Stanford

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Bio

BIO

I am interested in developing medical imaging-based AI models to identify patients with locally advanced rectal cancer who achieve a clinical complete response to neoadjuvant chemoradiotherapy, with the goal of sparing them from surgery and its associated risks.

Publications

PUBLICATIONS

- **AI-ready rectal cancer MR imaging: a workflow for tumor detection and segmentation.** *BMC medical imaging*
  Selby, H. M., Son, Y. A., Sheth, V. R., Wagner, T. H., Pollom, E. L., Morris, A. M.
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- **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
- **Predicting treatment response for the safe non-operative management of patients with rectal cancer using an MRI-based deep-learning model**
  Selby, H. M., Liu, C., Sheth, V., Napel, S., Wagner, T., Morris, A. M.
  LIPPINCOTT WILLIAMS & WILKINS.2023
- **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
- **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.
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- **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
- **Machine Learning Radiomics Model for Early Identification of Small-Cell Lung Cancer on Computed Tomography Scans.** *JCO clinical cancer informatics*
  Shah, R. P., Selby, H. M., Mukherjee, P., Verma, S., Xie, P., Xu, Q., Das, M., Malik, S., Gevaert, O., Napel, S.
  2021; 5: 746-757

- **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