

Stanford



Noah Greenwald

Ph.D. Student in Cancer Biology, admitted Autumn 2017

 Curriculum Vitae available Online

Bio

BIO

PhD Candidate in the Cancer Biology program. Joint member of the Angelo and Curtis labs working to integrate imaging and sequencing data to better understand the tumor microenvironment in breast cancer.

STANFORD ADVISORS

- Robert Angelo, Doctoral Dissertation Advisor (AC)
- Christina Curtis, Doctoral Dissertation Co-Advisor (AC)

LINKS

- My website: <https://ngreenwald.github.io/>
- Angelo Lab: <https://www.angelolab.com/>
- Curtis Lab: <https://med.stanford.edu/curtislab.html>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Using deep learning to analyze multiplexed imaging data; profiling the tumor microenvironment to predict response and resistance to checkpoint blockade; integrating genomics, transcriptomics, and imaging to understand how changes in DNA and RNA affect phenotypes at the protein level

Publications

PUBLICATIONS

- **MIBI-TOF: A multiplexed imaging platform relates cellular phenotypes and tissue structure.** *Science advances*
Keren, L., Bosse, M., Thompson, S., Risom, T., Vijayaragavan, K., McCaffrey, E., Marquez, D., Angoshtari, R., Greenwald, N. F., Fienberg, H., Wang, J., Kambham, N., Kirkwood, et al
2019; 5 (10): eaax5851
- **Patient-derived xenografts undergo mouse-specific tumor evolution** *NATURE GENETICS*
Ben-David, U., Ha, G., Tseng, Y., Greenwald, N. F., Oh, C., Shih, J., McFarland, J. M., Wong, B., Boehm, J. S., Beroukhi, R., Golub, T. R.
2017; 49 (11): 1567+
- **Genomic landscape of high-grade meningiomas** *NPJ GENOMIC MEDICINE*
Bi, W., Greenwald, N. F., Abedalthagafi, M., Wala, J., Gibson, W. J., Agarwalla, P. K., Horowitz, P., Schumacher, S. E., Esaulova, E., Mei, Y., Chevalier, A., Ducar, M. A., Thorner, et al
2017; 2

- **DeepCell Kiosk: scaling deep learning-enabled cellular image analysis with Kubernetes.** *Nature methods*
Bannon, D., Moen, E., Schwartz, M., Borba, E., Kudo, T., Greenwald, N., Vijayakumar, V., Chang, B., Pao, E., Osterman, E., Graf, W., Van Valen, D.
2021; 18 (1): 43–45
- **Single-cell metabolic profiling of human cytotoxic T cells.** *Nature biotechnology*
Hartmann, F. J., Mrdjen, D., McCaffrey, E., Glass, D. R., Greenwald, N. F., Bharadwaj, A., Khair, Z., Verberk, S. G., Baranski, A., Baskar, R., Graf, W., Van Valen, D., Van den Bossche, et al
2020
- **The Society for Immunotherapy in Cancer statement on best practices for multiplex immunohistochemistry (IHC) and immunofluorescence (IF) staining and validation.** *Journal for immunotherapy of cancer*
Taube, J. M., Akturk, G., Angelo, M., Engle, E. L., Gnjjatic, S., Greenbaum, S., Greenwald, N. F., Hedvat, C. V., Hollmann, T. J., Juco, J., Parra, E. R., Rebelatto, M. C., Rimm, et al
2020; 8 (1)
- **Large expert-curated database for benchmarking document similarity detection in biomedical literature search** *DATABASE-THE JOURNAL OF BIOLOGICAL DATABASES AND CURATION*
Brown, P., Tan, A., El-Esawi, M. A., Liehr, T., Blanck, O., Gladue, D. P., Almeida, G. F., Cernava, T., Sorzano, C. O., Yeung, A. K., Engel, M. S., Chandrasekaran, A., Muth, et al
2019
- **Neuronal differentiation and cell-cycle programs mediate response to BET-bromodomain inhibition in MYC-driven medulloblastoma** *NATURE COMMUNICATIONS*
Bandopadhyay, P., Piccioni, F., O'Rourke, R., Ho, P., Gonzalez, E. M., Buchan, G., Qian, K., Gionet, G., Girard, E., Coxon, M., Rees, M. G., Brenan, L., Dubois, et al
2019; 10: 2400
- **SvABA: genome-wide detection of structural variants and indels by local assembly** *GENOME RESEARCH*
Wala, J. A., Bandopadhyay, P., Greenwald, N. F., O'Rourke, R., Sharpe, T., Stewart, C., Schumacher, S., Li, Y., Weischenfeldt, J., Yao, X., Nusbaum, C., Campbell, P., Getz, et al
2018; 28 (4): 581–91
- **Radiographic prediction of meningioma grade by semantic and radiomic features** *PLOS ONE*
Coroller, T. P., Bi, W., Huynh, E., Abedalthagafi, M., Aizer, A. A., Greenwald, N. F., Parmar, C., Narayan, V., Wu, W. W., de Moura, S., Gupta, S., Beroukhim, R., Wen, et al
2017; 12 (11): e0187908
- **Osteoglycin promotes meningioma development through downregulation of NF2 and activation of mTOR signaling** *CELL COMMUNICATION AND SIGNALING*
Mei, Y., Du, Z., Hu, C., Greenwald, N. F., Abedalthagafi, M., Agar, N. R., Dunn, G. P., Bi, W., Santagata, S., Dunn, I. F.
2017; 15: 34
- **Artificial intelligence in research** *SCIENCE*
Musib, M.
2017; 357 (6346): 28
- **Clinical Identification of Oncogenic Drivers and Copy-Number Alterations in Pituitary Tumors** *ENDOCRINOLOGY*
Bi, W., Greenwald, N. F., Ramkissoon, S. H., Abedalthagafi, M., Coy, S. M., Ligon, K. L., Mei, Y., MacConaill, L., Ducar, M., Min, L., Santagata, S., Kaiser, U. B., Beroukhim, et al
2017; 158 (7): 2284–91
- **Clinical targeted exome-based sequencing in combination with genome-wide copy number profiling: precision medicine analysis of 203 pediatric brain tumors** *NEURO-ONCOLOGY*
Ramkissoon, S. H., Bandopadhyay, P., Hwang, J., Ramkissoon, L. A., Greenwald, N. F., Schumacher, S. E., O'Rourke, R., Pinches, N., Ho, P., Malkin, H., Sinai, C., Filbin, M., Plant, et al
2017; 19 (7): 986–96
- **Genomic profile of human meningioma cell lines** *PLOS ONE*
Mei, Y., Bi, W., Greenwald, N. F., Agar, N. Y., Beroukhim, R., Dunn, G. P., Dunn, I. F.
2017; 12 (5): e0178322

● **Landscape of Genomic Alterations in Pituitary Adenomas** *CLINICAL CANCER RESEARCH*

Bi, W., Horowitz, P., Greenwald, N. F., Abedalthagafi, M., Agarwalla, P. K., Gibson, W. J., Mei, Y., Schumacher, S. E., Ben-David, U., Chevalier, A., Carter, S., Tiao, G., Brastianos, et al
2017; 23 (7): 1841–51

● **Increased expression of programmed death ligand 1 (PD-L1) in human pituitary tumors** *ONCOTARGET*

Mei, Y., Bi, W., Greenwald, N. F., Du, Z., Agar, N. R., Kaiser, U. B., Woodmansee, W. W., Reardon, D. A., Freeman, G. J., Fecci, P. E., Laws, E. R., Santagata, S., Dunn, et al
2016; 7 (47): 76565–76