Stanford



Alarice Lowe

Professor of Pathology

CLINICAL OFFICE (PRIMARY)

- **Surgical Pathology**

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Bio

BIO

Dr. Lowe joined the School of Medicine faculty in 2019. She received her undergraduate degree in Biology from MIT and her medical degree at UCSD, prior to residency and cytology fellowship at UCLA. In 2011, she joined the faculty at Brigham and Women's Hospital where she developed a research focus on Circulating Tumor Cells (CTCs) and the application of new technology to improve clinical and molecular diagnostics. Clinically, her interests focus on Cytopathology and Genitourinary Pathology.

CLINICAL FOCUS

- Anatomic and Clinical Pathology
- Cytopathology
- Fine Needle Aspiration Biopsy
- Genitourinary Pathology

ACADEMIC APPOINTMENTS

- Professor-Univ Med Line, Pathology
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Cancer Institute

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Global Health Faculty Fellow, Center for Innovation in Global Health (CIGH) (2026 - present)

PROFESSIONAL EDUCATION

- Fellowship: UCLA Dept of Pathology (2011) CA
- Residency: UCLA Dept of Pathology (2010) CA
- Board Certification: Anatomic and Clinical Pathology, American Board of Pathology (2010)
- Medical Education: University of California San Diego School of Medicine (2006) CA

- Specialty Certification, Ultrasound Guided Fine Needle Aspiration Biopsy Training , College of American Pathologists (2019)
- Board Certification: Cytopathology, American Board of Pathology (2011)
- Board Certification, Anatomic Pathology/Clinical Pathology , American Board of Pathology (2010)

Research & Scholarship

CLINICAL TRIALS

- Molecular and Cellular Profiling of Uterine Lavage Collected During Gynecologic Surgery, Recruiting

Publications

PUBLICATIONS

- **The feasibility of low-cost portable microscopes as an alternative to standard microscopes for rapid on-site evaluation of FNA.** *Cancer cytopathology*
  Gardezi, M., Fakhari, M., Libert, D., Dey, R., Phan, T., Shiu, T., Adeniyi, A. M., Martin, C., Snowball, B., Lowe, A. C.
  2025; 133 (12): e70061
- **Detection of effusion tumor cells under different storage and processing conditions.** *Cancer cytopathology*
  Libert, D. M., Zhu, Y., Wang, A., Allard, G. M., Cheng-Yi Lowe, A.
  2024
- **Immunofluorescent and molecular characterization of effusion tumor cells reveal cancer site#of#origin and disease#driving mutations** *Cancer Cytopathology*
  Zhu, Y., Wang, A., Allard, G. M., Nordberg, J. J., Nair, R. V., Kunder, C. A., Lowe, A. C.
  2022
- **Identification and characterization of effusion tumor cells (ETCs) from remnant pleural effusion specimens.** *Cancer cytopathology*
  Zhu, Y., Allard, G. M., Ericson, N. G., George, T. C., Kunder, C. A., Lowe, A. C.
  2021
- **Enriched methylomes of low-input and fragmented DNA using fragment ligation EXclusive methylation sequencing.** *Nucleic acids research*
  Yu, J., Ahmann, L. S., Yao, Y. Y., Toland, A., Snowden, A., Ho, C., Loyfer, N., Kaplan, T., Vogel, H., Wang, L., Howitt, B. E., Holmes, B., Lowe, et al
  2026; 54 (9)
- **Digitally Assessed Nucleolar Size Compared to Traditional Pathologist WHO Grade Allocation in Clear Cell Renal Cell Carcinoma.** *International journal of surgical pathology*
  Kuk, M., Lowe, A., Sangoi, A. R., Chan, E.
  2026: 10668969261429048
- **Evaluation of low-cost portable microscopes for rapid on-site evaluation of fine-needle aspirates in a clinical environment.** *Journal of the American Society of Cytopathology*
  Dey, R., Libert, D., Monsrud, A., Goh, T., Tabibi, S., Zagazeta, O., Shiu, T., Adeniyi, A., Gedallovich, J., Ozawa, M., Ernst, K., Lowe, A.
  2026
- **Prostatic Adenocarcinoma Identified on Transurethral Resection of Bladder Tumor: A Clinicopathologic Series of a Diagnostically Relevant Potential Pitfall.** *Human pathology*
  Wu, D. J., Pacheco, R., Chan, E., Lowe, A. C., Sangoi, A. R.
  2026: 106059
- **Feasibility of Low-Cost Portable Microscopes for Rapid On-Site Evaluation of Fine Needle Aspiration Biopsies**
  Dey, R., Libert, D., Adeniyi, A., Lowe, A.
  ELSEVIER SCIENCE INC.2025
- **Cytologic diagnosis of fumarate hydratase-deficient renal cell carcinoma: A single-institutional experience.** *Cancer cytopathology*
  Mullane, P. C., Qian, X., Lau, H. D., Lowe, A. C.
  2025; 133 (2): e22931

- **Science, Medicine, and Cytology: an educational program of the Diversity, Equity, and Inclusion Committee of the American Society of Cytopathology.** *Journal of the American Society of Cytopathology*
  Gimenez, C., Balassanian, R., Banet, N., Barkan, G., DeRobbio, K., Henderson-Jackson, E., Jenkins, E., Kilic, A., Lai, L., Lura, T., Morgenstern, N., Mito, J., Reid, et al
  2024

- **Success Rates for Molecular Testing with ThyroSeq v3 Genomic Classifier and Stanford's Solid Tumor Actionable Mutation Panel (STAMP) from Cytology Smears**
  Nichols, T., Fakhari, M., Shiu, T., Dey, R., Phan, T., Lowe, A.
  ELSEVIER SCIENCE INC.2024: S450-S451

- **Multicancer screening test based on the detection of circulating non haematological proliferating atypical cells.** *Molecular cancer*
  Malara, N., Coluccio, M. L., Grillo, F., Ferrazzo, T., Garo, N. C., Donato, G., Lavecchia, A., Fulciniti, F., Sapino, A., Cascardi, E., Pellegrini, A., Foxi, P., Furlanello, et al
  2024; 23 (1): 32

- **Circulating and Imaging Biomarkers of Radium-223 Response in Metastatic Castration-Resistant Prostate Cancer.** *JCO precision oncology*
  Saylor, P. J., Otani, K., Balza, R., Ukleja, J., Pleskow, H., Fisher, R., Kusaka, E., Otani, Y. S., Badusi, P. O., Smith, M. R., Meneely, E., Olivier, K., Lowe, et al
  2024; 8: e2300230

- **Comprehensive epithelial biomarker analysis of malignant mesothelioma: EpCAM positivity is a potential diagnostic pitfall.** *Cancer cytopathology*
  Zhu, Y., Moore, S., Wang, A., George, E., Allard, G. M., Libert, D. M., Lowe, A. C.
  2023

- **Single-cell Retrieval from Clinical Cytology Slides Under Morphologic Guidance Facilitates Future Comprehensive Genomic Profiling from Paucicellular Samples**
  Zhu, Y., Aragon, A., Wang, A., Gonzalez-pena, V., Gawad, C., Lowe, A.
  ELSEVIER SCIENCE INC.2023: S388

- **Axial and Intra-Cranial Tumors Presenting as Extra-Cranial Soft Tissue Masses in the Head and Neck: Cytologic Features of 9 Cases Diagnosed on Fine Needle Aspiration (FNA)**
  Ewais, M., Lowe, A., Reid, M., Birdsong, G., Ewaz, A.
  ELSEVIER SCIENCE INC.2023: S294

- **Fine Needle Aspiration with Rapid on-site Evaluation in Diagnosing Retroperitoneal Masses: A Clinicopathological Analysis of 63 Cases**
  Liu, Y., Lowe, A., Qian, X.
  ELSEVIER SCIENCE INC.2023: S331

- **Detecting Effusion Tumor Cells (ETCs) Under Different Storage and Processing Conditions**
  Libert, D., Zhu, Y., Wang, A., Lowe, A.
  ELSEVIER SCIENCE INC.2023: S328-S329

- **Target receptor identification and subsequent treatment of resected brain tumors with encapsulated and engineered allogeneic stem cells.** *Nature communications*
  Bhere, D., Choi, S. H., van de Donk, P., Hope, D., Gortzak, K., Kunnummal, A., Khalsa, J., Revai Lechtich, E., Reinshagen, C., Leon, V., Nissar, N., Bi, W. L., Feng, et al
  2022; 13 (1): 2810

- **Circulating tumor cell analysis in locally advanced and metastatic squamous cell carcinoma of the head and neck.** *Laryngoscope investigative otolaryngology*
  Harris, E. J., Huang, J., Carroll, E., Lowe, A. C., Chau, N. G., Rabinowits, G., Haddad, R., Hanna, G. J., Haddad, T., Sanborn, M., Kacew, A., Lorch, J.
  2020; 5 (6): 1063-1069

- **Circulating tumor cell analysis in locally advanced and metastatic squamous cell carcinoma of the head and neck** *LARYNGOSCOPE INVESTIGATIVE OTOLARYNGOLOGY*
  Harris, E. J., Huang, J., Carroll, E., Lowe, A. C., Chau, N. G., Rabinowits, G., Haddad, R., Hanna, G. J., Haddad, T., Sanborn, M., Kacew, A., Lorch, J.
  2020

- **Multiplexed fluorescence in situ hybridization-based detection of circulating tumor cells: A novel liquid-based technology to facilitate accurate and early identification of non-small cell lung cancer patients.** *Cancer cytopathology*
  Zhu, Y., Lowe, A. C.
  2020

- **A lab-on-a-disc platform enables serial monitoring of individual CTCs associated with tumor progression during EGFR-targeted therapy for patients with NSCLC.** *Theranostics*
  Lim, M., Park, J., Lowe, A. C., Jeong, H. O., Lee, S., Park, H. C., Lee, K., Kim, G. H., Kim, M. H., Cho, Y. K.
  2020; 10 (12): 5181-5194

- **A lab-on-a-disc platform enables serial monitoring of individual CTCs associated with tumor progression during EGFR-targeted therapy for patients with NSCLC** *THERANOSTICS*
  Lim, M., Park, J., Lowe, A. C., Jeong, H., Lee, S., Park, H., Lee, K., Kim, G., Kim, M., Cho, Y.
  2020; 10 (12): 5181–94

- **Use of Deep Learning to Develop and Analyze Computational Hematoxylin and Eosin Staining of Prostate Core Biopsy Images for Tumor Diagnosis.** *JAMA network open*
  Rana, A. n., Lowe, A. n., Lithgow, M. n., Horback, K. n., Janovitz, T. n., Da Silva, A. n., Tsai, H. n., Shanmugam, V. n., Bayat, A. n., Shah, P. n.
  2020; 3 (5): e205111

- **Malignancy risk for solitary and multiple nodules in Hurthle cell-predominant thyroid fine-needle aspirations: A multi-institutional study** *CANCER CYTOPATHOLOGY*
  Wong, K. S., Jo, V. Y., Lowe, A. C., Faquin, W. C., Renshaw, A. A., Shah, A. A., Roh, M. H., Stelow, E. B., Krane, J. F.
  2019

- **Integration of rare cell capture technology into cytologic evaluation of cerebrospinal fluid specimens from patients with solid tumors and suspected leptomeningeal metastasis.** *Journal of the American Society of Cytopathology*
  Torre, M., Lee, E. Q., Chukwueke, U. N., Nayak, L., Cibas, E. S., Lowe, A. C.
  2019

- **Circulating Tumor Cells: Overview and Opportunities in Cytology** *ADVANCES IN ANATOMIC PATHOLOGY*
  Sundling, K. E., Lowe, A. C.
  2019; 26 (1): 56-63

- **Molecular Testing of Nodules with a Suspicious or Malignant Cytologic Diagnosis in the Setting of Non-Invasive Follicular Thyroid Neoplasm with Papillary-Like Nuclear Features (NIFTP)** *ENDOCRINE PATHOLOGY*
  Strickland, K. C., Eszlinger, M., Paschke, R., Angell, T. E., Alexander, E. K., Marqusee, E., Nehs, M. A., Jo, V. Y., Lowe, A., Vivero, M., Hollowell, M., Qian, X., Wieczorek, et al
  2018; 29 (1): 68-74

- **Preoperative Cytologic Diagnosis of Noninvasive Follicular Thyroid Neoplasm with Papillary-Like Nuclear Features: A Prospective Analysis** *THYROID*
  Strickland, K. C., Vivero, M., Jo, V. Y., Lowe, A. C., Hollowell, M., Qian, X., Wieczorek, T. J., French, C. A., Teot, L. A., Sadow, P. M., Alexander, E. K., Cibas, E. S., Barletta, et al
  2016; 26 (10): 1466-1471

- **Translational Breast Cancer Research Consortium (TBCRC) 022: A Phase II Trial of Neratinib for Patients With Human Epidermal Growth Factor Receptor 2-Positive Breast Cancer and Brain Metastases** *JOURNAL OF CLINICAL ONCOLOGY*
  Freedman, R. A., Gelman, R. S., Wefel, J. S., Melisko, M. E., Hess, K. R., Connolly, R. M., Van Poznak, C. H., Niravath, P. A., Puhalla, S. L., Ibrahim, N., Blackwell, K. L., Moy, B., Herold, et al
  2016; 34 (9): 945-+

- **Young investigator challenge: Application of cytologic techniques to circulating tumor cell specimens: Detecting activation of the oncogenic transcription factor STAT3** *CANCER CYTOPATHOLOGY*
  Lowe, A. C., Pignon, J., Carvo, I., Drage, M. G., Constantine, N. M., Jones, N., Kroll, Y., Frank, D. A., Signoretti, S., Cibas, E. S.
  2015; 123 (12): 696-705