevaert, O., Aberle, M., Olde Damink, S. W., van Dijk, D., Rensen, S. S.  
2024; 43 (7): 1809-1815
- **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
- **regionalpcs: improved discovery of DNA methylation associations with complex traits.** *bioRxiv : the preprint server for biology*  
Eulalio, T., Sun, M. W., Gevaert, O., Greicius, M. D., Montine, T. J., Nachun, D., Montgomery, S. B.  
2024
- **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
  - **Adaptive Machine Learning Head Model Across Different Head Impact Types Using Unsupervised Domain Adaptation and Generative Adversarial Networks** *IEEE SENSORS JOURNAL*  
Zhan, X., Sun, J., Liu, Y., Cecchi, N. J., Le Flao, E., Gevaert, O., Zeineh, M. M., Camarillo, D. B.  
2024; 24 (5): 7097-7106
  - **Adaptive Machine Learning Head Model Across Different Head Impact Types Using Unsupervised Domain Adaptation and Generative Adversarial Networks.** *IEEE sensors journal*  
Zhan, X., Sun, J., Liu, Y., Cecchi, N. J., Le Flao, E., Gevaert, O., Zeineh, M. M., Camarillo, D. B.  
2024; 24 (5): 7097-7106
  - **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
  - **Predicting rapid progression and overall survival in stage II-III pancreatic cancer using a CT-based radiomic signature.**  
Xu, Q., Toesca, D., Schueler, E., Jamalain, A., Alkim, E., Chang, D., Fisher, G. A., Vitzthum, L., Gevaert, O., Itakura, H.  
LIPPINCOTT WILLIAMS & WILKINS.2024: 706
  - **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  
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