

University of California, San Francisco
CURRICULUM VITAE

Name: Elham Khanafshar, MD, MS

Position: Professor of Clinical Pathology, Step 2
Pathology
School of Medicine

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EDUCATION

1989 - 1997	Tehran University of Medical Sciences, Tehran, Iran	M.D.	
1997 - 1999	University of Southern California, Los Angeles, CA	M.S.	Molecular & Experimental Pathology
1999 - 2002	Cedars-Sinai Medical Center, Los Angeles, CA	Resident	Anatomical & Clinical Pathology
2002 - 2003	Cedars-Sinai Medical Center, Los Angeles, CA	Chief Resident	Anatomical & Clinical Pathology
2003 - 2004	University of California, San Diego, CA	Fellow	Surgical Pathology
2004 - 2005	University of Southern California, Los Angeles, CA	Fellow	Cytopathology
2007 - 2007	University of Toronto, Toronto, ON Canada	Visiting Pathologist	Endocrine Pathology
2010 - 2010	University of Wisconsin, Minnesota, WI	Visiting Pathologist	Endocrine Pathology

LICENSES, CERTIFICATION

2001	Medical licensure, California
2003	Anatomical and Clinical Pathology Board Certification
2005	Cytopathology Board Certification
2005	Thin-Prep Certification

2006	ImmunoCyt Certification
2016	UCSF Bilingual Clinician Certification
2019	American Heart Association Basic Life Support

PRINCIPAL POSITIONS HELD

2002 - 2003	Cedars-Sinai Medical Center, Los Angeles, CA	Chief Resident	Anatomic and Clinical Pathology
2005 - 2010	University of California, San Francisco, CA	HS Assistant Clinical Professor	Pathology
2010 - 2012	University of California, San Francisco, CA	HS Associate Clinical Professor	Pathology
2012 - 2018	University of California, San Francisco, CA	Associate Clinical Professor	Pathology
2018 - present	University of California, San Francisco, CA	Clinical Professor	Pathology

OTHER POSITIONS HELD CONCURRENTLY

2006 - 2016	University of California, San Francisco, CA	Co-investigator	Tissue Research Core Laboratory
2008 - present	University of California, San Francisco, CA	QI Committee Member	Anatomical Pathology
2010 - 2012	University of California, San Francisco, CA	Associate Cytopathology Fellowship Program Director	Anatomical Pathology
2012 - 2018	University of California, San Francisco, CA	Associate Director of Cytopathology	Anatomical Pathology
2012 - present	University of California, San Francisco, CA	Cytopathology Fellowship Program Director	Anatomical Pathology
2015 - present	University of California, San Francisco, CA	Cytopathology Clinical Competency Committee Member	Anatomical Pathology
2015 - present	University of California, San Francisco, CA	Cytopathology Program Evaluating Committee Chair	Anatomical Pathology

2017 - present	University of California, San Francisco, CA	Medical Director of Cytopathology FNA Services	Anatomical Pathology
2017 - present	University of California, San Francisco, CA	Medical Director of Cytopathology Lab	Anatomical Pathology
2018 - 2018	University of California, San Francisco, CA	Interim Director of Cytopathology	Anatomical Pathology
2018 - present	University of California, San Francisco, CA	Director of Cytopathology	Anatomical Pathology
2019 - present	University of California, San Francisco, CA	Appointments, Promotions and Merits Committee Member	Anatomical Pathology

HONORS AND AWARDS

2001	Pathologist-in-training Award for the Outstanding Scientific Presentation, "3TC Protects Hepatitis B Core Antibody Positive Liver Allograft Recipients from Hepatitis B".	Hans-Popper Hepatopathology Society
2003	Nathan B. Friedman Award for the Best Poster Presentation, "Expression of Survivin Messenger RNA Correlates with Grade of Ductal Carcinoma In-Situ (DCIS)".	Cedars-Sinai Medical Center
2003	Leo Rigler Best Resident Award for the Outstanding Academic Achievement.	Cedars-Sinai Medical Center
2017	Great Catch Award for Patient safety	UCSF

KEYWORDS/AREAS OF INTEREST

Cytopathology, Fine Needle Aspiration Biopsy, Ultrasound-Guided Fine Needle Aspiration Biopsy, Surgical Pathology, Thyroid Pathology, Parathyroid Pathology, Endocrine Pathology, Continuing Medical Education.

CLINICAL ACTIVITIES

CLINICAL ACTIVITIES SUMMARY

As a board certified Anatomical and Clinical Pathologist with additional board certification in Cytopathology, my clinical mission is to provide diagnostic cytopathology and surgical pathology service. I have expertise in minimally invasive fine needle aspiration techniques with

or without ultrasound guidance for the purpose of definitive diagnosis, prognostic and therapeutic testing workup and research pursuit. I also provide rapid on-site evaluation for UCSF interventional radiology, endoscopy, and bronchoscopy physicians. I routinely sign out surgical pathology and cover surgical pathology frozen section service and night call at Mission Bay campus. My area of interest in surgical pathology is endocrine pathology. I serve as the expert thyroid pathologist for internal and external consult cases. In all of these roles I directly supervise pathology trainees, cytopathology fellows and cytotechnologists. I also staff the UCSF Thyroid Multidisciplinary Tumor Conference.

CLINICAL SERVICES

2005 - present	UCSF Cytopathology Service, Faculty	60% service commitment
2005 - present	UCSF Surgical Pathology Service, Faculty	5% service commitment
2005 - present	UCSF Surgical Pathology Night Call Service, faculty	Variable
2006 - present	UCSF Cancer Center Multidisciplinary Thyroid Tumor Conference, Pathology Faculty representative	Once Monthly

PROFESSIONAL ACTIVITIES

MEMBERSHIPS

2007 - present	Endocrine Pathology Society
2007 - present	Papanicolaou Society of Cytopathology
2006 - present	American Society of Cytopathology
1999 - present	College of American Pathologists (fellow since 2005)
1999 - present	United States and Canadian Academy of Pathologists
1999 - 2004	American Society of Clinical Pathologists
1999 - 2003	Los Angeles Society of Pathologists
1999 - 2006	American Medical Association
2019 - present	Association of Directors of Anatomic and Surgical Pathology
2019 - present	International Academy of Cytology

SERVICE TO PROFESSIONAL ORGANIZATIONS

2017 - 2019	American Society of Cytopathology, C.E.L.L. Task Force	Member
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SERVICE TO PROFESSIONAL PUBLICATIONS

2010 - present	Thyroid, Ad Hoc Reviewer
2011 - present	Expert review of Endocrinology and Metabolism, Ad Hoc Reviewer

2016 - present Cancer Cytopathology, Ad Hoc Reviewer

2016 - present Head and Neck, Reviewer

2018 - present Applied Immunohistochemistry & Molecular Morphology, Ad Hoc Reviewer

INVITED PRESENTATIONS - INTERNATIONAL

2000	United States and Canadian Academy of Pathology 2000 Annual Meeting, New Orleans, LA, " Web Based Teleconferencing Techniques as Inexpensive Tools for Telepathology Consultations: A Study of Transbronchial Biopsies from Lung Transplant Patients".	Poster Presenter
2001	United States and Canadian Academy of Pathology 2001 Annual Meeting, Atlanta, GA, " 3TC Protects Hepatitis B Core Antibody Positive Liver Allograft Recipients from Hepatitis B" .	Poster Presenter
2002	United States and Canadian Academy of Pathology 2002 Annual Meeting, Chicago, IL, " Hepatitis C Virus Can be Successfully Identified Employing Microdissection and RT-PCR from Either Formalin-Fixed or Ethanol-Fixed Liver Samples" .	Poster Presenter
2003	United States and Canadian Academy of Pathology 2003 Annual Meeting, Washington, DC, " Expression Level of Survivin Messenger RNA Correlates with Grade of Ductal Carcinoma In-Situ (DCIS)".	Poster Presenter
2008	United States and Canadian Academy of Pathology 2008 Annual Meeting, Denver, CO, "Parathyroid Carcinoma can be Differentiated from Benign Parathyroid Lesions Using HRPT2 and Galectin-3 Immunohistochemical Stains, a Tissue Microarray Study".	Platform Presenter
2013	United States and Canadian Academy of Pathology 2013 Annual Meeting, Baltimore, MD, " Cytology of the Week Cases (COWs): Impact of a Longitudinal Educational Intervention"	Poster Presenter
2014	United States and Canadian Academy of Pathology Diagnostic Cytopathology, Del Mar, CA, 'Improving FNA Technique with an Introduction to Ultrasound-Guidance. A Practical Hands-on Workshop".	Faculty
2014	United States and Canadian Academy of Pathology Diagnostic Cytopathology, Del Mar, CA, ' Body Fluid Cytology: Cytomorphology and Interpretation in Clinical Context'.	Faculty
2015	International Symposium on Salivary Gland Pathology, Tehran, Iran, "Cytology of Salivary Gland Lesions."	Faculty

2015	United States and Canadian Academy of Pathology 2015 Annual Meeting, Boston, MA, "Vascular Invasion and not Capsular Invasion Predicts Local Recurrence and Metastasis in Well-Differentiated Follicular Thyroid Carcinoma".	Poster Presenter
2016	United States and Canadian Academy of Pathology 2016 Annual Meeting, Seattle, WA, "Endocrine Platform Presentation."	Moderator
2016	United States and Canadian Academy of Pathology 2016 Annual Meeting, Seattle, WA, "Fine Needle Aspiration Biopsy Samples of Liver Lesions Yields Higher Percentage of Tumor Cells for Molecular Studies: A direct Comparison to Concurrent Core Biopsy."	Poster Presenter
2016	United States and Canadian Academy of Pathology 2016 Annual Meeting, Seattle, WA, "Cytology/Histology Correlation of Follicular Variant of Papillary Thyroid Carcinoma: The UCSF Experience."	Poster Presenter
2016	United States and Canadian Academy of Pathology Interactive Microscopy, Palm Spring, CA, "Head and Neck, and Endocrine Pathology: Potpourri of Non-neoplastic Lesions and Neoplastic".	Faculty
2017	United States and Canadian Academy of Pathology 2017 Annual Meeting, "Cytology Cases of the Week: Five Years of Data on an Educational Tool That Improves Trainee Exposure to Cytology".	Platform Presenter
2018	United States and Canadian Academy of Pathology 2018 Annual Meeting, "Dynamic Telepathology for Rapid Adequacy Assessment of Cytology Specimens Saves Valuable Time for the Cytopathologist: An Institutional Experience".	Platform Presenter
2018	United States and Canadian Academy of Pathology 2018 Annual Meeting, "Equitable Cytopathology Workload Distribution can be Achieved Using Royal College of Pathologists Guidelines".	Poster Presenter
2018	United States and Canadian Academy of Pathology 2018 Annual Meeting, "Novel Fine Needle Aspiration for Collecting Abdominal Fat Pad Cell Block for Amyloid Testing".	Poster Presenter
2019	United States and Canadian Academy of Pathology Interactive Microscopy, Palm Spring, CA, "Head and Neck Cytopathology: Practical Tools for Common Cases".	Course Director

INVITED PRESENTATIONS - NATIONAL

2001	American Association for the Study of Liver Diseases Annual Meeting 2001, Dallas, TX, "Hepatitis C Virus Localizes to Zone 1 in Chronic Hepatitis C: A Laser Microdissection Study.	Poster Presenter
2011	American Society of Cytopathology 2011 Annual Meeting, Baltimore, MD, 'Optimizing FNA Technique with an Introduction to US Guidance – A Practical Hands-on Workshop'.	Faculty
2012	American Society of Cytopathology 2012 Annual Meeting, Las Vegas, NV, 'Optimizing FNA Technique with an Introduction to US Guidance – A Practical Hands-on Workshop'.	Faculty
2013	American Society of Cytopathology 2013 Annual Meeting, Orlando, FL, 'Improving FNA Technique with an Introduction to Ultrasound-Guidance-A Practical Hands-on Workshop'.	Faculty
2014	American Society of Cytopathology 2014 Annual Meeting, Dallas, TX, "Improving FNA Technique with an Introduction to Ultrasound-Guidance. A Practical Hands-on Workshop".	Faculty
2015	American Society of Cytopathology 2015 Annual Meeting, Chicago, IL, "Improving FNA Technique with an Introduction to Ultrasound-Guidance. A Practical Hands-on Workshop".	Faculty
2016	American College of Surgeons 2016 Clinical Congress, Washington, DC, "Squamous Differentiation in Papillary Thyroid Carcinoma: a Rare Feature of Aggressive Disease".	Poster presenter
2016	American Society of Cytopathology 2016 Annual Meeting, New Orleans, LA, "Improving FNA Technique with an Introduction to Ultrasound-Guidance. A practical Hands-on Workshop".	Faculty
2016	American Society of Cytopathology 2016 Annual Meeting, New Orleans, LA, "Body Fluid Cytology Microscopic Workshop".	Faculty
2016	UCSF Head and Neck Cancer and Endocrine Surgery Conference, San Francisco, CA, "Papillary Thyroid Carcinoma, an Update".	Faculty
2018	UCSF Head and Neck Cancer and Endocrine Surgery Conference, San Francisco, CA, "Molecular Testing for Indeterminate Thyroid Nodules".	Faculty

2019 American Society of Cytopathology 2019 Annual Meeting, Faculty
Salt Lake City, UT, "Practical Tools in Salivary Gland
Cytology, Video Tutorial".

INVITED PRESENTATIONS - REGIONAL AND OTHER INVITED PRESENTATIONS

2007	California Association of Cytopathologists 2007 Annual Meeting, San Francisco, CA, " What You Need to Know in Body Fluid Cytology."	Faculty
2007	California Association of Cytopathologists 2007 Annual Meeting, San Francisco, CA, " Fine Needle Aspiration and Molecular Diagnosis."	Faculty
2007	9th Annual UCSF/Stanford Current Issues in Anatomic Pathology, San Francisco, CA, " Improving FNA Technique and Smear Preparation" .	Faculty
2011	14th Annual UCSF Current Issues in Anatomical Pathology/Cytology Seminar, San Francisco, CA, " Challenges in Fluid Cytology, Microscopic Tutorial."	Faculty
2011	14th Annual UCSF Current Issues in Anatomical Pathology, San Francisco, CA, " Potpourri of Thyroid and Parathyroid Lesions, Lunch Tutorials."	Faculty
2011	14th Annual UCSF Current Issues in Anatomical Pathology, San Francisco, CA, "Endocrine Session."	Moderator
2014	17th Annual UCSF Current Issues in Anatomical Pathology, San Francisco, CA, "Challenges in Fluid Cytology, Microscopic Tutorial."	Faculty
2015	18th Annual UCSF Current Issues in Anatomical Pathology, San Francisco, CA, "Pitfalls and Challenges in Endocrine Pathology, Microscopic Tutorial."	Faculty
2016	19th Annual UCSF Current Issues in Anatomical Pathology, San Francisco, CA, Body Fluid Cytology, Microscopic Tutorial."	Faculty
2016	20th Annual UCSF Current Issues in Anatomical Pathology, San Francisco, CA, "Thyroid pathology."	Faculty
2017	MD Anderson, Houston, TX, "Introduction to Ultrasound-Guided FNA."	Faculty
2017	UCSF Educational Showcase 2017, San Francisco, CA, "Cytology Cases of the Week: Five Years of Data on an Educational Tool That Improves Trainees Exposure to Cytology."	Presenter

2017	21th Annual UCSF Current Issues in Anatomical Pathology, San Francisco, CA, "Potpourri of Malignant Thyroid Lesions."	Faculty
2019	23th Annual UCSF Current Issues in Anatomical Pathology, San Francisco, CA, Body Fluid Cytology, Microscopic Tutorial."	Faculty

CONTINUING EDUCATION AND PROFESSIONAL DEVELOPMENT ACTIVITIES

2005	Mock Proficiency Test, The College of American Pathologists.
2005	Mechanisms of Disease Conference, UCSF, San Francisco, CA.
2006	Mechanisms of Disease Conference, UCSF, San Francisco, CA.
2006	Interlaboratory Comparison Program in Gynecologic Cytopathology, The College of American Pathologists.
2006	Interlaboratory Comparison Program in Gynecologic Cytopathology, The College of American Pathologists.
2006	Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
2006	Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
2006	Mock Proficiency Test, The College of American Pathologists.
2007	What's New in Anatomic Pathology and Laboratory Medicine, Los Angeles, CA.
2007	Interlaboratory Comparison Program in Gynecologic Cytopathology, The College of American Pathologists.
2007	Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
2007	Interlaboratory Comparison Program in Gynecologic Cytopathology, The College of American Pathologists.
2007	Medscape CME Courses.
2007	United States and Canadian academy of Pathologist's, 96th Annual Meeting, San Diego, CA.
2007	Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
2007	Mock Proficiency Test, The College of American Pathologists.
2007	Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
2008	Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.

- 2008 Interlaboratory Comparison Program in Gynecologic Cytopathology, The College of American Pathologists.
- 2008 Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
- 2008 Interlaboratory Comparison Program in Gynecologic Cytopathology, The College of American Pathologists.
- 2008 Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
- 2008 Interlaboratory Comparison Program in Gynecologic Cytopathology, The College of American Pathologists.
- 2008 Mock Proficiency Test, The College of American Pathologists.
- 2008 Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
- 2008 Interlaboratory Comparison Program in Gynecologic Cytopathology, The College of American Pathologists.
- 2009 Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
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- 2010 Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
- 2010 Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
- 2010 Interlaboratory Comparison Program in Gynecologic Cytopathology, The College of American Pathologists.
- 2010 United States and Canadian academy of Pathologists, 99th Annual Meeting, Washington, DC.
- 2011 Interlaboratory Comparison Program in Gynecologic Cytopathology, The College of American Pathologists.
- 2011 Interlaboratory Comparison Program in Gynecologic Cytopathology, The College of American Pathologists.

- 2011 Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
- 2011 Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
- 2011 Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
- 2012 Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
- 2012 The Introduction to Leadership Program, CORO Center for Civic Leadership.
- 2012 Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
- 2016 19th Annual UCSF Current Issue in Anatomic Pathology, Cytology Seminar.
- 2016 Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
- 2016 Interlaboratory Comparison Program in Gynecologic Cytopathology, The College of American Pathologists.
- 2016 Head and Neck Cancer and Endocrine Surgery Update, UCSF
- 2017 Interlaboratory Comparison Program in Gynecologic Cytopathology, The College of American Pathologists.
- 2017 Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
- 2017 United States and Canadian Academy of Pathologists, 106th Annual meeting, San Antonio, TX.
- 2018 United States and Canadian Academy of Pathologists, Leadership Session, Palm Spring, CA.
- 2018 United States and Canadian Academy of Pathologists, 107th Annual meeting, Vancouver, BC.
- 2019 United States and Canadian Academy of Pathologists, 107th Annual meeting, National Harbor, DC
- 2019 Interlaboratory Comparison Program in Non-Gynecologic Cytopathology, The College of American Pathologists.
- 2019 Interlaboratory Comparison Program in Gynecologic Cytopathology, The College of American Pathologists.
- 2019 Enhancing Relationship Centered Communication Skills for Providers, University of California San Francisco

UNIVERSITY AND PUBLIC SERVICE

SERVICE ACTIVITIES SUMMARY

As the Medical Director of Cytopathology, I am responsible for the overall operation and administration of the laboratory, including employment of personnel.

UCSF CAMPUSWIDE

2005 - 2005	UCSF Multidisciplinary Gastrointestinal Tumor Board	Faculty
2006 - 2006	UCSF Multidisciplinary Breast Tumor Board	Faculty
2006 - present	UCSF Multidisciplinary Thyroid Tumor Board	Faculty
2012 - present	UCSF Academic Senate Committee	Voting Member
2018 - present	UCSF Clinical Directors Committee	Member

SCHOOL OF MEDICINE

2016 - 2017	Search Committee for Chief of Anatomic Pathology at Zuckerberg San Francisco General Hospital and Trauma center (JPF00981)	Member
2019 - present	Department of Pathology Appointments, Promotions, and Merits Committee	Member

DEPARTMENTAL SERVICE

2005 - present	Department of Anatomic Pathology - Cytopathology Fellowship Selection Committee	Member
2008 - present	Department of Anatomical Pathology QI Committee	Member
2010 - 2012	Department of Anatomic Pathology - Cytopathology Fellowship Program	Associate Director
2011 - present	Department of Anatomic Pathology Resident Evaluation Committee	Member
2012 - present	Department of Anatomic Pathology Residency Selection Committee	Member
2012 - present	Department of Anatomic Pathology - Cytopathology Fellowship Program	Director
2012 - 2015	Department of Pathology - Cytopathology	Associate Director
2013 - present	Cytopathology Fellowship Clinical Competency Committee	Member
2013 - present	Cytopathology Fellowship Program Evaluation Committee	Chair
2016 - 2018	Department of Pathology - Cytopathology	Associate Director

2016 - 2017	Department of Pathology - Search Committee for Medical Director of Cytopathology Services (JPF00758)	Member
2017 - 2017	Department of Pathology - Faculty Search Committee for Cytology and Renal Pathologist (JPF01396)	Member
2017 - 2018	Department of Pathology - Faculty Search Committee for Cytopathologist Clinical Instructor (JPF01288)	Chair
2017 - 2018	Department of Pathology - Faculty Search Committee for Cytopathologist with emphasis in Molecular Pathology Faculty (JPF01307)	Chair
2017 - present	Department of Pathology - Faculty Search Committee for Surgical Pathologist/Cytopathologist (JPF01676)	Chair
2018 - 2018	Department of Pathology - Cytopathology	Interim Director
2018 - present	Department of Pathology - Faculty Search Committee for Surgical Pathologist/Cytopathologist/Hematopathologist (JPF01806)	Member
2018 - present	Department of Pathology - Faculty Search Committee for Cytopathologist/Surgical Pathologist (JPF01938)	Chair
2018 - present	Department of Pathology - Faculty Search Committee for Academic Surgical Pathologist (JPF01676)	Member
2018 - 2020	Department of Pathology - Faculty Search for Cytopathologist, Clinical Instructor (JPF02252)	Chair
2019 - present	Appointments, Promotions, and Merits Committee	Member

COMMUNITY AND PUBLIC SERVICE

2006 - 2008	PTA Green Valley Elementary School, Danville, CA	Member
2007 - 2007	Diablo Gymnastic Team, San Ramon, CA	Parent Volunteer
2007 - 2009	PTA Los Cerros Middle School, Danville, CA	Member
2008 - 2009	PTA John Baldwin Elementary School, Danville, CA	Member
2009 - 2010	PTA Creekside Elementary School, Danville, CA	Member
2010 - 2010	West Coast Gymnastic Team, Pleasanton, CA	Parent Volunteer
2010 - 2011	Vista Grande Elementary School, Danville, CA	Parent Volunteer
2011 - 2013	PTA Vista Grande Elementary School, Danville, CA	Member
2014 - 2015	PTA Montair Elementary School, Danville, CA	Member
2014 - 2015	Montair Elementary School Science Class, Danville, CA	Parent Volunteer
2015 - 2016	PTA Montair Elementary School, Danville, CA	Member
2016 - 2018	PTA Los Cerros Middle School, Danville, CA	Member

2018 - present Dublin Dazzlers Ice skating Team, Dublin, CA

Parent Volunteer

CONTRIBUTIONS TO DIVERSITY

CONTRIBUTIONS TO DIVERSITY

As the Cytopathology Program Director, and Director of Cytopathology, I review applications and interview candidates for fellowship, staff, and faculty positions. Through these responsibilities I am able to recruit candidates with different cultural, racial, and experiential backgrounds to our department. This contributes to a well-rounded division that can serve a changing patient population.

TEACHING AND MENTORING

TEACHING SUMMARY

As a medical educator, my responsibilities include teaching of medical students, anatomic pathology residents, endocrine and endocrine surgery residents, and fellows' training in surgical pathology and cytopathology. In addition to leading multiple histology/pathology laboratories for medical students, I participate in one-on-one microscopic-based teaching of medical students who rotate through anatomic pathology and cytopathology. I served as a block committee member to update the lab manual for the Medical School Endocrine lab. As an attending physician on the surgical pathology service, I teach residents as I review the gross specimens and microscopic slides of clinical cases as part of a routine clinical signout. In addition, as an attending physician on the cytology service, I teach residents and fellows how to perform fine needle aspiration biopsies and prepare and interpret all types of cytology samples. My total number of hours of teaching and mentoring for academic year 2014-15 was about 1200 hours. I anticipate the same number of hours for the academic year 2015-16 and 2016-17.

As the Cytopathology Fellowship Director, I oversee the fellowship program teaching curriculum. I have initiated a series of changes to our cytology fellowship program. My contributions include:

- Ongoing searchable database of our cytopathology Study Set (more than 900 cases)
- Implemented Cytology Cases of the Week (COWs) and Cytology Cases of the Prior Weeks (more than 700 cases)
- Implemented weekly fellowship Cibas' tests
- Implemented weekly cytopathology multihead scope sessions at Mount Zion and Mission Bay
- Implemented monthly Journal Club
- Implemented a 2-week "bootcamp" rotation for all incoming fellows for intensive immersion into cytopathology
- Implemented a new 3-day OPA rotation under supervision of Dr. John Abele for introduction to ultrasound-guided FNA

Outside of UCSF, I am frequently invited to give lectures on thyroid and cytopathology topics in regional, national, and international societies. I have taught multiple sessions on various topics at the UCSF Current Issues in Pathology annual meetings. I was the invited faculty member at the annual meeting of the American Society of Cytopathology, teaching fine needle aspiration biopsy technique (multiple sessions) and body fluid cytology. I was the invited speaker at the United States and Canadian Academy of Pathology (USCAP) Interactive Microscopy Session, where I lead a session on thyroid pathology. I have also moderated the

endocrine platform sessions at the USCAP Annual Meeting. I gave a lecture on salivary gland cytology at the International Symposium on Salivary Gland Tumors in Tehran, Iran.

FORMAL TEACHING

	Academic Yr	Course No. & Title	Teaching Contribution	School	Class Size
	2006 - 2005	Invasion and metastasis	Small Group Leader	Medicine	10
	2006 - 2006	Pathology of benign and malignant neoplasms	Small Group Leader	Medicine	10
	2007 - 2007	Immunology and inflammation	Lab Instructor	Medicine	30
	2007 - 2007	Hypersensitivity and rejection	Lab Instructor	Medicine	30
	2007 - 2007	Pathological characteristics of benign and malignant neoplasms	Lab Instructor	Medicine	30
	2007 - 2007	Pathology of benign and malignant neoplasms	Small Group Leader	Medicine	10
	2007 - 2007	" Body Fluid Cytology," UCSF Resident' s Lecture Series.	Lecturer	Medicine	
	2008 - 2008	Classification of neoplasms	Small Group Leader	Medicine	10
	2008 - 2008	Liver pathology	Lab Instructor	Medicine	30
	2008 - 2008	Acute and Chronic inflammation and Neoplasia	Lab Instructor	Medicine	30
	2008 - 2008	Hypersensitivity and rejection	Lab Instructor	Medicine	30
	2008 - 2008	Pathological characteristics of benign and malignant neoplasms	Lab Instructor	Medicine	30
	2008 - 2008	Classification of neoplasms	Small Group Leader	Medicine	10

	Academic Yr	Course No. & Title	Teaching Contribution	School	Class Size
	2008 - 2008	" Cytopathology Laboratory Management," UCSF Resident' s Board Preparation Series.	Lecturer	Medicine	20
	2008 - 2008	" Body Fluid Cytology," UCSF Resident' s Lecture Series.	Lecturer	Medicine	20
	2009 - 2009	Classification of neoplasms	Small Group Leader	Medicine	10
	2009 - 2009	Pathology of benign and malignant neoplasms	Lab Instructor	Medicine	30
	2009 - 2009	" Body Fluid Cytology," UCSF Resident' s Lecture Series.	Lecturer	Medicine	20
	2010 - 2010	" Body Fluid Cytology," UCSF Resident' s Lecture Series.	Lecturer	Medicine	20
	2011 - 2011	Pathology of benign and malignant neoplasms	Lab Instructor	Medicine	30
	2011 - 2011	Classification of neoplasm	Small Group Leader		10
	2011 - 2011	" Body Fluid Cytology," UCSF Resident' s Teaching Course	Lecturer	Medicine	20
	2011 - present	" Cytology Cases of the Week (COWs)," UCSF Residents and Fellows	Faculty	Medicine	20
	2012 - 2012	Ovary and endometrium lab	Lab Instructor	Medicine	30
	2012 - 2012	Endocrine and Cytopathology	Lab Instructor	Medicine	10

	Academic Yr	Course No. & Title	Teaching Contribution	School	Class Size
	2012 - 2012	Inflammation and Neoplasia	Lab Instructor	Medicine	30
	2012 - 2012	Pathological Characteristics of Benign and Malignant Neoplasms	Lab Instructor	Medicine	30
	2013 - 2013	Adrenal Glands/Endocrine Histology/Pathology Lab	Lab Instructor	Medicine	30
	2013 - 2014	101: Prologue Lab: Inflammation & Neoplasia Lab	Lab Instructor	Medicine	30
	2013 - 2014	106: M3: Methods, Mechanisms & Malignancies Characteristics of Benign & Malignant Neoplasms Lab	Lab Instructor	Medicine	30
	2013 - 2014	103A: Metabolism & Nutrition Endocrine System Histo/Path Lab	Lab Instructor	Medicine	30
	2014 - 2015	Endocrine and Cytopathology	Lab Instructor	Medicine	30
	2015 - 2016	Endocrine and Cytopathology	Lab Instructor	Medicine	30
	2018 - 2018	"Body Fluid Cytology," UCSF Resident's Teaching Course	Lecturer	Medicine	20
	2018 - present	Medical Student's Clerkship Rotation	Faculty	Medicine	1

INFORMAL TEACHING

2002 - 2003 Supervise junior residents in gross room as well as sign out as a chief resident, Cedars Sinai Medical Center.

2003 - 2004 Supervise and sign out with residents as a surgical pathology fellow, University of California, San Diego.

- 2004 - 2005 Supervise residents/medical students in FNA clinic as a cytology fellow, University of Southern California.
- 2005 - 2005 Multihead microscopic case presentation for endocrinologists, twice, UCSF.
- 2005 - 2010 Cytopathology/Surgical pathology unknown-slide conference for house staff, once every other month.
- 2005 - present Supervise medical students, residents and cytology fellows in FNA clinic, UCSF/Mount Zion.
- 2005 - present Sign out cytology cases with residents/fellows, UCSF/Mount Zion.
- 2005 - present Sign out surgical pathology cases with residents/fellows, 3 days/month, UCSF.
- 2006 - present Endocrine tumor board, one conference per month, UCSF/Mount Zion.
- 2006 - 2006 Breast tumor board, one conference, UCSF Mount Zion.
- 2006 - 2006 Gastrointestinal tumor board, one conference, UCSF Mount Zion.
- 2010 - present Cytopathology consensus conference, one conference per week, UCSF/Mount Zion.
- 2006 - present Multihead scope resident' s conference, UCSF/Mount Zion.
- 2018 - present Medical Student's Ad Hoc Pathology Rotation

MENTORING SUMMARY

As the Cytopathology fellowship director I am closely involved with the residents and fellows' mentoring in Cytopathology through collaboration on research projects and direct and indirect supervision of their clinical training. A significant number of our fellows have joined faculty positions at UCSF and other institutions. I am also mentoring junior faculty members to help them advance in their career.

POSTDOCTORAL FELLOWS AND RESIDENTS MENTORED

Dates	Name	Fellow	Mentor Role	Faculty Role	Current Position
2005 - 2006	Kristen Jensen	Cytopathology	Co-Mentor/Clinical Mentor	Mentor	Stanford Faculty
2005 - 2006	Mathew Greenberg	Cytopathology	Co-Mentor/Clinical Mentor	Mentor	Private Practice
2006 - 2007	Ian Jaffe	Cytopathology	Co-Mentor/Clinical Mentor	Mentor	Staff Pathologist, CPMC
2006 - 2007	Judy Pang	Cytopathology	Co-Mentor/Clinical Mentor	Mentor	University of Michigan Faculty

Dates	Name	Fellow	Mentor Role	Faculty Role	Current Position
2007 - 2008	Annemieke van Zante	Cytopathology	Co-Mentor/Clinical Mentor	Mentor	Associate Professor, UCSF
2007 - 2008	Becky Swain	Cytopathology	Co-Mentor/Clinical Mentor	Mentor	Private Practice
2008 - 2009	Joan Bernard	Cytopathology	Co-Mentor/Clinical Mentor	Mentor	Staff Pathologist, Sacramento VAMC
2008 - 2009	Veronica Velasco	Cytopathology	Co-Mentor/Clinical Mentor	Mentor	University of Oklahoma Faculty
2009 - 2010	Stephanie McAlhany	Cytopathology	Co-Mentor/Clinical Mentor	Mentor	Private Practice
2009 - 2010	Poonam Vohra	Cytopathology	Co-Mentor/Clinical Mentor	Mentor	ZSFG Faculty
2010 - 2011	Maria Serrano-Correa	Cytopathology	Co-Mentor/Clinical Mentor	Mentor/Associate Program Director	Private Practice
2010 - 2011	Renu Yu	Cytopathology	Co-Mentor/Clinical Mentor	Mentor/Associate Program Director	Private Practice
2011 - 2012	Khaing win	Cytopathology	Career Mentor, Co-Mentor/Clinical Mentor	Mentor/Associate Program Director	Private Practice
2011 - 2012	Nancy Ciau	Cytopathology	Co-Mentor/Clinical Mentor	Mentor/Associate Program Director	Private Practice
2012 - 2013	Brandie Firetag	Cytopathology	Co-Mentor/Clinical Mentor	Mentor/ Program Director	Private Practice
2012 - 2013	Sara Barcia	Cytopathology	Co-Mentor/Clinical Mentor	Mentor/ Program Director	Private Practice

Dates	Name	Fellow	Mentor Role	Faculty Role	Current Position
2013 - 2014	Sarah Calkins	Cytopathology	Co-Mentor/Clinical Mentor	Mentor / Program Director	UCSF Faculty
2013 - 2014	James M. Lindsey	Cytopathology	Co-Mentor/Clinical Mentor	Mentor/ Program Director	Private Practice
2014 - 2015	Tara Saunders	Cytopathology	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Mentor/Program Director	UCSF Faculty
2014 - 2015	Vijay George	Cytopathology	Co-Mentor/Clinical Mentor	Mentor/Program Director	Private Practice
2015 - 2016	Patricia Goldhoff	Cytopathology	Co-Mentor/Clinical Mentor	Mentor/Program Director	Private Practice
2015 - 2016	Dianna Ng	Cytopathology	Research/Scholarly Mentor, Co-Mentor/Clinical Mentor	Mentor/Program Director	ZSFG Faculty
2016 - 2017	Nhu Thuy Can	Cytopathology	Research/Scholarly Mentor, Career Mentor, Co-Mentor/Clinical Mentor	Mentor/Program Director	Private Practice
2016 - 2017	Joshua Menke	Cytopathology	Career Mentor, Co-Mentor/Clinical Mentor	Mentor/Program Director	ZSFG Faculty
2017 - 2018	Shweta Agarwal	Cytopathology	Career Mentor, Co-Mentor/Clinical Mentor	Mentor/Program Director	Academic Faculty
2017 - 2018	Jeanette Ruiz	Cytopathology	Career Mentor, Co-Mentor/Clinical Mentor	Mentor/Program Director	ZSFG Faculty

Dates	Name	Fellow	Mentor Role	Faculty Role	Current Position
2018 - 2019	Soo-Ryum Yang	Cytopathology	Career Mentor, Co-Mentor/Clinical Mentor	Mentor/Program Director	Current Fellow
2018 - 2019	Nancy Greenland	Cytopathology	Career Mentor, Co-Mentor/Clinical Mentor	Mentor/Program Director	Current Fellow

FACULTY MENTORING

Dates	Name	Position while Mentored	Mentor Type	Mentoring Role	Current Position
2015 - 2016	Tara Saunders	Clinical Instructor	Co-Mentor/Clinical Mentor	Attending	Assistant Clinical Professor, UCSF
2015 - 2016	Vanessa Ma	Clinical Instructor	Co-Mentor/Clinical Mentor	Attending	Pathologist, Private Practice
2016 - 2017	Patricia Goldhoff	Clinical Instructor	Co-Mentor/Clinical Mentor	Attending	Pathologist, Private Practice
2017 - 2018	Vighnesh Walavalkar	Assistant Clinical Professor	Co-Mentor/Clinical Mentor	Attending	Assistant Clinical Professor
2017 - 2018	Nicholas Lau	Clinical Instructor	Co-Mentor/Clinical Mentor	Attending	Pathologist, Private Practice

VISITING FACULTY MENTORED

2012 - 2012	Hooman Khaki, M.D.	Tehran University, Iran
2013 - 2013	Reza Lankarani, M.D.	Shiraz University, Iran
2017 - 2017	Nadia Naderi, M.D.	Marin General Hospital

RESEARCH AND CREATIVE ACTIVITIES

RESEARCH AND CREATIVE ACTIVITIES SUMMARY

I am involved in a multi-centric study on hyalinizing trabecular tumor (HTT) along with other expert thyroid pathologists. It is recently shown that GLIS fusions are the characteristic genetic events in these tumors. Specific goals of the study are (1) to establish long-term outcome of

tumors with HTT morphology and GLIS fusions, with the possibility to reclassify these tumors back to hyalinizing trabecular adenoma if data support it, and (2) to establish (or disprove) the existence of its malignant counterpart, hyalinizing trabecular carcinoma (HTC).

I have been involved in a research study that has shown PTH hypersecretion is triggered by GABAB1 and Ca²⁺-sensing receptor heterocomplex in hyperparathyroidism. The results of this study are submitted to Nature Metabolism and currently under revision. Furthermore we have recently submitted a grant proposal to study regulation of parathyroid functions by G-protein coupled receptor. The specific goals of the study are (1) define the role of GABAB1R/CaSR heteromer in mediating PTH hypersecretion, (2) delineate the role and regulation of parathyroid GAD1/2 in mediating PTH hypersecretion, and (3) characterize the mechanism by which GABAR2R regulates CaSR signaling. The grant is scored 3%, and has just passed Council Review and moved in to Just-in-time phase for the expected date of July 1, 2019.

I am also involved in a randomized , open-label, phase II open platform study evaluating the efficacy and safety of novel spartalizumab (PDR001) combinations in previously treated unresectable or metastatic melanoma. My role is a consultant pathologist to evaluate the tissue adequacy.

RESEARCH AWARDS - CURRENT

1.	PI	Khanafshar (PI)
	UCSF CCGL Departmental Fund	
	Validation of a Clinicopathologic Algorithm for Molecular testing of Thyroid Nodules with Indeterminate Cytology	\$ 10,500 total

The role of thyroid FNA biopsy is to reduce unnecessary surgical intervention, helping to decrease both healthcare costs and risk of serious post-surgical complications. For the majority of cases clinicians are able to confidently manage patients without further testing. The false negative and false positive rates of thyroid FNA have both been reported to be less than 1% (1). However, atypia of undetermined significance/follicular lesion of undetermined significance (AUS/FLUS, category III), as defined by the Bethesda System for Reporting Thyroid Cytopathology (TBSRTC), accounts for 4-10.4% of thyroid FNAs on liquid-base preparations, with a 5-15% risk of malignancy (2-4). A diagnosis of AUS/FLUS is used for specimens with limitations due to adequacy or preparation, specimens with incongruent clinical and cytologic features, or cases with architectural or cytologic atypia. TBSRTC recommends that AUS/FLUS should represent less than 7% of specimens, since an excess of AUS/FLUS diagnoses would lead to suboptimal patient management. At UCSF, a review of 2,781 cases from 1997-2004 revealed an AUS/FLUS rate of 8.1% using direct smears (unpublished data). Several studies have evaluated the utility of molecular testing in the triage of indeterminate thyroid nodules by FNA using Gene Expression Classifiers (GEC), targeted next-generation sequencing (ThyroSeq2.0 panel), and 7 or 8 oncogene panels with variable results (5-8). In one study assessing mutations in AUS/FLUS specimens, RAS mutations were the most common genetic alteration detected (NRAS, HRAS, KRAS); other mutations and gene fusions identified included PTEN, EIF1AX, BRAF V600E, BRAF K601E, TSHR, THADA, PPAR-gamma, NTRK3, NTRK1 and ALK (9). The majority of cancers (20/22) were classified correctly using the ThyroSeq2.0 panel with a sensitivity of 90.9%, specificity of 92.1%, positive predictive value of 76.9%, and negative predictive value of 97.2% (9). The American Thyroid Association Statement on Surgical Application of Molecular Profiling for Thyroid Nodules recognizes that the performance of molecular testing varies based on thyroid cancer prevalence and institutional FNA accuracy. Although, the ATA provides recommendations on patient management of patients with AUS/FLUS based on molecular testing, ranging from active surveillance to oncologic thyroidectomy, it also suggests that interpretation of molecular testing must be made in the context of the clinical, pathologic and radiologic data (8). This study will serve to validate a clinicopathologic algorithm for molecular testing of thyroid nodules with FNA diagnoses of AUS/FLUS at UCSF. We will determine whether a targeted next generation sequencing (NGS) assay can offer significant improvement in diagnosis of AUS/ FLUS nodules at UCSF. Based on the results of this study, we will design an algorithmic approach for AUS/FLUS specimens. Hypothesis: We hypothesize that the addition of molecular testing on AUS/FLUS specimens will reduce the need for repeat biopsies, provide information to guide patient management, and potentially decrease unnecessary surgeries or the need for completion thyroidectomies. Preliminary data: A review of 2,781 cases from 1997-2004 revealed an AUS/FLUS rate of 8.1%. 57 cases with FNA diagnoses of ' AUS/FLUS' or ' indeterminate' have been identified through a CoPath search (2015-2016). Proposed study: Cytologic smears from 20 cases with a diagnosis of AUS/FLUS and a corresponding histologic resection will be retrieved from the UCSF Pathology Archives. The direct smears will be assessed for cellularity and adequate tumor content for genomic analysis. Follicular cells from 20 patients will be manually macrodissected from the direct smears and submitted for next generation sequencing by the UCSF Clinical Cancer Genomics Laboratory. Analysis of the sequencing data will be performed by the study investigators under the guidance of Dr. Joseph. Sanger sequencing of any recurrently mutated genes will be performed on an expanded cohort of AUS/FLUS cases. The cytologic, histologic and molecular findings will be correlated. Conclusion and Future Directions: This study will help elucidate critical molecular changes in thyroid nodules with diagnoses of AUS/FLUS, and will evaluate the performance of a targeted NGS panel, and determine how it can help guide patient management.

Principal Investigator

RESEARCH AWARDS - SUBMITTED

1. Pending	Consultant	\$10,000/year % effort	Wenhan Chang (PI)
NIH		07/01/2019	06/30/2021
Regulation of Parathyroid Functions By G-Protein Coupled Receptors			
The grant proposal was scored 3% and has passed Council Review and moved to Just-in- time phase for the effective date of July 1, 2019			
Consultant			

RESEARCH AWARDS - PAST

1. Attwater Foundation		Jan 2008	July 2010
"Towards the eradication of HER2-driven breast cancer", 5% effort, Mark M. Moasser, P.I. Role: co-investigator.		\$ 150,000 direct/yr 1	

2. UC CRCC

	2009	2010
"Using matrix metalloproteinase gene and protein expression profiles to determine the risk of central neck lymph node metastasis in Papillary thyroid cancer", 10% effort, Wen T. Shen, P.I. Role: collaborator		

3. California Breast Cancer
Research Program

	2010	2011
"Towards the eradication of HER2-driven breast cancer", 5% effort, Mark M. Moasser, P.I., 160B-0150, Role: co-investigator		

4. NIH/NCI P30 CA82103 Co-Investigator

Cancer Center Support Grant, 5% effort, McCormick, P.I. CCSG. 556168-29610.	2008	2016
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5. IRB # 12-09102

Principal Investigator

UCSF Endowment for resident Research project

06/04/2012 06/03/2015

Hyalinizing Trabecular carcinoma: Case report and Molecular Profile

PEER REVIEWED PUBLICATIONS

1. A Yu, JM Vierling, SD Colquhoun, WS Arnaout, CK Chan, E Khanafshar, SA Geller, WS Nichols, T-L Fong, Transmission of Hepatitis B Infection from Hepatitis B Core Antibody Positive Liver Allografts is Prevented by Lamivudine Therapy , Transplantation, 2001; 7:513-517
2. A Marchevsky, S Lau, E Khanafshar, C Lockhart, A Phan, PJ Michaels, M Fishbein, Web Based Teleconferencing Methods for Telepathology Consultations from Lung and Heart Transplant Patients , Human Pathology, 2002; 33(4): 410-414.
3. E Khanafshar, J Phillipson, DP Schammel, L Minobe, J Cymerman, N Weidner, Inflammatory myofibroblastic tumor of the breast , Ann Diagn Pathol, 2005 Jun; 9(3): 123-9.
4. GG Fernandez-Ranvier, K Jenson, E Khanafshar, JM Quivey, C Glestonbury, E Kebebew, QY Duh, OH Clark, Nonfunctioning Parathyroid Carcinoma: A Case Report and a Review of the Literature , Endocr Pract. 2007 Nov-Dec;13(7):750-7.
5. GG Fernandez-Ranvier, E Khanafshar, K Jenson, R Zarnegar, J Lee, E. Kebebew, QY Duh, O Clark, Parathyroid Carcinoma, Atypical Parathyroid Adenoma or Parathyromatosis? , Cancer. 2007 Jul 15;110(2):255-64.
6. RS Sippel, DM Elaraj, E Khanafshar, E Kebebew, QY Duh, O Clark, Does the Presence of Additional Thyroid Nodules on Ultrasound Alter the Risk of Malignancy in Patients with a Follicular Neoplasm of the Thyroid? , Surgery, 2007 Dec;142(6):851-7.
7. RS Sipple, DM Elaraj, E Khanafshar, R Zarnegar, E Kebebew, QY Duh, O Clark, Tumor Size Predicts Malignant Potential in Hurtle Cell Neoplasms of the Thyroid ,World J Surg, World J Surg. 2008 May; 32(5):702-7.
8. Suppressor Genes for Adrenocortical Carcinoma by Expression Profile of Genes on Chromosome 11q13 , World J Surg, DOI 10.1007/s00268-008-9521-0.
9. D Shibru, J Hwang, E Khanafshar, QY Duh, O Clark, E Kebebew, Does The Three-Gene Diagnostic Assay Accurately Distinguish Benign from Malignant Thyroid Neoplasms? , Cancer. 2008 Sep 1; 113(5):930-5.
10. GG Fernandez-Ranvier, J Weng, RF Yeh, E Khanafshar, I Suh, C Baker, QY Duh, O Clark, E Kebebew, Identification of biomarkers of adrenocortical carcinoma using genomewide gene expression profiling , Arch Surg. 2008 Sep;143(9):841-6
11. DT Ruan, RS Warren, J Moalem, KW Chung, AC Griffin, W Shen, QY Duh, E Nakakura, DB Donner, E Khanafshar, J Weng, OH Clark, E Kebebew, Mitogen-inducible gene-6 expression correlates with survival and is an independent predictor of recurrence in BRAF(V600E) positive papillary thyroid cancer , Surgery. 2008 Dec;144(6):908-14.

12. GG Fernandez-Ranvier, E Khanafshar, D Tacha, M Wong, E Kebebew, QY Duh, OH Clark, Defining a molecular phenotype for benign and malignant parathyroid tumors , *Cancer*. 2009 Jan 15;115(2):334-44.
13. MA Guerrero, MR Vriens, I Suh, E Khanafshar, OH Clark, Intraoperative diagnostic strategy to differentiate parathyroid adenoma from metastatic thyroid cancer , *Endocr Pract*. 2009 July/August; 15(5):454-457.
14. W Moses, J Weng, E Khanafshar, QY Duh, O Clark, E Kebebew, Multiple genetic alterations in papillary thyroid carcinoma are associated with younger age at presentation , *J Surg Res*. 2010 May 15;160(2):179-83.
15. MA Guerrero, S Lindsay, I Suh, MR Vriens, E Khanafshar, WT Shen, J Gosnell, E Kebebew, "Medullary Thyroid Cancer: It is a pain in the Neck?", *J of Cancer*, 2011; 2:200-205.
16. G Meyer-Rochow, N Jackson, J Conaglen, D Whittle, M Kunnimalaiyaan, H Chen, G Westin, J Sandgren, P S, E Khanafshar, D Shibru, Q-Y Duh, O Clark, E Kebebew, A Gill, R Clifton-Bligh, B Robinson, D Benn, S Sidhu, MicroRNA profiling of benign and malignant pheochromocytoma tumors identifies novel diagnostic and therapeutic targets , *Endocr Relat Cancer*, 2010. 17(3):835-46.
17. W Moses, J Weng, I Sansano, M Peng, E Khanafshar, BM Ljung, QY Duh, OH Clark, E. Kebebew, Molecular testing for somatic mutations improves the accuracy of Thyroid fine-needle aspiration biopsy , *World J surg*. 2010. 34(11):2589-94.
18. A Mathur, W Moses, E Khanafshar, R Rahbari, QY Duh, O Clark, E Kebebew, "Higher prevalence of somatic mutations in papillary thyroid cancer over time ", *Cancer*, 2011. 117(19): 4390-95. doi: 10.1002/cncr.26072.
19. C C Wang, L Friedman, G C Kennedy, H Wang, E Kebebew, D L Steward, M A Zeiger, W H Westra, Y Wang, E Khanafshar, G Fellegara, J Rosai, V LiVolsi, R Lanman, A large multicenter correlation study of thyroid nodule cytopathology and histopathology , *Thyroid*. 2011 Mar;21(3):243-52.
20. E Khanafshar, RV Lloyd, The spectrum of papillary thyroid carcinoma variants , *Adv Anat Pathol*. 2011 Jan; 18(1) 90-7.
21. RV Lloyd, DG Buehler, E Khanafshar, " Papillary thyroid carcinoma variants" , *Head Neck Pathol*. 2011 Mar;5(1):51-6.
22. R Rahbari, AK Holloway, M He, E Khanafshar, OH Clark, E Kebebew, " Identification of Differentially Expressed MicroRNA in Parathyroid Tumors" ' *Ann Surg Oncol*. 2011 Apr;18(4):1158-65.
23. J Moalem, DX Choi, E Khanafshar, DT Ruan, KA Woeber, OH Clark, E Kebebew, " Delayed diagnosis of metastatic papillary thyroid cancer misdiagnosed as non-small cell lung cancer" , *Thyroid*. 2011 Mar;21(3):319-23.
24. DS Spassov, CH Wong, S McDonough, P Phojanakong, D Wang, B Hann, P Yaswen, E Khanafshar, MM Moasser, " A tumor suppressing function in the epithelial adhesion protein Trask" , *Oncogene*. 2012 Jan 26;31(4):419-31. doi: 10.1038/onc.2011.246. Epub 2011 Jun 27.
25. E Khanafshar, AM van Zante, " Parathyroid carcinoma: Problems in Diagnosis" , *Pathology Case Reviews: July/August 2011 - Volume 16 - Issue 4 - pp 157-160*.

26. E Khanafshar, B-M Ljung, " Ultrasound Guided Fine Needle Aspiration of a Pleomorphic Adenoma in the Deep Lobe of the Parotid Gland and an Elastofibroma in the Shoulder", Pathology Case Reviews: January/February 2013 - Volume 18 - issue 1 - pp 43-47.
27. A. J. Chien, G. Auerback, H. S. Rugo, M. Melisko, P. N. Munster, E. Khanafshar, K. G. Ordovas, E. F. Petricoin, K. M. Koch and M. M. Moasser, "A phase I dose escalation study of 5-day intermittent oral lapatinib therapy in patients with HER2-overexpressing breast cancer", J Clin Oncol. 2014 May 10;32(14):1472-9. doi: 10.1200/JCO.2013.52.1161. Epub 2014 Apr 7.
28. T. Saunders, T. Miller, E. Khanafshar, "Intrapancreatic accessory spleen: utilization of fine needle aspiration for diagnosis of a potential mimic of a pancreatic neoplasm", J of Gastrointestinal Oncol. 2015 Feb 09. doi: 10.3978/j.issn.2078-6891.2015.030.
29. E. Shugard¹, J. Chen, J. M. Quivey, C Glastonbury, E. Khanafshar, A. Garsa, J.R. George, S. S. Yom, "Does Radiation Dose Matter in Thyroid Cancer?: Patterns of Local-Regional Failure in Recurrent and Metastatic Well-Differentiated Thyroid Cancers Treated with Dose-Painted Intensity-Modulated Radiation Therapy", J of Medical Imaging and Radiation Oncology 2016 Aug;60(4): 560-7. doi: 10.1111/1754-9485. Epub 2016 Mar 28.
30. Y. Nikiforov YE, R. Seethala, G. Tallini, Z. Baloch, F. Basolo, L Thompson, J Barletta, B Wenig, A. Al Ghuzlan, K. Kakudo, T. Giordano, V. Alves, E. Khanafshar, S. Asa, A. El-Naggar, W. Gooding, S. Hodak, R. Lloyd, G. Maytal, O. Mete, M. Nikiforov, V. Nose, M. Papotti, D. Poller, P. Sadow, A. Tischler, R. Tuttle, K. Wall, V. LiVolsi, G. Randolph, R. Ghossein, "Nomenclature revision for Encapsulated Follicular Variant of Papillary Thyroid Carcinoma: A Paradigm Shift to Reduce Overtreatment of Indolent Tumors", JAMA Oncol.2016 Apr 14. Doi:10.1001/jamaoncol.2016.0386.
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33. R Seethala, Z Baloch, J Barletta, E Khanafshar, O Mete, P Sadow, V LiVolsi, Y Nikiforov, G Tallini, L Thompson, "Noninvasive Follicular Thyroid Neoplasm with Papillary-Like Nuclear Features (NIFTP): A Review for Pathologists," Modern Pathology, 2018Jan;31(1):39-55.doi:10.1038/modpathol.2017.130. Epub 2017 Oct 20.
34. NT Can, KL White, S Calkins, BM Ljung, E Khanafshar, "Cytology Cases of the Week: An educational Tool that Improves Trainees Exposure to Cytology", Journal of American Society of Cytopathology, 2018 March-April; 2018 7(2): 106-110.https://doi.org/10.1016/j.jasc.2017.10.005.
35. T Beninato, WP Kluijfhout, F Thurston Drake, E Khanafshar, JE Gosnell, WT Shen, QY Duh, I Suh, "Squamous Differentiation in Papillary Thyroid Carcinoma: A Rare

Feature of Aggressive Disease", J Surg Res, 2018 Mar;223:39-45. doi: 10.1016/j.jss.2017.10.023. Epub 2017 Nov 9.

36. **K Kennichi, A El-Naggar, SP Hodak, E Khanafshar, Y Nikiforov, V Nose, L Thompson, "Noninvasive Follicular Thyroid Neoplasm with Papillary Like Nuclear Features (NIFTP) in Thyroid Tumor Classification", Pathol Int. 2018 Apr 19. doi: 10.1111/pin.12673. [Epub ahead of print]**
37. **R Sukpanish, E Khanafshar, I Suh, J Gosnell, "Case report of a neuroendocrine tumor of the thyroid gland with limited calcitonin expression: a diagnostic challenge", In press.**
38. **LM Han, E Khanafshar, A Afshar, SM Calkins, "The diagnostic Utility of Next-Generation Sequencing on Fine Needle Aspiration Biopsies of Melanocytic Uveal Lesions", In preparation.**
39. **W Chang, A Herberger, F Jean-Alphonse, CL Tu, Z Cheng, J Hwang, H Ho, A Li, D Wang, H Liu, AD White, I Suh, W Shen, QY Duh, E Khanafshar, DM Shoback, K Xiao, JP Vilardaga, "PTH Hypersecretion Triggered by a GABAB1 and Ca²⁺-sensing Receptor Heterocomplex in Hyperparathyroidism", Submitted to Nature Metabolism, in revision.**

BOOKS AND CHAPTERS

1. **E Khanafshar and N Weidner, "Applications of Immunohistochemistry in Breast Pathology". In: Immunomicroscopy: A Diagnostic Tool for the Surgical Pathologists: 3rd Edition, Elsevier Saunders, Nov 2005.**
2. **E Khanafshar and A van Zante, "Thyroid Cytology: Benefits and Problems". In: Textbook of Endocrine Surgery: 3rd Edition, Elsevier, 2015.**

SIGNIFICANT PUBLICATIONS

1. GG Fernandez-Ranvier, **E Khanafshar**, K Jenson, R Zarnegar, J Lee, E. Kebebew, QY Duh, O Clark, Parathyroid Carcinoma, Atypical Parathyroid Adenoma or Parathyromatosis? , Cancer. 2007 Jul 15;110(2):255-64.

I was responsible for all the clinical and histological correlation for this study. I also participated in writing and editing the manuscript.

2. D Shibrú, J Hwang, **E Khanafshar**, QY Duh, O Clark, E Kebebew, Does The Three-Gene Diagnostic Assay Accurately Distinguish Benign from Malignant Thyroid Neoplasms? , Cancer. 2008 Sep 1; 113(5):930-5.

I was responsible for all the histological correlation for this study. I also participated in writing and editing the manuscript.

3. GG Fernandez-Ranvier, **E Khanafshar**, D Tacha, M Wong, E Kebebew, QY Duh, OH Clark, " Defining a molecular phenotype for benign and malignant parathyroid tumors" , Cancer. 2009 Jan 15;115(2):334-44.

I designed and interpreted the immunohistochemical studies which established that stains such as Parafibromin, Galectin-3 and Rb can be helpful in distinguishing benign and malignant parathyroid tumors.

4. W Moses, J Weng, **E Khanafshar**, QY Duh, O Clark, E Kebebew, Multiple genetic alterations in papillary thyroid carcinoma are associated with younger age at presentation , J Surg Res. 2010 May 15;160(2):179-83.

I was responsible for all the histological correlation for this study. I also participated in writing and editing the manuscript.

5. **E Khanafshar**, RV Lloyd, “ The spectrum of papillary thyroid carcinoma variants” , Adv Anat Pathol. 2011 Jan;18(1):90-7.

I was the primary author on this review of the literature. I went through the process of literature review, writing and publication.

6. RV Lloyd, DG Buehler, **E Khanafshar**, “ Papillary thyroid carcinoma variants” , Head Neck Pathol. 2011 Mar;5(1):51-6.

I was the senior author on this review of literature. I overviewed the process of literature review, writing and publication.

7. Y. Nikiforov YE, R. Seethala, G. Tallini, Z. Baloch, F. Basolo, L. Thompson, J. Barletta, B. Wenig, A. Al Ghuzlan, K. Kakudo, T. Giordano, V. Alves, **E. Khanafshar**, S. Asa, A. El-Naggar, W. Gooding, S. Hodak, R. Lloyd, G. Maytal, O. Mete, M. Nikiforov, V. Nose, M. Papotti, D. Poller, P. Sadow, A. Tischler, R. Tuttle, K. Wall, V. LiVolsi, G. Randolph, R. Ghossein, "Nomenclature revision for Encapsulated Follicular Variant of Papillary Thyroid Carcinoma: A paradigm Shift to Reduce Overtreatment of Indolent Tumors", JAMA Oncol.2016 Apr 14. Doi:10.1001/jamaoncol.2016.0386.

I was part of this internationally-known endocrine panel to help reclassify one of the variant of papillary thyroid carcinoma.

8. D Ng, NT Can, ZV Ma, A van Zante, BM Ljung, **E Khanafshar**, "Cytomorphological Features of Noninvasive Follicular Thyroid Neoplasm with Papillary-Like Nuclear Features (NIFTP): A Comparison with Infiltrative Follicular Variant of Papillary Thyroid Carcinoma", Journal of Basic and Clinical Med. 2017 1(1): 51-56.

I was the senior author on this special edition of NIFTP. The publication is one of the few publications on cytological features of newly described NIFTP.

9. R Seethala, Z Baloch, J Barletta, E Khanafshar, O Mete, P Sadow, V LiVolsi, Y Nikiforov, G Tallini, L Thompson, "Noninvasive Follicular Thyroid Neoplasm with Papillary-Like Nuclear Features (NIFTP): A Review for Pathologists," Modern Pathology, 2018Jan;31(1):39-55.doi:10.1038/modpathol.2017.130. Epub 2017 Oct 20.

I was one of the author on this manuscript about pathological features of NIFTP written by internationally-known endocrine faculty.

CONFERENCE ABSTRACTS

1. S Lau, A Marchevsky, C Felton, W Yong, C Lockhart, E Khanafshar, A Phan, "Web Based Teleconferencing Techniques as Inexpensive Tools for Telepathology Consultations," E-Poster Abstract, Advancing Pathology Informatics, Imaging, and the Internet, <http://apiii.upmc.edu/ab-cedar.htm>

2. A Marchevsky, E Khanafshar, C Lockhart, "Web Based Teleconferencing Techniques as Inexpensive Tools for Telepathology Consultations: A Study of Transbronchial Biopsies from Lung Transplant Patients," *Modern Pathology*, 2000; 13:213A.
3. E Khanafshar, T-L Fong, RC Chan, WS Nichols, SA Geller, "3TC Protects Hepatitis B Core Antibody Positive Liver Allograft Recipients from Hepatitis B," *Modern Pathology*, 2001; 14:197A.
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9. Patricia Goldhoff, Poonam Vohra, Elham Khanafshar, Britt-Marie Ljung, "Fine Needle Aspiration Biopsy Samples of Liver Lesions Yields higher Percentage of Tumor Cells for Molecular Studies: A Direct Comparison to Concurrent Core Biopsy," *USCAP Annual Meeting 2016*, poster presentation, Seattle, WA
10. Dianna Ng, Zheng Vanessa Ma, Britt-Marie Ljung, Elham Khanafshar, "Cytology/Histology Correlation of Follicular Variant of Papillary Thyroid Carcinoma: The UCSF Experience," *USCAP Annual Meeting 2016*, poster presentation, Seattle, WA
11. Nhu Thuy Can, Kristie White, Sarah Calkins, Britt-Marie Ljung, Elham Khanafshar, "Cytology Cases of the Week: Five Years of Data on an Educational Tool That Improve Trainee Exposure to Cytology," *USCAP Annual Meeting 2017*, platform presentation, San Antonio, TX
12. Nhu Thuy Can, Kristie White, Sarah Calkins, Britt-Marie Ljung, Elham Khanafshar, "Cytology Cases of the Week: Five Years of Data on an Educational Tool That Improves Trainee Exposure to Cytology," *UCSF Educational Showcase 2017* mini-oral presentation, San Francisco, CA
13. Elham Khanafshar, Sarah Calkins, "Equitable Cytopathology Workload Distribution can be Achieved Using Royal College of Pathologists Guidelines," *USCAP Annual Meeting 2018*, poster presentation, Vancouver, BC
14. Jeanette Ruiz, Joshua Menke, Elham Khanafshar, Britt-Marie Ljung, "Novel Fine Needle Aspiration for Collecting Abdominal Fat Pad Cell Block for Amyloid Testing," *USCAP Annual Meeting 2018*, poster presentation, Vancouver, BC

15. Shweta Agawal, Jill Grochowski, Elham Khanafshar, "Dynamic Telepathology for Rapid Adequacy Assessment of Cytology Specimens Saves Valuable Time for the Cytopathologist: An Institutional Experience," USCAP Annual Meeting 2018, platform presentation, Vancouver, BC
16. Lucy M Han, Elham Khanafshar, Armin Afshar, Sarah M. Calkins, " The Diagnostic Utility of Next Generation Sequencing on Fine Needle Aspiration Biopsies of Melanocytic Uveal Lesions", USCAP Annual Meeting 2019, platform presentation, National Harbor, DC

ACADEMIC LEADERSHIP

As the Cytopathology Fellowship Director, a member of Cytopathology Clinical Competency Committee, and chair of Cytopathology Program Evaluation Committee, I oversee the fellowship program, and teaching curriculum. I provide individual educational strategies and learning plan for fellows. I do direct one-on-one instruction on cytopathology.

OTHER CREATIVE ACTIVITIES

1. *Mechanisms of Tumorigenesis Induced by Feline Leukemia Virus Proviral Integration with Yan Shi & P Roy Burman, Department of Pathology, School of Medicine, University of Southern California, 1998-1999. (research activity)*
2. *Clinical & Pathological Study of Basal Cell Carcinoma . Department of Pathology, Tehran University of Medical Sciences, 1996-1997. (research activity)*
3. *Growth Curve Study of Children Under One Year Old , Department of Health, Tehran University of Medical Sciences, 1996. (research activity)*
4. I was one of the three pathologists, along with Drs. Ljung and Ramachandran, who revised the Syllabus for "Endocrine and Cytopathology Lab" on Metabolism and Neoplasia Block. This block is one of the labs that the first year medical students take.

ADDITIONAL RELEVANT INFORMATION

I am the Director of Cytopathology Fellowship Program since Oct 2012 and has taken over the fellowship program responsibilities. I am responsible for fellows' education, evaluation, recruitment, administration, regulatory compliance, and mentoring.