

# Stanford

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## Michael G. Ozawa

Clinical Assistant Professor, Pathology

### CLINICAL OFFICE (PRIMARY)

- **Surgical Pathology**

300 Pasteur Dr H2110 MC 5243

Stanford, CA 94305

**Tel** (650) 739-6692

**Fax** (650) 725-0900

### ACADEMIC CONTACT INFORMATION

- **Administrative Contact**

Charlene Armitage - Administrative Assistant

**Email** carmitag@stanford.edu

**Tel** 6507361783

### Bio

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#### BIO

Dr. Ozawa is a Clinical Assistant Professor of Pathology with subspecialty focus in Cytopathology, Head and Neck pathology, and Thoracic pathology. He completed his M.D., Ph.D. training at the McGovern Medical School and the M. D. Anderson Cancer Center in Houston, TX. He then completed residency training in Anatomic and Clinical Pathology followed by fellowship training in Surgical Pathology and Cytopathology at Stanford University. He is board certified in Anatomic and Clinical Pathology as well as Cytopathology. His interests include pulmonary neoplasms as well as neoplasms of the Head and Neck. He also has developed collaborative research interests in utilizing fine needle aspiration (FNA) techniques in the growing clinical application of Chimeric Antigen T Cell (CAR-T) therapy.

#### CLINICAL FOCUS

- Anatomic and Clinical Pathology
- Cytopathology
- Head and Neck Pathology
- Thoracic pathology

#### ACADEMIC APPOINTMENTS

- Clinical Assistant Professor, Pathology

#### ADMINISTRATIVE APPOINTMENTS

- Medical Director (Clinical Laboratory), Stanford Cancer Center South Bay, (2018- present)
- Associate Director, Surgical Pathology Fellowship, Stanford Medicine, Department of Pathology, (2022- present)

#### PROFESSIONAL EDUCATION

- Board Certification: Cytopathology, American Board of Pathology (2018)
- Board Certification: Cytopathology, American Board of Pathology (2018)
- Fellowship: Stanford University Cytopathology Fellowship (2018) CA
- Fellowship: Stanford University Surgical Pathology Fellowship (2017) CA
- Board Certification: Anatomic and Clinical Pathology, American Board of Pathology (2016)

- Residency: Stanford University Pathology Residency (2016) CA
- Medical Education: University of Texas Medical School at Houston Registrar (2012) TX

## Publications

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### PUBLICATIONS

- **A clinical trial of therapeutic vaccination in lymphoma with serial tumor sampling and single cell analysis.** *Blood advances*  
Shree, T., Haebe, S. E., Czerwinski, D. K., Eckhert, E., Day, G., Sathe, A., Grimes, S. M., Frank, M. J., Maeda, L., Alizadeh, A. A., Advani, R. H., Hoppe, R. T., Long, et al  
2023
- **Follicular lymphoma evolves with a surmountable dependency on acquired glycosylation motifs in the B cell receptor.** *Blood*  
Haebe, S. E., Day, G., Czerwinski, D. K., Sathe, A., Grimes, S. M., Chen, T., Long, S. R., Martin, B. A., Ozawa, M. G., Ji, H. P., Shree, T., Levy, R.  
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
- **Ceramide as an endothelial cell surface receptor and a lung-specific lipid vascular target for circulating ligands.** *Proceedings of the National Academy of Sciences of the United States of America*  
Staquicini, D. I., Cardó-Vila, M., Rotolo, J. A., Staquicini, F. I., Tang, F. H., Smith, T. L., Ganju, A., Schiavone, C., Dogra, P., Wang, Z., Cristini, V., Giordano, R. J., Ozawa, et al  
2023; 120 (34): e2220269120
- **p53 governs an AT1 differentiation programme in lung cancer suppression.** *Nature*  
Kaiser, A. M., Gatto, A., Hanson, K. J., Zhao, R. L., Raj, N., Ozawa, M. G., Seoane, J. A., Biegging-Rolett, K. T., Wang, M., Li, I., Trope, W. L., Liou, D. Z., Shrager, et al  
2023
- **Biochemical, biophysical, and immunological characterization of respiratory secretions in severe SARS-CoV-2 infections.** *JCI insight*  
Kratochvil, M. J., Kaber, G., Demirdjian, S., Cai, P. C., Burgener, E. B., Nagy, N., Barlow, G. L., Popescu, M., Nicolls, M. R., Ozawa, M. G., Regula, D. P., Pacheco-Navarro, A. E., Yang, et al  
2022; 7 (12)
- **The Tabula Sapiens: A multiple-organ, single-cell transcriptomic atlas of humans.** *Science (New York, N.Y.)*  
Jones, R. C., Karknias, J., Krasnow, M. A., Pisco, A. O., Quake, S. R., Salzman, J., Yosef, N., Bulthaupt, B., Brown, P., Harper, W., Hemenez, M., Ponnusamy, R., Salehi, et al  
2022; 376 (6594): eabl4896
- **Constrictive Pericarditis Revealing Rare Case of ALH Amyloidosis With Underlying Lymphoplasmacytic Lymphoma (Waldenstrom Macroglobulinemia).** *JACC. Case reports*  
Ho, V. V., O'Sullivan, J. W., Collins, W. J., Ozdalga, E., Bell, C. F., Shah, N. D., Krishnam, M. S., Ozawa, M. G., Witteles, R. M.  
2022; 4 (5): 271-275
- **The Value of Endobronchial Ultrasound Guided-Fine Needle Aspiration in Research Biobanking**  
Miyakawa-Liu, M., Lundi, L., Padda, S., Leuenerberger, D., Sung, A., Ramsey, M., Nair, V., Bedi, H., Ozawa, M.  
SPRINGERNATURE.2022: 286-287
- **Cell types of origin of the cell-free transcriptome.** *Nature biotechnology*  
Vorperian, S. K., Moufarrej, M. N., Tabula Sapiens Consortium, Quake, S. R., Jones, R. C., Karknias, J., Krasnow, M., Pisco, A. O., Quake, S. R., Salzman, J., Yosef, N., Bulthaupt, B., Brown, P., et al  
2022
- **CDX2 expression in malignant peripheral nerve sheath tumor: A potential diagnostic pitfall associated with PRC2 inactivation.** *Histopathology*  
Odeyemi, O. O., Ozawa, M. G., Charville, G. W.  
2022
- **Reconstructing codependent cellular cross-talk in lung adenocarcinoma using REMI.** *Science advances*

- Yu, A., Li, Y., Li, I., Ozawa, M. G., Yeh, C., Chiou, A. E., Trope, W. L., Taylor, J., Shrager, J., Plevritis, S. K.  
2022; 8 (11): eabi4757
- **RNA splicing programs define tissue compartments and cell types at single cell resolution.** *eLife*  
Olivieri, J. E., Dehghannasiri, R., Wang, P. L., Jang, S., de Morree, A., Tan, S. Y., Ming, J., Ruohao Wu, A., Tabula Sapiens Consortium, Quake, S. R., Krasnow, M. A., Salzman, J.  
2021; 10
  - **CAR T cells with dual targeting of CD19 and CD22 in adult patients with recurrent or refractory B cell malignancies: a phase 1 trial.** *Nature medicine*  
Spiegel, J. Y., Patel, S., Muffly, L., Hossain, N. M., Oak, J., Baird, J. H., Frank, M. J., Shiraz, P., Sahaf, B., Craig, J., Iglesias, M., Younes, S., Natkunam, et al  
2021
  - **Mammary Lobular Carcinoma-Like Salivary Gland Carcinoma: Report of a Rare Case.** *Head and neck pathology*  
Lei, L., Van Staaldouin, E., Troxell, M., Ozawa, M. G., Zeineh, M., Berry, G.  
2021
  - **A multi-scale integrated analysis identifies KRT8 as a pan-cancer early biomarker**  
Scott, M. D., Ozawa, M. G., Chu, P., Limaye, M., Nair, V. S., Schaffert, S., Koong, A. C., West, R., Khatri, P., Altman, R. B., Dunker, A. K., Hunter, L., Ritchie, et al  
WORLD SCIENTIFIC PUBL CO PTE LTD.2021: 297-308
  - **Impact of a deep learning assistant on the histopathologic classification of liver cancer.** *NPI digital medicine*  
Kiani, A. n., Uyumazturk, B. n., Rajpurkar, P. n., Wang, A. n., Gao, R. n., Jones, E. n., Yu, Y. n., Langlotz, C. P., Ball, R. L., Montine, T. J., Martin, B. A., Berry, G. J., Ozawa, et al  
2020; 3 (1): 23
  - **CD22-Directed CAR T-Cell Therapy Induces Complete Remissions in CD19-Directed CAR-Refractory Large B-Cell Lymphoma.** *Blood*  
Baird, J. H., Frank, M. J., Craig, J. n., Patel, S. n., Spiegel, J. Y., Sahaf, B. n., Oak, J. S., Younes, S. n., Ozawa, M. n., Yang, E. n., Natkunam, Y. n., Tamaresis, J. S., Ehlinger, et al  
2020
  - **Determining the Optimal Number of Core Needle Biopsy Passes for Molecular Diagnostics** *CARDIOVASCULAR AND INTERVENTIONAL RADIOLOGY*  
Hoang, N. S., Ge, B. H., Pan, L. Y., Ozawa, M. G., Kong, C. S., Louie, J. D., Shah, R. P.  
2018; 41 (3): 489-95
  - **A study of the mutational landscape of pediatric-type follicular lymphoma and pediatric nodal marginal zone lymphoma.** *Modern pathology*  
Ozawa, M. G., Bhaduri, A., Chisholm, K. M., Baker, S. A., Ma, L., Zehnder, J. L., Luna-Fineman, S., Link, M. P., Merker, J. D., Arber, D. A., Ohgami, R. S.  
2016; 29 (10): 1212-1220
  - **Synchronous Hepatoblastoma, Neuroblastoma, and Cutaneous Capillary Hemangiomas: A Case Report** *PEDIATRIC AND DEVELOPMENTAL PATHOLOGY*  
Ozawa, M. G., Cooney, T., Rangaswami, A., Hazard, F. K.  
2016; 19 (1): 74-79
  - **Synchronous Hepatoblastoma, Neuroblastoma, and Cutaneous Capillary Hemangiomas: A Case Report.** *Pediatric and developmental pathology*  
Ozawa, M. G., Cooney, T., Rangaswami, A., Hazard, F. K.  
2016; 19 (1): 74-79
  - **Dasatinib-related Follicular Hyperplasia: An Underrecognized Entity With Characteristic Morphology.** *American journal of surgical pathology*  
Ozawa, M. G., Ewalt, M. D., Gratzinger, D.  
2015; 39 (10): 1363-1369
  - **Correlation of percutaneously biopsied axillary lymph nodes marked with black tattoo ink prior to neoadjuvant chemotherapy with sentinel lymph nodes in breast cancer patients**  
Choy, N., Lipson, J., Pal, S., Ikeda, D., Trinh, L., Allison, K., Ozawa, M., Wheeler, A., Wapnir, I.  
AMER ASSOC CANCER RESEARCH.2015
  - **The utility of IgM, CD21, HGAL and LMO2 in the diagnosis of pediatric follicular lymphoma** *HUMAN PATHOLOGY*  
Karnik, T., Ozawa, M. G., Lefterova, M., Luna-Fineman, S., Alvarez, E., Link, M., Zehnder, J. L., Arber, D. A., Ohgami, R. S.  
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- **Discovery and horizontal follow-up of an autoantibody signature in human prostate cancer** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Mintz, P. J., Rietz, A. C., Cardo-Vila, M., Ozawa, M. G., Dondossola, E., Do, K., Kim, J., Troncoso, P., Logothetis, C. J., Sidman, R. L., Pasqualini, R., Arap, W. 2015; 112 (8): 2515-2520
- **Initial results with preoperative tattooing of biopsied axillary lymph nodes and correlation to sentinel lymph nodes in breast cancer patients.** *Annals of surgical oncology*  
Choy, N., Lipson, J., Porter, C., Ozawa, M., Kierny, A., Pal, S., Kao, J., Trinh, L., Wheeler, A., Ikeda, D., Jensen, K., Allison, K., Wapnir, et al 2015; 22 (2): 377-382
- **Initial Results With Black Ink Tattooing of Biopsied Axillary Lymph Nodes**  
Choy, N. S., Lipson, J., Kierny, A., Porter, C., Ikeda, D., Pal, S., Trinh, L., Ozawa, M., Allison, K., Jensen, K., Wapnir, I. SPRINGER.2014: 35–36
- **Combinatorial targeting and discovery of ligand-receptors in organelles of mammalian cells** *NATURE COMMUNICATIONS*  
Rangel, R., Guzman-Rojas, L., Le Roux, L. G., Staquicini, F. I., Hosoya, H., Barbu, E. M., Ozawa, M. G., Nie, J., Dunner, K., Langley, R. R., Sage, E. H., Koivunen, E., Gelovani, et al 2012; 3
- **Systemic combinatorial peptide selection yields a non-canonical iron-mimicry mechanism for targeting tumors in a mouse model of human glioblastoma** *JOURNAL OF CLINICAL INVESTIGATION*  
Staquicini, F. I., Ozawa, M. G., Moya, C. A., Driessen, W. H., Barbu, E. M., Nishimori, H., Soghomonyan, S., Flores, L. G., Liang, X., Paolillo, V., Alauddin, M. M., Basilion, J. P., Furnari, et al 2011; 121 (1): 161-173
- **Combinatorial targeting and nanotechnology applications** *BIOMEDICAL MICRODEVICES*  
Souza, G. R., Staquicini, F. I., Christianson, D. R., Ozawa, M. G., Miller, J. H., Pasqualini, R., Arap, W. 2010; 12 (4): 597-606
- **Three-dimensional tissue culture based on magnetic cell levitation** *NATURE NANOTECHNOLOGY*  
Souza, G. R., Molina, J. R., Raphael, R. M., Ozawa, M. G., Stark, D. J., Levin, C. S., Bronk, L. F., Ananta, J. S., Mandelin, J., Georgescu, M., Bankson, J. A., Gelovani, J. G., Killian, et al 2010; 5 (4): 291-296
- **Cracking the code for compartment-specific dual functionality proteins in cancer The case for CRKL** *CELL CYCLE*  
Ozawa, M. G., Cardo-Vila, M., Mintz, P. J., Arap, W., Pasqualini, R. 2010; 9 (1): 8-9
- **The Interleukin-11 Receptor as a Candidate Ligand-Directed Target in Osteosarcoma: Consistent Data from Cell Lines, Orthotopic Models, and Human Tumor Samples** *CANCER RESEARCH*  
Lewis, V. O., Ozawa, M. G., Deavers, M. T., Wang, G., Shintani, T., Arap, W., Pasqualini, R. 2009; 69 (5): 1995-1999
- **An unrecognized extracellular function for an intracellular adapter protein released from the cytoplasm into the tumor microenvironment** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Mintz, P. J., Cardo-Vila, M., Ozawa, M. G., Hajitou, A., Rangel, R., Guzman-Rojas, L., Christianson, D. R., Arap, M. A., Giordano, R. J., Souza, G. R., Easley, J., Salameh, A., Oliviero, et al 2009; 106 (7): 2182-2187
- **Ligand-directed Cancer Gene Therapy to Angiogenic Vasculature** *TISSUE-SPECIFIC VASCULAR ENDOTHELIAL SIGNALS AND VECTOR TARGETING, PART A*  
Driessen, W. H., Ozawa, M. G., Arap, W., Pasqualini, R. 2009; 67: 103-121
- **Beyond receptor expression levels: The relevance of target accessibility in ligand-directed pharmacodelivery systems** *TRENDS IN CARDIOVASCULAR MEDICINE*  
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- **The original Pathologische Anatomie Leiden-Endothelium monoclonal antibody recognizes a vascular endothelial growth factor-binding site within neuropilin-1** *CANCER RESEARCH*

- Jaalouk, D. E., Ozawa, N. G., Sun, J., Lahdenranta, J., Schlingemann, R. O., Pasqualini, R., Arap, W.  
2007; 67 (20): 9623-9629
- **Impaired angiogenesis in aminopeptidase N-null mice** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Rangel, R., Sun, Y., Guzman-Rojas, L., Ozawa, M. G., Sun, J., Giordano, R. J., Van Pelt, C. S., Tinkey, P. T., Behringer, R. R., Sidman, R. L., Arap, W., Pasqualini, R.  
2007; 104 (11): 4588-4593
  - **Techniques to decipher molecular diversity by phage display.** *Methods in molecular biology (Clifton, N.J.)*  
Christianson, D. R., Ozawa, M. G., Pasqualini, R., Arap, W.  
2007; 357: 385-406
  - **A hybrid vector for ligand-directed tumor targeting and molecular imaging** *CELL*  
Hajitou, A., Trepel, M., Lilley, C. E., Soghomonyan, S., Alauddin, M. M., Marini, F. C., Restel, B. H., Ozawa, M. G., Moya, C. A., Rangel, R., Sun, Y., Zaoui, K., Schmidt, et al  
2006; 125 (2): 385-398
  - **Antiangiogenic therapy decreases integrin expression in normalized tumor blood vessels** *CANCER RESEARCH*  
Yao, V. J., Ozawa, M. G., Varner, A. S., Kasman, I. M., Chantry, Y. H., Pasqualini, R., Arap, W., McDonald, D. M.  
2006; 66 (5): 2639-2649
  - **Networks of gold nanoparticles and bacteriophage as biological sensors and cell-targeting agents** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Souza, G. R., Christianson, D. R., Staquicini, F. I., Ozawa, M. G., Snyder, E. Y., Sidman, R. L., Miller, J. H., Arap, W., Pasqualini, R.  
2006; 103 (5): 1215-1220
  - **Ligand-directed surface profiling of human cancer cells with combinatorial peptide libraries** *CANCER RESEARCH*  
Kolonin, M. G., Bover, L., Sun, J., Zurita, A. J., Do, K. A., Lahdenranta, J., Cardo-Vila, M., Giordano, R. J., Jaalouk, D. E., Ozawa, M. G., Moya, C. A., Souza, G. R., Staquicini, et al  
2006; 66 (1): 34-40
  - **Angiogenesis with pericyte abnormalities in a transgenic model of prostate carcinoma** *CANCER*  
Ozawa, M. G., Yao, V. J., Chantry, Y. H., Troncoso, P., Uemura, A., Varner, A. S., Kasman, I. M., Pasqualini, R., Arap, W., McDonald, D. M.  
2005; 104 (10): 2104-2115
  - **Targeting pancreatic islets with phage display assisted by laser pressure catapult microdissection** *AMERICAN JOURNAL OF PATHOLOGY*  
Yao, V. J., Ozawa, M. G., Trepel, M., Arap, W., McDonald, D. M., Pasqualini, R.  
2005; 166 (2): 625-636
  - **Aminopeptidase A is a functional target in angiogenic blood vessels** *CANCER CELL*  
Marchio, S., Lahdenranta, J., Schlingemann, R. O., Valdembri, D., Wesseling, P., Arap, M. A., Hajitou, A., Ozawa, M. G., Trepel, M., Giordano, R. J., Nanus, D. M., Dijkman, H. B., Oosterwijk, et al  
2004; 5 (2): 151-162