

University of California, San Francisco

CURRICULUM VITAE

Name: Poonam Vohra, MD

Position: HS Clinical Professor, Step 1
Pathology
School of Medicine

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EDUCATION

1990 - 1996	Govt. Medical College, Patiala, India	Bachelor of Medicine, Bachelor of Surgery (MBBS)	
1997 - 1998	Govt. Medical College, Chandigarh, India	Junior resident	Transfusion Medicine
1998 - 2001	Govt. Medical College, Patiala, India	Resident	Pathology
2001 - 2002	Postgraduate Institute of Medical Education & Research, Chandigarh, India	Post doctorate	Cytopathology (partial)
2004 - 2005	University of California San Francisco, San Francisco, CA	Research assistant	Neuropathology
2005 - 2009	University of Massachusetts Medical Center, Worcester, MA	Resident	Anatomic Pathology & Clinical Pathology
2007 - 2007	Massachusetts General Hospital, Boston, MA	Elective	Gynecological Pathology
2007 - 2007	Brigham and Women's Hospital PTH, Boston, MA	Elective	Cytopathology
2009 - 2010	University of California San Francisco, San Francisco, CA	Fellow	Cytopathology

LICENSES, CERTIFICATION

1996 Certificate of Registration, Punjab Medical Council, Punjab, India

2004	Educational Commission for Foreign Medical Graduates (ECFMG)
2009	California Physician and Surgeon Medical License (A107178)
2009	American Board of Pathology, Anatomic Pathology and Clinical Pathology
2010	American Board of Pathology, subspecialty certification in Cytopathology
2010	ThinPrep Certification, Thin prep Path TM liquid based Pap test
2010	SurePath Certification, BD Sure Path TM liquid based Pap test
2014	Certificate of Special Expertise in Ultrasound-Guided Fine Needle Aspiration, College of American Pathologists
2021	Diversity, Equity, and Inclusion Champion Training (DEI). UCSF School of Medicine and Enact Leadership

PRINCIPAL POSITIONS HELD

2004 - 2005	University of California San Francisco, San Francisco, CA	Research Assistant	Neuropathology
2007 - 2008	University of Massachusetts Medical Center, Worcester, MA	Chief Resident Clinical pathology	Pathology
2008 - 2009	University of Massachusetts Medical Center, Worcester, MA	Chief Resident Anatomic and Clinical pathology	Pathology
2011 - 2012	University of California San Francisco, San Francisco, CA	Clinical Instructor Anatomic Pathology	Pathology
2012 - 2018	University of California San Francisco, San Francisco, CA	Assistant Clinical Professor	Pathology
2016 - 2023	Zuckerberg San Francisco General Hospital, San Francisco, CA	Director of Cytopathology Division	Pathology
2016 - 2023	Zuckerberg San Francisco General Hospital, San Francisco, CA	Site Director Cytopathology Fellowship	Pathology
2018 - 2023	University of California San Francisco, San Francisco, CA	Associate Clinical Professor	Pathology
2022 - 2023	University of California San Francisco, San Francisco, CA	Associate Program Director of Cytopathology Fellowship	Pathology
2023 - present	University of California San Francisco, San Francisco, CA	Clinical Professor	Pathology

2023 - present	University of California San Francisco, San Francisco, CA	Breast Pathology Fellowship Director	Pathology
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HONORS AND AWARDS

2007	Chief Resident, Clinical Pathology	University of Massachusetts Medical Center, Worcester, MA
2008	Chief Resident, Anatomic Pathology and Clinical Pathology	University of Massachusetts Medical Center, Worcester, MA
2017	Hearts Grant Award	San Francisco General Hospital Foundation, San Francisco, CA
2022	Excellence in Teaching award	UCSF is the Haile T. Debas Academy of Medical Educators, San Francisco, CA
2022	Excellence in Diversity, Equity and Inclusion Research Award. The best scientific paper advancing DEI goals	American Society of Cytopathology.
2023	Diversity, Equity and Inclusion Faculty Leadership Award	Pathology and Laboratory Medicine DEI Committee, UCSF, CA.

KEYWORDS/AREAS OF INTEREST

Cytopathology
Paris System of Reporting Urinary Cytology
Fine Needle Aspiration Biopsy
Ultrasound Guided Fine Needle Aspiration Biopsy
Breast Pathology
Fine Needle Aspiration Biopsy (FNA) to support and provide tissue samples for research
studies
Medical Education
Mentoring
Operational issues in Cytopathology
Immunohistochemistry

CLINICAL ACTIVITIES

CLINICAL ACTIVITIES SUMMARY

In July 2023, I transitioned from Zuckerberg San Francisco General Hospital (ZSFG) to University of California San Francisco (UCSF) and took on the role of Breast Pathology Fellowship Director at UCSF. My previous positions included being the Director of Cytopathology at ZSFG from 2016 to 2023, as well as the Associate Director of the Cytopathology Fellowship at UCSF.

My main clinical areas of focus have been FNA biopsy service, general cytology, and breast surgical pathology. I'm certified by the College of American Pathologists in using ultrasound guidance for FNA biopsy and have emphasized its application at UCSF's FNA Clinic.

During my tenure as Cytopathology Director at ZSFG, I enhanced the FNA Clinic's operations and expanded services through directed outreach and e-consults. I supervised lab accredited by the Joint Commission which included monitoring cytology SOPs, workflow, and addressing day-to-day service issues. I established a state-of-the-art FNA clinic at ZSFG, overcoming challenges to improve patient care. I introduced ultrasound technology to guide FNAs, decreasing non-diagnostic FNAs and unnecessary follow-up visits. At ZSFG, I've enabled cytology telepathology (RMT) to expand FNA procedure coverage by pathology staff.

As an Associate Program Director of the Cytopathology Fellowship at UCSF, I recruited fellows for academic cytopathology practice, supervised their clinical introduction, and oversaw educational curricula.

I actively participated in ZSFG's multidisciplinary tumor boards, presented cases at breast tumor boards twice a month. I was involved in quality assurance reviews of the immunohistochemistry lab, supervised pathology residents' and medical students' cytology rotations, and structured a cytology schedule for ZSFG residents.

My contributions aim to advance diagnostic capabilities, patient care, and education in the field.

PROFESSIONAL ACTIVITIES

MEMBERSHIPS

2005 - present United States and Canadian Academy of Pathologists

2005 - present College of American Pathologists

2010 - present American Society of Clinical Pathology

2013 - present Papanicolaou Society of Cytopathology

2016 - present South Bay Pathology Society

2018 - present American Society of Cytopathology

2022 - present Papanicolaou Society of Cytopathology

SERVICE TO PROFESSIONAL ORGANIZATIONS

2018 - 2022 Case Study Committee, American Society of Cytopathology,

2020 - present The Paris System for Reporting Urinary Cytology Working Group.

2021 - present Editorial Advisory Review Board, Journal of The American Society of Cytopathology

2022 - present Social Media Committee. Papanicolaou Society of Cytopathology. Chair

2022 - present Social media board of Diagnostic Cytopathology (DiCy) Chair

2023 - present	Editorial Review Board of Cancer Cytopathology.	
2023 - present	Executive Board of Papanicolaou Society of Cytopathology.	Member at large
2023 - 2023	71st American Society of Cytopathology Annual Scientific Meeting.	Level 1 abstract reviewer
2023 - present	Special Symposium Issue for Diagnostic Cytopathology	Co-Editor
2023 - present	Invitation to contribute a review article on "Anal Cytology" by The Journal of the American Society of Cytopathology (JASC).	Author

SERVICE TO PROFESSIONAL PUBLICATIONS

2013 - present	Ad-hoc reviewer for Diagnostic Cytopathology
2014 - present	Ad-hoc reviewer for Cytojournal
2016 - present	Ad- hoc reviewer Human Pathology case reports
2019 - present	Ad-hoc reviewer for Journal of American Society of Cytopathology
2020 - present	Ad-hoc reviewer for Cancer Cytopathology
2021 - present	Ad-hoc reviewer for American Journal of Clinical Pathology (AJCP)

INVITED PRESENTATIONS - INTERNATIONAL

2002	Clinico histopathological correlation of vesiculobullous lesions. 51st Annual Conference of Indian Association of Pathologists & Microbiologists. Kolkata, India	Platform presentation
2007	RNA-binding protein IMP3 expression in neoplasms of the Schneiderian and squamous mucosa of the head and neck. United States and Canadian Academy of Pathology 96th Annual Meeting. San Diego, CA	Platform presentation
2007	p16 protein expression in neoplasms of the Schneiderian and squamous mucosa of the head and neck. States and Canadian Academy of Pathology 96th Annual Meeting. San Diego. CA	Poster presentation
2012	Challenges in fine needle aspiration of superficial soft tissue lesions. Indo US International CME in surgical pathology, cytology and hematology. Department of Pathology, Himalayan Institute of Medical Sciences in collaboration with Association of Indian Pathologists in North America (AIPNA) & Indian college of Pathologist (ICP). Uttaranchal, India	Invited speaker
2012	Challenges in fine needle aspiration of superficial soft tissue lesions. Department of Pathology, Govt. Medical College Patiala. Punjab, India (Invited)	Invited speaker

2012	Diagnostic challenges and pitfalls in FNAC of Salivary gland tumors. Annual Conference of Indian Academy of Cytologists, Cytocon. Bhubaneswar, India	Invited speaker
2013	Comparison of ER, PR and HER2 expression between breast carcinoma fine needle aspiration samples and corresponding surgical pathology specimens - a large retrospective study. United States and Canadian Academy of Pathology 102nd Annual meeting. Baltimore, MD	Poster presentation
2014	Cervical cytology. 19th AIPNA-ICP International CME 2014, Department of Histopathology, PGIMER. Chandigarh, India	Invited speaker
2014	Correlation between Fine Needle Aspiration Biopsies (FNA) and Surgical Specimens in the Diagnosis of Fibroepithelial Lesions of the Breast- A Large Retrospective Study. United States and Canadian academy of Pathology 103rd Annual Meeting, San Diego, CA, 2014.	Poster presentation
2015	Mucosal Proliferations in Completely Dissected Fallopian Tubes in a Blinded Study of Ovarian Serous Cystadenoma, Borderline Tumor and Low Grade Serous Carcinoma: Does a Precursor Tubal Lesion Exist?" United States and Canadian academy of Pathology 104th Annual meeting. Boston, MA	Co-Author
2016	Ultrasound FNA Biopsy Workshop. American Society of Cytopathology 64th Annual Scientific Meeting. New Orleans, LA.	Lead presenter
2017	A Paris System-Like Approach and Cell Block Utilization in Urine Cytology. United States and Canadian academy of Pathology 106th Annual meeting. San Antonio, TX.	Senior Author
2017	Breast Fine needle aspiration biopsy with a focus on papillary lesions. Virtual Slide Seminar. American Society of Cytopathology, 65th Annual Scientific Meeting. Phoenix, AZ	Invited speaker
2017	Ultrasound FNA Biopsy Workshop. American Society of Cytopathology 65th Annual Scientific Meeting. Phoenix, AZ	Lead presenter
2017	Rapid On-Site Evaluation; Live in Action!. Video Microscopy. American Society of Cytopathology. 65th Annual Scientific Meeting. Phoenix, AZ	Invited speaker
2017	Anal Cytology. American Society of Cytopathology Meeting, 65th Annual Scientific Meeting. Phoenix, AZ	Invited speaker

2018	Quantification and Viability Assessment of Cytopathologist- Performed Ultrasound-Guided Fine Needle Aspiration Biopsy (USFNA) of Nonpalpable Inguinal Lymph Nodes (LNs) in HIV-infected Adults. United States and Canadian Academy of Pathology 107th annual meeting. Vancouver BC.	Senior Author
2018	Clinical and Pathologic Features of Invasive Breast Cancers with OncotypeDx Recurrence Score Less Than 11. United States and Canadian Academy of Pathology 107th annual meeting. Vancouver BC.	Lead presenter
2018	Rapid On-Site Evaluation; Live in Action! Video Microscopy. American Society of Cytopathology 66th Annual Scientific Meeting. Washington DC	Invited speaker
2018	Ultrasound FNA Biopsy Workshop. American Society of Cytopathology 66th Annual Scientific Meeting, Washington DC	Lead presenter
2018	Anal Cytology. American Society of Cytopathology 66th Annual Scientific Meeting. Washington DC	Invited Speaker
2018	Fine Needle Aspiration Biopsy of Primary Pulmonary Adenocarcinoma Yields Higher Percentage of Tumor Cells for Molecular Studies: A 5-year Comparison Study to Needle Core Biopsy Sampling. American Society of Cytopathology 66th Annual Scientific Meeting. Washington DC.	Senior Author
2018	Ultrasound-guided Fine Needle Aspiration Biopsy (USFNB) is an Effective Method to Measure HIV Reservoirs in Lymph Nodes., American Society of Cytopathology 66th Annual Scientific Meeting, Washington DC	Senior Author
2019	Genomic Profiling of Basaloid Breast Carcinomas Reveals Recurrent Alterations in CREBBP and Distinct Genetics from Other Triple Negative Breast Cancers. United States and Canadian Academy of Pathology 108th annual meeting. Vancouver BC	Platform presentation. Co-Author
2019	Evaluation of Cytologic-Histologic Discordance Rates in Anal Dysplasia and Cancer Screening. United States and Canadian Academy of Pathology 108th Annual meeting. Baltimore, Maryland	Poster presentation
2019	Ultrasound FNA Biopsy Workshop. 20th International Congress of Cytology, Sydney, Australia	Invited presenter

2019	Ultrasound FNA Biopsy Workshop. American Society of Cytopathology 67th Annual Scientific Meeting. Salt Lake City, Utah	Lead presenter
2019	Truong K, Ng D, Ung R, Vohra P. Evaluating Hidden Biases in Clinical Cytopathology Practice. American Society of Cytopathology 67th Annual Scientific Meeting. Salt Lake City, UT	Poster presentation
2019	Margin detection mini-symposium. 5th World Congress on controversies in Breast Cancer. San Francisco, CA	Invited speaker
2020	Fine Needle Aspiration and Core Needle Biopsy Have Similar Diagnostic Performance for Fibroepithelial Lesions of Breast. United States and Canadian Academy of Pathology 109th Annual meeting. Los Angeles, CA	Poster presenter
2020	Chondroid Matrix-Producing Metaplastic Carcinomas of the Breast are Genetically Distinct from Mixed Metaplastic Carcinomas with Chondroid Differentiation. United States and Canadian Academy of Pathology 109th Annual meeting. Los Angeles, CA	Platform presentation, Co-Author
2020	Breast Hidradenoma and Breast Mucoepidermoid Carcinoma Share Pathologic Features and Molecular Alteration. The American Society of Dermatopathology, 57th Virtual Annual Meeting.	Platform presentation Co-Author
2021	Upper Urinary Tract Cytology Performance Before and After the Implementation of the Paris System for Reporting Urinary Cytology (TPS). United States; Canadian Academy of Pathology's 110th Virtual Annual Meeting.	Poster presentation
2021	Anal Cytology. American Society of Cytopathology 66th Annual Scientific Meeting. Video Microscopy Session (VMT) ASC's 69th Annual Scientific Meeting, Nevada.	Invited speaker
2021	Selective Urine Cytology Specimens: A Case-Based Discussion with a Urologist's Perspective. Short Course. ASC's 69th Annual Scientific Meeting, Nevada	Invited speaker
2021	Ultrasound Fine Needle Aspiration Workshop. ASC's 69th Annual Scientific Meeting, Nevada.	Invited presenter
2021	Spectacular Cell Blocks: The Pull Back Technique for Producing Core Biopsy Equivalent FNA Cell Blocks ASC's 69th Annual Scientific Meeting, Nevada	Poster
2022	Prostate cancer in patients on gender affirming hormonal therapy: highlighting diagnostic issues in an underserved patient population. United States and Canadian academy of Pathology 111th Annual meeting. Los Angeles CA.	Poster

2022	Anal Cytology. 21st International Congress of Cytology presented jointly with ASC's 70th Annual Scientific Meeting, Baltimore.	Invited speaker VMT
2022	Selective Urine Cytology Specimens: A Case-Based Discussion with a Urologist's Perspective. 21st International Congress of Cytology presented jointly with ASC's 70th Annual Scientific Meeting, Baltimore.	Invited speaker VMT
2022	Resolving Problematic Cases of Serous Fluid Cytopathology by Applying The International System (TIS). 21st International Congress of Cytology presented jointly with ASC's 70th Annual Scientific Meeting, Baltimore.	Invited speaker symposium
2022	Performance of Transformation Zone and Nucleated Squamous Cell Component in Anal Cancer Screening in Correlation with Histologic Follow-up: An Institutional Experience. 21st International Congress of Cytology presented jointly with ASC's 70th Annual Scientific Meeting, Baltimore.	Poster presentation
2022	Ultrasound Fine Needle Aspiration Workshop. 21st International Congress of Cytology presented jointly with ASC's 70th Annual Scientific Meeting, Baltimore.	Invited presenter
2022	Urine Cytology in Patients with Gender Confirmation Surgery and Hormone Therapy: Highlighting the Performance of Urine Cytology in an Underserved Patient Population. 21st International Congress of Cytology presented jointly with ASC's 70th Annual Scientific Meeting, Baltimore.	Platform presentation
2022	Utility and Performance of Cell Blocks in Urine Cytology: Experience at Three Teaching Hospitals. 21st International Congress of Cytology presented jointly with ASC's 70th Annual Scientific Meeting, Baltimore.	Platform presentation
2023	Genetic and Immunohistochemical Characterization of Mammary Hidradenoma and Comparison to Mucoepidermoid Carcinoma. United States and Canadian Academy of Pathology 112th Annual meeting. New Orleans, LA.	Platform presentation
2023	Pitfalls of Keratin and P63 Expression and Utility of Targeted DNA Sequencing and HMGA2 in Malignant Phyllodes Tumors of the Breast. United States and Canadian Academy of Pathology 112th Annual meeting. New Orleans, LA.	Platform presentation

2023	Utility of The Paris System in Patients with HPV-Positive Urethral and Urothelial Tract Carcinoma. United States and Canadian Academy of Pathology 112th Annual meeting. New Orleans, LA.	Poster presentation
2023	High-Grade Urothelial Carcinoma with Squamous Features May Not Show Typical HGUC Findings by The Paris System Criteria. United States and Canadian Academy of Pathology 112th Annual meeting. New Orleans, LA.	Poster presentation
2023	Age and Race-Based Differences in Anal Cytology: Implications for Screening and Prevention of Anal Cancer Disparities: A Single Institutional Study. American Society of Cytopathology, 71st Annual Scientific Meeting. Austin TX.	Poster Presentation
2023	American Society of Cytopathology Survey on Pathologist Performed Ultrasound Guided Fine Needle Aspiration. American Society of Cytopathology, 71st Annual Scientific Meeting. Austin TX.	Poster Presentation
2023	CSF Cell Block Cytology: Utility and Performance at two Academic Medical Centers. American Society of Cytopathology, 71st Annual Scientific Meeting. Austin TX.	Poster Presentation
2023	Fungal Infection of Lymph Nodes Diagnosed by Fine Needle Aspiration Biopsy: Utility of Cytomorphology, Culture, and Molecular Testing. American Society of Cytopathology, 71st Annual Scientific Meeting. Austin TX.	Poster Presentation
2023	Implementation of ThyroSeq v3 Molecular Testing for Underserved Patients with Indeterminate Thyroid Nodules. American Society of Cytopathology, 71st Annual Scientific Meeting. Austin TX.	Poster Presentation
2023	Non-epithelial Lesions Mimicking Epithelial Neoplasms: Diagnostic Pitfalls and Role of Ancillary Studies. Papanicolaou Society of Cytopathology Companion Session. ASC 71st Annual Scientific Meeting. Austin TX.	Invited speaker
2023	Selective Urine Cytology Specimens: A Case-Based Discussion with a Urologist's Perspective. Short course. American Society of Cytopathology, 71st Annual Scientific Meeting. Austin TX	Invited speaker
2023	Interventional Cytology: The Present Status and Future Direction of Ultrasound Guided Fine Needle Aspiration Biopsy Practice. Panel discussion seminar. American Society of Cytopathology, 71st Annual Scientific Meeting. Austin TX.	Invited speaker

2023	Ultrasound Fine Needle Aspiration Biopsy Workshop. American Society of Cytopathology, 71st Annual Scientific Meeting. Austin TX	Invited speaker
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INVITED PRESENTATIONS - NATIONAL

2006	KOC (K-Homology-Domain-Containing-Protein Over-expressed in Cancer. Annual Meeting of the American Thyroid Association (ATA). Phoenix, Arizona	Poster presentation
2006	Vascular Endothelial Growth Factors (VEGF-D) In Papillary and Follicular Thyroid Tumors. Annual Meeting of the American Thyroid Association. Phoenix Arizona .	Lead presenter
2013	Diagnosis of Rare and Sometime-Not-So-Rare Superficial Soft Tissue Tumors on FNAB . Annual UCSF Current Issues, Cytology Seminar. San Francisco, CA	Invited speaker
2014	17th Annual UCSF Current Issues, Cytology Seminar. Atypical glandular cells" Cervical cytology	Invited speaker
2015	18th Annual UCSF Current Issues, Cytology Seminar. Anal cytology.	Invited speaker
2016	CA Society of Pathologists (CSP) 69th Annual Meeting, San Francisco Nov 30th. The Paris system for reporting urinary cytology.	Invited speaker
2017	Paris system for reporting urinary cytology. 19th Annual UCSF Current Issues, Cytology Seminar. San Francisco, CA	Invited speaker
2018	Cervical Cytology. Annual 20th UCSF Current Issues, Cytology Seminar, San Francisco, CA	Invited speaker
2018	Anal cytology. Society for Cytotechnology (ASCT) Educational Webinar	Invited speaker
2018	Primary Effusion Lymphoma: Expanding Our Differential Diagnosis for SBP. SGIM national conference. Chicago, IL	Poster presentation
2019	Myoepithelial lesions of the Breast. Annual 21st Current Issues in Anatomic Pathology and Cytology, UCSF. San Francisco, CA	Invited speaker
2019	The Paris system for reporting urinary cytology. California Society of Pathologists (CSP) Annual Meeting. San Francisco, CA	Invited speaker
2019	Case presentation and Kidney FNA. California Society of Pathologists (CSP) Annual Meeting. San Francisco, CA	

2021	American Society of Cytopathology (ASC), Educational Webinar Series. A Trip Around the Block: A Look into Cell Block Preparations at Three Different Institutions.	Invited speaker
2021	American Society of Cytopathology (ASC), Educational Webinar Series. How to submit a Case Study.	Invited speaker
2022	Paris System for reporting urinary cytology TPS 2.0. Annual Current Issues in Anatomic Pathology, Cytology Seminar, San Francisco, CA.	Invited speaker

INVITED PRESENTATIONS - REGIONAL AND OTHER INVITED PRESENTATIONS

2011	Diffuse large B cell lymphoma vs. Burkitt's lymphoma. Medical Grand Rounds HIV/AIDS, Zuckerberg San Francisco General Hospital. San Francisco, CA	Invited speaker
2011	Practical and pertinent issues in cytology (IR guided FNA specimens), Department of Radiology IR staff conference. Zuckerberg San Francisco General Hospital . San Francisco, CA	Invited speaker
2017	EBV associated smooth muscle tumor. South Bay Pathology Society meeting. Palo Alto, CA	Presenter
2017	Medical Grand Rounds HIV/AIDS. EBV associated smooth muscle tumor in liver at Zuckerberg San Francisco General Hospital.	Invited Speaker
2018	Clear cell variant of follicular carcinoma thyroid metastatic to bone South Bay Pathology Society meeting. Palo Alto, CA	Presenter
2018	Clinical Vignette for the Primary Effusion Lymphoma: Expanding Our Differential Diagnosis for SBP. Society of General Internal Medicine Regional Conference.	Poster presentation
2019	Head and Neck Cytology resident slide session review, Stanford University. Stanford. Palo Alto, CA	Invited presentation
2019	The impact of The Paris System for reporting urinary cytology. Stanford University. Stanford. Palo Alto, CA	Invited speaker
2023	Dos and Don'ts of Social Media in Pathology. Pathology and Laboratory Medicine, University of Pennsylvania (UPenn).	Invited speaker
2023	"Job Search Virtual Talk" for surgical pathology fellowship program at University of Pennsylvania (UPENN) Pathology and Lab Medicine department.	Invited panelist

CONTINUING EDUCATION AND PROFESSIONAL DEVELOPMENT ACTIVITIES

2000	Indo-US Symposium and Slide Seminar, Endocrine Surgical Pathology. Lucknow, India
2010	13th Annual UCSF Current issues in Anatomic Pathology. San Francisco, CA
2011	United States and Canadian Academy of Pathology Annual Meeting. San Antonio, TX
2011	CAP inter laboratory performance improvement program in surgical pathology PIP-D
2011	CAP inter laboratory performance improvement program in cytopathology PIP-D
2011	UCSF Department of Pathology Mechanisms of Disease lecture series. San Francisco, CA
2011	14th Annual UCSF Current issues in Anatomic Pathology. San Francisco, CA
2012	UCSF Department of Pathology Mechanisms of Disease lecture series. San Francisco, CA
2012	15th Annual UCSF Current issues in Anatomic Pathology. San Francisco, CA
2013	United States and Canadian Academy of Pathology Annual Meeting. Baltimore, MD
2013	16th Annual UCSF Current issues in Anatomic Pathology. San Francisco, CA
2014	CAP USFNA certification workshop. Chicago, IL
2014	United States and Canadian Academy of Pathology Annual Meeting. San Diego, CA
2014	17th Annual UCSF Current Issues in Anatomic Pathology. San Francisco, CA
2015	18th Annual UCSF Current Issues in Anatomic Pathology. San Francisco, CA
2016	American Society of Cytopathology. 64th annual scientific meeting. New Orleans, LA
2016	United States and Canadian Academy of Pathology Annual Meeting. Seattle, WA
2017	Improving patient experience through communication organized by University of Arkansas for Medical sciences. San Francisco, CA
2017	American Society of Cytopathology. 65th annual scientific meeting. Phoenix, AZ
2017	United States and Canadian Academy of Pathology Annual Meeting, San Antonio TX
2017	Annual UCSF Current Issues in Anatomic Pathology, San Francisco, CA
2018	Annual UCSF Current Issues in Anatomic Pathology, San Francisco, CA

2018	American Society of Cytopathology. 66th annual scientific meeting. Washington DC
2018	United States and Canadian Academy of Pathology Annual Meeting. Vancouver BC
2019	South Bay Pathology Society Meeting. Palo Alto, CA
2019	United States and Canadian Academy of Pathology Annual Meeting. Baltimore, MD
2019	Annual UCSF Current Issues in Anatomic Pathology, San Francisco, CA
2019	American Society of Cytopathology. 65th annual scientific meeting. Salt Lake City, Utah
2019	20th International Congress of Cytology. Sydney, Australia
2020	United States and Canadian Academy of Pathology Annual Meeting. Los Angeles, CA
2020	South Bay Pathology Society meeting. Virtual.
2021	American Society of Cytopathology. 69th annual scientific meeting. Las Vegas, Nevada
2021	CAP inter laboratory performance improvement program in surgical pathology PIP-D
2021	CAP inter laboratory performance improvement program in cytopathology PIP-D
2022	Annual UCSF Current Issues in Anatomic Pathology, San Francisco, CA. Virtual.
2022	CAP inter laboratory performance improvement program in surgical pathology PIP-D
2022	Annual UCSF Current Issues in Anatomic Pathology. San Francisco CA. Virtual
2022	CAP inter laboratory performance improvement program in cytopathology PIP-D
2022	American Society of Cytopathology. 21st International Congress of Cytology presented jointly with ASC's 70th Annual Scientific Meeting, Baltimore.
2023	United States and Canadian Academy of Pathology 112th Annual meeting. New Orleans, LA.

UNIVERSITY AND PUBLIC SERVICE

SERVICE ACTIVITIES SUMMARY

Since 2013, I've held a role as a committee member on the Cytopathology Fellowship Clinical Competence Committee (CCC) at UCSF, focusing on evaluating the clinical competence of cytopathology fellows.

Starting in 2021, my contributions extended to the Pathology Compensation Committee, where I assist in formulating and reviewing compensation strategies aligned with the institution's goals.

Additionally, I am a member of the Pathology Strategic Initiatives Committee, focusing on global health, and have aided in developing plans to expand the department's international clinical service, teaching, and research missions.

In 2020, I joined the Anatomic Pathology resident (UCSF) Clinical Competency Committee (CCC) for a year to ensure clinical competence among residents.

In 2019, I co-chaired the search committee for pathology faculty with 2 successful faculty recruits. I have also served as a member for multiple search committees in the department of Pathology

From 2012 to 2023, I've actively participated in monthly performance improvement patient safety (PIPS) meetings in the ZSFG pathology department, ensuring the quality assurance of pathology services. Between 2014 and 2023, I served as a committee member on the Cancer Committee at ZSFG, contributing to cancer-related initiatives. During this period, I presented projects at Zuckerberg San Francisco General Hospital for the Commission on Cancer (CoC) Quality program, highlighting the examination of lymph nodes in resected gastric and non-small cell lung cancers according to specific AJCC stages. Annually, I reported the pathology department's compliance with College of American Pathologists Protocols and Synoptic reporting standards (Std.5.1 and Std 5.7).

UCSF CAMPUSWIDE

2013 - present	Cytopathology Fellowship Clinical Competence Committee (CCC). University of California San Francisco. San Francisco, CA	Committee member
2014 - 2023	Cancer Committee, Zuckerberg San Francisco General Hospital. San Francisco, CA	Committee member
2014 - 2023	Commission on Cancer (CoC) Quality program project on at least 15 lymph nodes removed and pathologically examined in resected gastric cancers. Zuckerberg San Francisco General Hospital. San Francisco, CA	Presenter
2014 - 2023	Commission on Cancer (CoC) Quality program project on at least 10 lymph nodes removed and pathologically examined in AJCC stage IA, IB, IIA and IIB resected non-small cell lung cancers. Zuckerberg San Francisco General Hospital. San Francisco, CA	Presenter
2019 - present	Global Cancer Program. University of California San Francisco. San Francisco, CA	Member
2020 - present	Anatomic Pathology resident (UCSF) Clinical Competency Committee (CCC). University of California San Francisco. San Francisco, CA	Member

2021 - present	Pathology Compensation Committee, University of California San Francisco. San Francisco, CA	Member
2021 - present	Pathology Strategic Initiatives Committee □ Global Health □, University of California San Francisco. San Francisco, CA	Member

SCHOOL OF MEDICINE

2007 - 2009	Graduate Medical Education Council, UMASS	Resident representative
2017 - 2017	Faculty Search Committee (JPF01092), UCSF Pathology.	Committee member
2017 - 2017	Faculty Search Committee (JPF01177), UCSF Pathology.	Committee member
2018 - 2018	Faculty Search Committee (JPF01806), UCSF Pathology	Committee member
2019 - 2019	Faculty Search Committee (JPF02538), UCSF Pathology	Co-Chair
2022 - 2022	Faculty Search Committee (JPF03662), UCSF Pathology	Committee member
2023 - 2023	Anatomic Pathology Program Director, UCSF Pathology	Committee member
2023 - 2023	Anatomic Pathology Vice chair of Education, UCSF Pathology	Committee member
2023 - present	Faculty Search Committee (JPF04697) UCSF Pathology.	Committee member

DEPARTMENTAL SERVICE

2009 - present	Multidisciplinary Gynecology Tumor Board, ZSFG Hospital. San Francisco	Review and present cases.
2011 - present	Performance Improvement Patient Safety (PIPS) meetings, ZSFG Hospital. San Francisco, CA	Member
2011 - present	Multidisciplinary Surgical Tumor Board, ZSFG Hospital. San Francisco, CA	Review and present cases.
2013 - present	Multidisciplinary Breast Interdisciplinary Tumor Board, ZSFG Hospital. San Francisco, CA	Review and present cases.
2016 - present	Director Cytopathology, ZSFG Hospital. San Francisco, CA	Director
2016 - present	Associate Program Director, Cytopathology Fellowship, UCSF, San Francisco, CA	Associate Program director
2016 - present	Pathology Consensus Conference twice weekly, ZSFG Hospital. San Francisco, CA	Present cases

COMMUNITY AND PUBLIC SERVICE

2019 - present	Partners in Cancer Diagnosis and Treatment in Africa Coalition. American Society of Clinical Pathology (ASCP). African telepathology initiative.	Consultant
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CONTRIBUTIONS TO DIVERSITY

CONTRIBUTIONS TO DIVERSITY Contributions to Diversity, Equity & Inclusion Guidance

As an Indian immigrant and a woman of color in academia, I am acutely aware of the hurdles ethnic minorities encounter while advancing in their careers. From my beginnings as a foreign medical graduate during residency to my current position as a faculty member mentoring trainee, I have consistently championed diversity and inclusion.

In 2023, I was honored to receive the esteemed 2023 UCSF Pathology DEI Leadership Award for faculty, acknowledging my accomplishments that underscored my commitment and dedication to fostering diversity, inclusion, and equity.

Since my fellowship days, my commitment to diversity has persisted, especially during my tenure at ZSFG since 2011 -2023. Operating within a community hospital, we serve a wide range of diverse and underrepresented groups encompassing various religions, genders, sexual orientations, economic backgrounds, and recent immigrants. As the cytology director at ZSFG, my primary focus was to foster a workplace that mirrors our diverse community. My cytology team administered direct patient care in a specialized walk-in fine needle aspiration (FNA) clinic, prioritizing equitable access to cytopathology for the diverse population at ZSFG.

I lead the DEI project titled "Urine Cytology in Patients with Gender Confirmation Surgery and Hormone Therapy," which earned the "Excellence in Diversity, Equity and Inclusion Research Award" from the American Society of Cytopathology. The project was presented at the IAC-ASC joint meeting and subsequently published in the Journal of the American Society of Cytopathology in 2023.

I am also a member of UCSF Cancer Global Program and serve as a mentor to a MMED Scholar in the Cancer Research Training Program in Tanzania (CRTP-TZ). We are currently working on a project titled □Correlation between HER2 overexpression and clinicopathological features of bladder carcinoma at Muhimbili National Hospital, Tanzania. Since January 2019, I have volunteered to review consult cases from Tanzania and being a part of □Partners in Cancer Diagnosis and Treatment in Africa Coalition□, which is an American Society of Clinical Pathologists for Africa telepathology initiative.

In this same manner, I co-authored a study titled Prostate Cancer in Patients Receiving Gender Affirming Hormonal Therapy: Highlighting Diagnostic Issues In An Underserved Patient Population which was published in American Journal of Surgical Pathology in 2022.

I both teach the improvement process and engage cytology fellows in quality improvement projects that have a direct bearing on equitable care. These projects outlined below had direct and immediate bearing on equitable care for patients at ZSFG and served as a model for staff and faculty for developing programs which are centered by DEI.

2019-2020: □Local Anesthesia (LA) Administration: Improvements in Clinical Cytopathology Practice□. This project addressed documented discrepancies in patients receiving lidocaine administration for FNA biopsy. The aim of the project was to mitigate the impacts of any potential unconscious/implicit bias on the decision of whether to use lidocaine prior to FNA biopsy. With various measures addressing lidocaine availability, as well as educating cytopathology staff to ensure awareness of the potential impacts of unconscious/implicit bias

on their decision to administer lidocaine, significant improvements were made. The goal of administering lidocaine to 95% of patients across all races and genders was met in 2019. This initiative fundamentally changed the culture for the FNA service and exemplifies the UCSF commitment to Differences Matter for the patient experience and quality of care.

2020-2022: I served as faculty supervisor for cytopathology fellows who designed and implemented patient satisfaction surveys post-FNA procedure. This project provided a mechanism for creating inclusion for the diverse patient population served by the FNA clinic.

2022-2023: I served as the faculty supervisor for the cytology fellow who developed a workflow for molecular testing of indeterminate thyroid nodules diagnosed by FNA at ZSFG. Previously, molecular testing was not available for these patients, which was not concordant with American Thyroid Association guidelines and represented inequities for patient care across the UCSF system. Through this project, access to thyroid molecular testing was increased by 86%, thereby reducing disparities for ZSFG patients with indeterminate thyroid nodules.

I completed a workshop □Improving patient experience through communication□ organized by University of Arkansas for Medical Sciences in October 2017. This was designed to support and encourage an inclusive environment for healthcare delivery and enhance communication skills.

I also completed Diversity, Equity, and Inclusion (DEI) Champion Training at UCSF on Feb 2021.

TEACHING AND MENTORING

TEACHING SUMMARY

Throughout my tenure at UCSF, I contributed extensively to teaching in various capacities. In recognition of these efforts, I was honored to receive the "The Haile T. Debas Academy of Medical Educators, Excellence in Teaching Award for 2022" from UCSF in August 2022 for outstanding teaching during the academic year 2021-2022.

(1) In my capacity as an attending pathologist, I engaged in one-on-one microscope-based teaching for pathology residents and cytopathology fellows. My teaching extended to reviewing gross specimens and microscopic slides of clinical cases during routine clinical sign-outs. Additionally, I instructed residents and fellows in performing FNA biopsies, as well as preparing and interpreting various cytology samples. To facilitate FNA biopsy training, I established a weekly workshop where residents and medical students had the opportunity to practice palpation and ultrasound-guided FNA biopsy techniques on a phantom mold. This ensured residents gained proficiency before conducting their first patient FNAs.

(2) In my new role as Breast Fellowship Director, I am responsible for overseeing and developing breast fellowship curriculum for fellows. This responsibility involves shaping the educational framework, designing comprehensive learning experiences, and ensuring the program aligns with the highest standards in breast pathology training. In this capacity, I work closely with fellows to provide mentorship, facilitate their exposure to diverse aspects of breast pathology, and foster a collaborative and enriching learning environment.

(3) As the Director of the Cytopathology Service and Associate Program Director for the ACGME accredited UCSF Cytopathology Fellowship (until 2023), I actively participated in

shaping and implementing the cytopathology curriculum for residents and fellows. Moreover, I facilitated ongoing education for cytotechnologists at ZSFG. In 2015, I introduced a novel cytology schedule to meet a new ACGME requirement for residents at ZSFG.

In 2017, I launched didactic lectures and case conferences to provide residents and fellows with insights into diagnostic decision-making in cytology. Utilizing multiple-choice questions, I gauged lecture effectiveness and reinforced key learning points. These lectures served to prepare trainees for AP/CP and Cytology boards, and they have consistently been a highlight of resident exit interviews.

(3) Serving as the faculty supervisor for medical student rotations at ZSFG until 2023, I led a pivotal component of the Pathology 150.03 elective for MS3s and MS4s. I directly interacted with students, ensuring their comprehensive exposure to cytology and surgical pathology services for a well-rounded UCSF experience. Our medical student cytology curriculum encompassed FNA rounds, cytology teaching, unknown cases sessions twice a week, and daily microscopic sign-outs. During this period, students also familiarized themselves with cytology preparation techniques in the laboratory. I was actively involved in the "Ultrasound-guided FNA skills session for medical students" and conducted a remote Medical Student Senior Virtual Pathology elective course on "Cervical and Anal Cytology" as part of Pathology 150.03.

(4) As a member of UCSF Cancer Global Program I serve as a mentor to a MMED Scholar in the Cancer Research Training Program in Tanzania (CRTP-TZ). We are currently working on a project titled □Correlation between HER2 overexpression and clinicopathological features of bladder carcinoma at Muhimbili National Hospital, Tanzania□.

On an international scale, I led a workshop for the American Society of Cytopathology on FNA biopsy with ultrasound guidance, a role I have consistently fulfilled since 2016. I have also delivered well-received educational lectures and microscopic tutorials in cytology at regional, national, and international conferences, including the UCSF Current Issues, American Society of Cytopathology Annual Meeting, California Society of Pathology conferences, and American Society for Cytotechnology webinars.

FORMAL TEACHING

	Academic Yr	Course No. & Title	Teaching Contribution	School	Class Size
	2005 - 2009	Tissue Histology Lab Series for medical students, University of Massachusetts Medical Center. Worcester, MA	Lab Instructor / Teaching assistant	Medicine	~60-70
	2011 - 2016	Unknown cytology case conference, ZSFG Hospital. San Francisco, CA	1 conference/month	Medicine	3-4

	Academic Yr	Course No. & Title	Teaching Contribution	School	Class Size
	2016 - present	Didactic cytology lectures geared towards cytopathology boards, ZSFG Hospital. San Francisco, CA	1-2 lectures/month	Medicine	4-5
	2019 - 2019	Ultrasound guided FNA Skills Session at The Pathology Student Interest Group at UCSF. San Francisco, CA	Instructor	Medicine	15-20
	2020 - 2020	Medical Student Senior Virtual Pathology elective course number Path 150.03. "Cervical and Anal Cytology).	Presenter	Medicine	20-25
	2020 - 2020	Clinical Pathology Core Lecture "Introduction to Fluid Cytology". Virtual RTC	Presenter	Medicine	15-20
	2021 - 2021	Clinical Pathology Core Lecture "Cervical Cytology, Board Review". Virtual RTC	Presenter	Medicine	15-20

INFORMAL TEACHING

- 2007 - 2009 As a Chief Resident: Special Gross Conferences: I reviewed interesting and classic gross presentations of disease entities (monthly presentation) .Unknown Conferences: I presented challenging unknown cases of the week, a conference geared towards teaching residents an organized approach to diagnosis (Bi-weekly presentation)
- 2009 - 2010 As A Cytology Fellow: I presented tutorials for medical students (monthly at Moffitt Hospital). I reviewed the sides and presented at the Tumor board conference (monthly at SFGH). I also presented thyroid cytology interdepartmental conference (monthly at SFGH).

- 2011 - 2012 As a Clinical Instructor: Cytology unknown slide conferences (weekly at SFGH) Interesting cases in cytology conferences (weekly at SFGH). Monthly cytotechnologist conference (at SFGH). Daily teaching during sign out sessions with fellows and residents rotating on surgical pathology and cytopathology services. Informal teaching and supervision of pathology residents/fellow performing and interpreting FNA biopsies .
- 2012 - 2018 As an Assistant Clinical Professor: Responsible for daily teaching during sign-out sessions with fellows and residents rotating on surgical pathology and cytopathology services including teaching in FNA workshop developed for training of FNA technique and smear making for residents and medical students. Responsible for teaching and supervision of medical student elective rotation in pathology geared towards UCSF and visiting students interested in pursuing residency in anatomic pathology and laboratory medicine one week in a month in cytology at ZSFG.
- 2012 - 2023 Twice a month breast interdepartmental conference in collaboration with the department of Radiology, Oncology and Surgery faculty, fellows, and residents.
- 2018 - 2023 As an Associate Clinical Professor: Responsible for daily teaching during sign-out sessions with fellows and residents rotating on surgical pathology and cytopathology services including teaching in FNA workshop developed for training of FNA technique and smear making for residents and medical students. Teaching and supervision of medical student elective rotation in pathology geared towards UCSF and visiting students interested in pursuing residency in anatomic pathology and laboratory medicine one week in a month in cytology at ZSFG.
- 2023 - present As a Clinical Professor: Responsible for training and supervising residents and fellows on the cytology service and breast pathology service.

MENTORING SUMMARY

In my new role as Breast Fellowship Director at UCSF, I will serve as the faculty advisor to breast pathology fellows and will train them to excel in diagnostic accuracy, therapeutic decision-making, and multidisciplinary collaboration in breast pathology.

As the director of the Cytopathology fellowship program (2016-2023), I served as the faculty advisor for both residents and cytopathology fellows, as they spend about 50% of their rotation time at the ZSFG campus. I specifically trained the fellows on FNA sampling technique and supervise their work in the clinic with patients on a daily basis. I mentored the fellows in creative activities such as A3/LEAN Management Fellow Incentive Program and IHC validation projects and strongly encouraged every fellow to perform a project aiming at peer-reviewed publication during the fellowship year. I mentored cytology fellows in research and scholarly projects and quality improvement A3 projects.

As others have mentored me in the past (and continue to do so), I informally mentored residents and younger faculty members and advise them on various academic activities, promotion requirements, and career decisions. Several trainees have progressed on to faculty positions; some are continuing their training, and some are in private practice.

I have mentored fellows to teach medical students in special skills sessions: in December 2020, both the cytopathology fellows participated in the ultrasound-guided FNA skills session hosted by our Pathology Student Interest Group in the Kanbar Simulation Center at Parnassus. In addition, I invited one of our fellows to give a teaching session to medical students in the remote version of our senior Pathology elective, course code Path 150.03. This session in April 2020 was one of the earliest examples of Zoom-based remote teaching for our students as we adapted to a new workflow due to COVID precautions.

I serve as a mentor to a MMED Scholar in the Cancer Research Training Program in Tanzania (CRTP-TZ). We are working on a project titled "Correlation between HER2 overexpression and clinicopathological features of bladder carcinoma at Muhimbili National Hospital, Tanzania.

POSTDOCTORAL FELLOWS AND RESIDENTS MENTORED

Dates	Name	Fellow	Mentor Role	Faculty Role	Current Position
2011 - 2011	Maria Serrano Correa	Cytopathology	Co-Mentor/Clinical Mentor	Directly supervised	Staff pathologist at Kaiser, San Francisco, CA
2011 - 2011	Rena Yu	Cytopathology	Co-Mentor/Clinical Mentor	Directly supervised	Staff pathologist Sutter Medical Network, Sacramento, CA
2011 - 2012	Khaing Soe Win	Cytopathology	Co-Mentor/Clinical Mentor	Directly supervised	Staff pathologist ValleyCare Medical Center, Pleasanton, CA
2012 - 2013	Brandie Firetag	Cytopathology	Co-Mentor/Clinical Mentor	Directly supervised	Staff pathologist French Hospital Medical Center, San Luis Obispo, CA

Dates	Name	Fellow	Mentor Role	Faculty Role	Current Position
2012 - 2013	Sara Barcia	Cytopathology	Co-Mentor/Clinical Mentor	Directly supervised	Staff pathologist Mount Auburn Hospital, Cambridge, MA.
2013 - 2014	Sarah Calkins	Cytopathology	Co-Mentor/Clinical Mentor	Directly supervised	Associate Professor, Department of Pathology, UCSF. San Francisco, CA
2013 - 2014	James Lindsey	Cytopathology	Project Mentor, Co-Mentor/Clinical Mentor	Directly supervised	Staff pathologist French Hospital Medical Center, San Luis Obispo, CA
2014 - 2015	Vijay George	Cytopathology	Co-Mentor/Clinical Mentor	Directly supervised	Staff pathologist Marian Regional Medical Center, San Luis Obispo, CA
2014 - 2015	Tara Saunders	Cytopathology	Co-Mentor/Clinical Mentor	Directly supervised	Assistant Professor, Department of Pathology, UCSF. San Francisco, CA
2015 - 2016	Patricia Goldhoff	Cytopathology	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Directly supervised	Staff Pathologist Kaiser Permanente, CA

Dates	Name	Fellow	Mentor Role	Faculty Role	Current Position
2015 - 2016	Dianne Ng	Cytopathology	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Directly supervised	Faculty, Department of Pathology, Memorial Sloan Kettering Cancer Center. New York
2016 - 2017	Josh Menke	Cytopathology	Co-Mentor/Clinical Mentor	Directly supervised	Assistant Clinical Professor Stanford University. Stanford, CA
2016 - 2017	Thuy Can	Cytopathology	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Directly supervised	Consultant Pathologist Genomic Health and private practice, CA
2017 - 2018	Shweta Aggarwal	Cytopathology	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Directly supervised	Staff Pathologist in Memphis, TN
2017 - 2018	Jeanette Ruiz	Cytopathology	Research/Scholarly Mentor, Project Mentor, Co-Mentor/Clinical Mentor	Directly supervised	Private practice, Texas
2018 - 2019	Soo-Ryum Yang	Cytopathology	Co-Mentor/Clinical Mentor	Directly supervised	Thoracic fellow at Memorial Sloan Kettering. New York
2018 - 2019	Nancy Greenland	Cytopathology	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Directly supervised	Assistant Professor UCSF. San Francisco

Dates	Name	Fellow	Mentor Role	Faculty Role	Current Position
2019 - 2020	Kent Troung	Cytopathology	Research/Scholarly Mentor, Career Mentor, Co-Mentor/Clinical Mentor	Directly supervised	Surgical pathology fellow, UCSF. San Francisco CA
2019 - 2020	Lucy Han	Cytopathology	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Directly supervised	AP/CP resident
2020 - 2021	Brent Molden	Cytopathology	Co-Mentor/Clinical Mentor	Directly supervised	Pathology Resident, UCSF. San Francisco, CA
2020 - 2021	Mohsen Hosseini	Cytopathology	Co-Mentor/Clinical Mentor	Directly supervised	Faculty at MID Anderson, Texas
2021 - 2022	Carlo De La Sancha Verduzco	Cytopathology	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Directly supervised	Fellowship Dermatopathology. Indiana University
2021 - 2022	Lauren Eversmeyer	Cytopathology	Project Mentor, Co-Mentor/Clinical Mentor	Directly supervised	ClinPath Associates, Arizona
2022 - 2023	Hannah Lee	Cytopathology	Project Mentor, Co-Mentor/Clinical Mentor	Directly supervised	Molecular genetics fellowship
2022 - 2023	Dan Qazi	Cytopathology	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Directly supervised	Clinical instructor UCSF pathology

FACULTY MENTORING

Dates	Name	Position while Mentored	Mentor Type	Mentoring Role	Current Position
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Dates	Name	Position while Mentored	Mentor Type	Mentoring Role	Current Position
2016 - present	Rebecca Wolsky	Clinical instructor	Co-Mentor/Clinical Mentor	Mentor	Faculty, University of Colorado, Denver
2017 - 2018	Alicia Calderon	Clinical Instructor	Co-Mentor/Clinical Mentor	Mentor	Private practice CA
2017 - 2020	Dianna Ng	Assistant Professor	Research/Scholarly Mentor, Project Mentor	Research collaborator	Faculty, Memorial Sloan Kettering Cancer Center. NY
2018 - 2020	Josh Menke	Assistant Professor	Research/Scholarly Mentor, Project Mentor	Research collaborator	Faculty, department of Pathology, Stanford Hospital. Stanford CA
2019 - 2020	Jeanette Ruiz	Clinical Instructor	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Mentor/ research collaborator	Private practice, Texas

RESEARCH AND CREATIVE ACTIVITIES

RESEARCH AND CREATIVE ACTIVITIES SUMMARY

As an academic cytopathologist, my goal is to focus on clinical, teaching and scholarly/creative work responsibilities. My research activities have focused on translational research in cytopathology with a focus in bladder cytology and surgical breast pathology centered on clinical applications of refining morphological criteria, immunohistochemistry and molecular diagnostics.

I have recently contributed to 2 book chapters (Adequacy and Upper Urinary Tract Cytology (UUT)) in the second edition of □The Paris System for Reporting Urine Cytology 2.0□. In addition, I have recently published 2 comprehensive reviews on □Upper Tract Urinary Cytology□ with an international collaboration in Cancer Cytopathology and Journal of American Society of Cytopathology (JASC). The objective of these studies was to systemically review the published literature on the utility and performance of UUT cytology in identifying upper tract urothelial carcinoma (UTUC) before and after implementation of The Paris System. In addition, I co-authored two more publications in bladder cytology including diagnostic dilemma of urothelial tissue fragments and micropapillary variant of urothelial carcinoma.

I led a research project published in Cancer Cytopathology in 2023, investigating the effectiveness and performance of cell blocks in urine cytology. The study was retrospective, encompassing urine cytology cases with cell blocks from three UCSF-affiliated teaching hospitals. The evaluation included 250 urinary cytology specimens. The findings revealed that the utilization of cell blocks in urinary cytology confirmed the final diagnosis in over half of the cases and changed diagnosis in a subset of cases.

I have received an invitation from the Editor in Chief of the Journal of the American Society of Cytopathology (JASC) to author a Comprehensive Review on Anal Cytology. The review is scheduled for publication in late 2023.

I lead a study on urine cytology in patients with gender confirmation surgery and hormone therapy. To our knowledge, this is the first study highlighting the performance of urine cytology in an underserved patient population specimen. This cohort may be at risk of overdiagnosis of atypical diagnosis, particularly if the cytopathologist is not aware of clinical history. Pathologists will need to recognize reactive cytomorphological changes in these patients. It has been accepted for a platform presentation at 21st International Congress of Cytology presented jointly with ASC's 70th Annual Scientific Meeting, Baltimore and earned the "Excellence in Diversity, Equity and Inclusion Research Award" from the American Society of Cytopathology. This project was subsequently published in the Journal of the American Society of Cytopathology in 2023.

I served as a corresponding author of case study series of pediatric type follicular lymphoma (PTFL). It is a multi-institutional study and a collaboration between ZSFG, UCSF and Stanford cases. PTFL is a rare and recently recognized subtype of nodal follicular B-cell lymphoma with only rare case reports in cytology literature. In this study, FNA biopsy is presented as a practical tool for initial evaluation of this rare entity as part of a multimodal diagnostic approach, for which increased awareness among cytopathologists can ensure the appropriate triage of specimen studies necessary for the diagnosis. Our findings were published in the Journal of American Society of Cytopathology (JASC) in 2022.

I also served a co-investigator with the "SCOPE STUDY" by Dr. Steven Deeks in examining HIV-associated immune dysfunction and its impact on HIV persistence (the reservoir) from 2017-2023. SCOPE is an observational, prospective study of HIV-1 infected volunteers designed to provide a specimen bank of samples with carefully characterized clinical data. SCOPE specimens are used to examine multiple questions involving virologic, immunologic, and host factors involved in HIV-1 infection, progression, non-progression, response to treatment, control of HIV-1 virus, and evolution of drug resistance. My role as a leading pathologist is to procure lymph node samples by fine needle aspiration under ultrasound guidance and to perform rapid on-site interpretation of the samples. I recently submitted an abstract based on our experience titled "The use of fine needle aspiration of the inguinal lymph nodes to support HIV pathogenesis studies" to the USCAP and American Society of Cytopathologists (ASC). This study has demonstrated that cytopathologist performed US-guided FNAB of non-palpable inguinal lymph nodes in HIV-infected adults is a well-tolerated and safe procedure and provides sufficient and viable samples for various HIV-1 reservoir and pathogenesis studies. Additionally, US-guided FNAB is an excellent alternative to LN excision for various research methodologies. Another advantage is that US-guided FNAB provides the capacity to study the same site longitudinally over time, which will allow for more precise assessment of how a variety of potentially HIV curative interventions affect immune function and the reservoir instead of lymph node excisions. As a part of this project, I coauthored a study "Phenotypic Analysis of the Unstimulated In Vivo HIV CD4 T Cell Reservoir", which has

been accepted for publication in eLife, 2020. This manuscript describes a method that leverages validated high-dimensional phenotyping to trace latently HIV-infected cells. The results suggest that contrary to common assumptions, the reservoir is not randomly distributed among cell subsets, and is conserved between individuals. This work addresses an important area of research as the identification and characterization of the latent HIV reservoir is critical to efforts to develop curative strategies. The techniques described provide a tool for identifying the latently-infected CD4+ T cell subsets and suggests potential applications in the design of therapeutic strategies to precisely study and target latently-infected cells.

I served as a corresponding author of case study series of gastric-type endocervical adenocarcinoma (GAS) diagnosed over two years at ZSFG. GAS is a diagnostic challenge due to its rarity, subtle histologic and cytologic features, and lack of association with HPV. The aim of this study was to evaluate the cytologic features of GAS in comparison to reported features of GAS with an emphasis on diagnostic pitfalls. Awareness of the morphologic features of GAS will enhance pathologists' ability to recognize this difficult tumor. Our findings were published in the journal Cytopathology in 2020.

I served as a first author of a project which was accepted for publication in September 2019 in the Journal of the National Comprehensive Cancer Network (JNCCN). In this study, we compared concurrently obtained core needle biopsies (CNBs) and fine needle aspiration biopsy- cell blocks (FNAB-CBs) in terms of diagnostic accuracy, tumor cell concentration, and overall tumor cellularity of primary and metastatic liver lesions. Although both biopsy techniques are adequate for diagnosis, we demonstrated that the FNAB-CB provided superior tumor cell concentration and overall cellularity in a large subset; thus, making it an excellent substrate for next generation sequencing and similar studies. Our results, coupled with the preferred safety profile of FNABs, underscore the value of cytopathology in current practice.

I was the Principal Investigator for a study diagnostic precision of urine cytology by implementation of The Paris System and the use of cell blocks which was published in Cancer Cytopathology in 2018. To our knowledge, this is the first report on the utility of cell blocks in urine cytology specimens. We demonstrated that application of stringent cytologic criteria, correlation with cystoscopic findings and use of cell blocks helped to improve the diagnostic accuracy of voided urine cytology.

Currently, I am the principal investigator for a project correlating Oncotype DX Recurrence score in ductal carcinoma in situ (DCIS) patients with immunohistochemical staining as well as clinical and histopathological features including grade, mitotic activity, dense periductal inflammation and comedonecrosis. The goal is to identify which test will best stratify patients most likely to benefit from adjuvant chemotherapy.

I am a principal investigator in another project determining the correlation between fibroepithelial lesions diagnosed by FNA with surgical excision and core needle biopsy (CNB). This is a large retrospective histopathologic correlation study between FNA and surgical specimens of fibroepithelial lesions. So far, our results show that FNA is an excellent screening tool for fibroepithelial lesions if we incorporate clinical/imaging/pathologic correlation.

I served as the first author for a study reviewing all fine needle aspiration (FNA) biopsies and corresponding surgical pathology specimens of breast cancer performed from 2002-2014 at UCSF. Our findings were published in Cancer Cytopathology. The main aim of this study was to assess and compare ER, PR, and HER2 expression between fine needle aspiration samples (cell block) and corresponding surgical pathology specimens. Our results in this study

supported the equivalency of ER and HER2 evaluation performed on FNA cell blocks compared with surgical tissue blocks.

Between 2013 and 2015, I served as a consultant and member of the West Coast AIDS Cancer Specimen Resource (ACSR). The purpose of ASCR is to support translational research of HIV-related malignancies and to acquire, store and distribute tumor tissues and biological fluids with associated clinical, pathological, diagnostic and demographic data from patients with HIV-associated malignancies. The mission of ASCR was to meet the emerging needs of the HIV research community by contributing to drug development timelines and facilitating the development of novel diagnostic and therapeutic approaches to HIV associated malignancies. My role was to supervise tissue microarray and validate diagnostic material submitted to ASCR. I also provided technical oversight for pathology related procedures

PEER REVIEWED PUBLICATIONS

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4. Lu D, **Vohra P**, Chu PG, Woda B, Rock KL, Jiang Z. An oncofetal protein IMP3: a new molecular marker for the detection of esophageal adenocarcinoma and high-grade dysplasia. *Am J Surg Pathol*. 2009 Apr; 33(4):521-5. PMID: 19047899
5. **Vohra P**, Ljung BM, Miller TR, Hwang ES, van Zante A. Paget's disease of the breast masquerading as squamous cell carcinoma on cytology: a case report. *Diagn Cytopathol*. 2012 Nov; 40(11):1015-8. PMID: 21548119
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10. **Vohra P**, Buelow B, Chen YY, Serrano M, Vohra M, Berry A, Ljung BM. ER, PR, and HER2 Expression in Breast Cancer Fine Needle Aspiration Cell Blocks and Paired

- Histologic Specimens - a Large Retrospective Study. *Cancer Cytopathology* 2016 Nov;124(11):828-835. PMID: 27315045
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 12. M. Pardons, R. Fromentin, L. Leyre, A. Pagliuzza, P. Vohra, D. Ng, R. Hoh, M. Kerbleski, V. Tai, J. Milush, F. Hecht, S. Deeks, N. Chomont. PP4.7 HIV persistence in lymph nodes from virally suppressed individuals: residual production VS latency. *Journal of virus eradication*. 2017 Dec 1; 3:25.
 13. Chan E, Balassanian R, Tabatabai ZL, Lou H, **Vohra P**. Improved diagnostic precision of urine cytology by implementation of The Paris System and the use of cell blocks. *Cancer Cytopathol*. 2018 Sep;126(9):809-816. doi: 10.1002/cncy.22034. Epub 2018 Sep 11. PMID: 30203925.
 14. Goldhoff PE, **Vohra P***, Kolli KP, Ljung BM. Fine-Needle Aspiration Biopsy of Liver Lesions Yields Higher Tumor Fraction for Molecular Studies: A Direct Comparison With Concurrent Core Needle Biopsy. *J Natl Compr Canc Netw*. 2019 Sep 1;17(9):1075-1081. doi: 10.6004/jnccn.2019.7300. PMID: 31487685.* **Contribution as first author.**
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OTHER CREATIVE ACTIVITIES

1. Medical School Graduation Thesis "Clinico histopathological correlation of vesiculobullous lesions". Study of 50 cases. Govt. Medical College Patiala. Punjab, India
2. FNA workshop at ZSFG (2015- Present). I have established a workshop to specifically train the residents, cytology fellows and medical students on fine-needle aspiration sampling technique.