University of California, San Francisco CURRICULUM VITAE

Name: Julia Ye

Position: Assistant Professor of Clinical Pathology, Step 2

Pathology

School of Medicine

Address: 1825 4th Street, L2181

University of California, San Francisco

San Francisco, CA 94158 Voice: 415-353-1613 Fax: 415-514-2346 Email: julia.ye@ucsf.edu

EDUCATION

2006 - 2010	Harvard University	A.B.	summa cum laude and Phi Beta Kappa Molecular and Cellular Biology, minor in Germanic Languages and Literatures	Jeffrey D. Macklis
2010 - 2019	University of California, San Francisco Medical Scientist Training Program	M.D.	Medicine	
2010 - 2019	University of California, San Francisco Medical Scientist Training Program	Ph.D.	Biomedical Sciences	Robert Blelloch
2019 - 2023	University of California, San Francisco	Resident Physician	Anatomic Pathology and Laboratory Medicine	
2023 - 2024	University of California, San Francisco	Clinical Fellow	Breast Pathology	
2024 - 2024	Mass General Brigham	Visiting Scholar	Breast Pathology	Stuart Schnitt, Susan Lester

2024 - 2025 University of Clinical Cytopathology

California, San Fellow

Francisco

LICENSES, CERTIFICATION

2022 Medical License (#A177599), Medical Board of California
2023 American Board of Pathology Certification, Anatomic Pathology (6/3/2023)
2023 American Board of Pathology Certification, Clinical Pathology (6/3/2023)

HONORS AND AWARDS

HUNURS AND	AWARDS	
2006	National Merit Scholar (PSAT score 240)	National Merit Scholarship Corporation
2007	Detur Book Prize (awarded to top 5% of Harvard freshman class)	Harvard College
2007	Harvard College Program for Research in Science and Engineering (PRISE) fellow	Harvard College
2007	John Harvard Scholar (awarded to top 5% of students each academic year)	Harvard College
2008	Harvard Stem Cell Institution (HSCI) Internship Program (HIP) summer intern	Harvard College
2009	Phi Beta Kappa ("junior 24" election, awarded to top 1.5% of Harvard junior class)	Harvard College
2010	Medical Scientist Training Program	University of California, San Francisco
2012	Julia Ye Science Scholarships created at Lowell High School, San Francisco, CA in honor of my work on the UCSF- Lowell Science Research Program	Lowell High School
2014	Moritz-Heyman UCSF Discovery Fellow (awarded to outstanding Ph.D. students to serve as ambassadors for initiative and basic science education at UCSF)	University of California, San Francisco
2015	Nominated to the AAAS/Science Program for Excellence in Science	American Association for the Advancement of Science

2020 Julius R. Krevans Award for Clinical

Excellence, UCSF/ZSFG Department

of Anatomic Pathology (awarded to outstanding intern)

University of California, San Francisco, Zuckerberg San Francisco General

Arthur Purdy Stout Society of Surgical

Hospital

Arthur Purdy Stout Society Stipend

Award recipient (awarded to

Pathologists

outstanding trainee for study at another institution; studied with Stuart Schnitt)

PROFESSIONAL ACTIVITIES

MEMBERSHIPS

2024

2009 - present Phi Beta Kappa, Alpha-lota of Massachusetts, Member

2021 - present College of American Pathologists, Junior member

2022 - present American Society of Cytopathology, Fellow member

2022 - present United States and Canadian Academy of Pathology, Trainee member

INVITED PRESENTATIONS - INTERNATIONAL

2023 "Pitfalls of keratin and p63 expression and utility of targeted Platform presenter

> DNA sequencing and HMGA2 in malignant phyllodes tumors of the breast," United States and Canadian

Academy of Pathology (USCAP) annual meeting, abstract

#1699

2024 "Diagnostically problematic morphologic permutations of Platform presenter

> atrophy and of HSIL in cervical biopsies/excisions from transmasculine patients using androgens for gender affirmation," United States and Canadian Academy of Pathology (USCAP) annual meeting, abstract #999

2024 Ultrasound Fine Needle Aspiration Biopsy Workshop, Workshop co-

American Society of Cytopathology (ASC) Annual Meeting, leader

Orlando, Florida

INVITED PRESENTATIONS - REGIONAL AND OTHER INVITED PRESENTATIONS

2024 "Ask Your Pathologist" Multi-headed Microscope Science Co-presenter

> Demonstration. Taste for the Cure: A Taste of Science, UCSF Carol Franc Buck Breast Care Center, San

Francisco CA

CONTINUING EDUCATION AND PROFESSIONAL DEVELOPMENT ACTIVITIES

2020 United States and Canadian Academy of Pathology Annual Meeting, Los

Angeles, California

2023	United States and Canadian Academy of Pathology Annual Meeting, New Orleans, Louisiana
2023	"Solving diagnostic problems in breast pathology" interactive microscopy course, United States and Canadian Academy of Pathology, Palm Springs, California
2024	United States and Canadian Academy of Pathology Annual Meeting, Baltimore, Maryland
2024	American Society of Cytopathology Annual Meeting, Orlando, Florida
2025	United States and Canadian Academy of Pathology Annual Meeting, Boston, Massachusetts

UNIVERSITY AND PUBLIC SERVICE

SERVICE ACTIVITIES SUMMARY

My major contributions to the Pathology Department to date have been in the realm of education. As a medical student, I helped develop pathology teaching materials and created learning modules and self-assessments for the UCSF School of Medicine pathology curriculum. I also helped to design the current format of the pathology small groups for the UCSF School of Medicine Bridges Curriculum. As a resident, I helped to develop an annual near-peer Boards preparation session and generated a living document of advice from residents and fellows who had most recently taken Anatomic Pathology and Clinical Pathology Board Exams. I also helped to develop the UCSF Anatomic Pathology Resident Orientation, which was a new curriculum that was built from the ground up in 2023. For the orientation experience, I created and led the Microscopy Skills course, which teaches incoming residents how to use the microscope. In addition, I created from scratch a digital microscopy teaching set for Cytopathology using PathPresenter, which has been well-received by residents and other learners.

My community and public service work primarily focuses on outreach at the pre-professional level. In 2010, I co-founded the UCSF-Lowell Science Research Program (UCSF-LSRP), an after school and summer program based at San Francisco's public high school, Lowell. During the school year, the UCSF-LSRP teaches high school students about different aspects of STEM and career development through a series of volunteer-guided talks, discussion sessions, and hands-on activities. During the summers, the UCSF-LSRP secures placement for a select group of summer interns to work in UCSF research laboratories. Through my active recruitment of UCSF student and faculty volunteers, I coordinated summer research experiences for 67 students over 8 years. Under my leadership and mentorship, 6 students were named Siemens, Intel STS, or Intel ISEF semifinalists and finalists. To this day, I continue to volunteer my time with the UCSF-LSRP and mentor current and former students inspired to pursue careers in STEM.

UNIVERSITY SERVICE UC SYSTEM AND MULTI-CAMPUS SERVICE

2022 - 2024	UCSF Medical Center Results Review Task Force	Member
2023 - 2024	UCSF Graduate Medical Education Committee	Resident representative

SCHOOL OF MEDICINE

2012 - 2019 MSTP Student Council, UCSF Medical Scientist Training Class representative Program

DEPARTMENTAL SERVICE

2013 - 2019	Developed pathology teaching materials for medical students (mentor: Rageshree Ramachandran). Helped create learning modules and self-assessments for UCSF School of Medicine pathology curriculum. Helped design pathology small groups for UCSF School of Medicine Bridges Curriculum.	Lead
2020 - present	Lactation Committee, UCSF Department of Pathology	Member
2020 - 2021	Next Generation Technology Strategic Planning Committee, UCSF Department of Pathology	Member
2020 - 2021	Evidence-Based Personalized Care Strategic Planning Committee, UCSF Department of Pathology	Member
2022 - 2022	Quality improvement project to update UCSF test menu with information on various platelet refractory tests (mentor: Ashok Nambiar). Completed.	Lead
2022 - 2022	Quality improvement project to update UCSF test menu with information on anti-Xa testing (mentor: Scott Kogan). Completed.	Lead
2022 - present	Helped develop an annual near-peer Boards preparation session with associated living documents with advice from residents and fellows who have most recently taken Pathology Boards.	Lead
2024 - present	Helped develop Anatomic Pathology Resident Orientation curriculum. Created and led Microscopy Skills course.	Lead
2025 - present	Created and maintained digital microscopy teaching set for cytopathology using PathPresenter.	Lead
2025 - present	Quality improvement project to assess intradepartmental changes in diagnostic thresholds for thyroid fine needle aspiration specimens (mentors: Annemieke van Zante, Elham Khanafshar, Ronald Balassanian, Poonam Vohra). In progress.	Lead

COMMUNITY AND PUBLIC SERVICE

2010 - 2019 UCSF-Lowell Science Research Program. Created an after Co-founder, Co-school program teaching high school students about director

school program teaching high school students about science research. Coordinated summer research experiences for 67 high school students over 8 years. Under my leadership and mentorship, 6 students were named Siemens, Intel STS, or Intel ISEF semifinalists and

finalists.

2010 - present UCSF-Lowell Science Research Program. Volunteer

2011 - present Harvard Alumni Association Alumni interviewer

2016 - 2024 Lowell Alumni Association Elected member of

Board of Directors

2023 - present Lowell HS Annual College and Career Kick-off Volunteer

2024 - present Taste for the Cure: A Taste of Science, UCSF Carol Franc Co-presenter

Buck Breast Care Center, San Francisco CA. Co-led the "Ask Your Pathologist" multi-headed microscope science

demonstration.

TEACHING AND MENTORING

TEACHING SUMMARY

I have been deeply involved in teaching at the pre-professional level for many years. As the cofounder of the UCSF-LSRP (see Service Activities Summary above), I regularly taught the after school activities component of the program and created learning assessments for students in the summer research component. To this day, I continue to contribute to the UCSF-LSRP as a volunteer in the after school program.

I have been involved in teaching at the medical school level since I was a UCSF medical student myself. I have been a small group facilitator for a variety of different courses over the years. As a resident and fellow, I have primarily been involved in teaching the pathology small groups in the Life Stages block. I have also taught the CODA block Competency-Based Immersion Experiences (COBIEs) courses, for which I created and led the Microscopy Skills course.

I have also been active in teaching at the residency level. I helped develop the UCSF Anatomic Pathology Resident Orientation, for which I created and led the Microscopy Skills course. As a fellow, I led didactic and slide-based teaching sessions in breast pathology and cytopathology for residents and fellows. I also trained residents in palpation- and ultrasound-guided fine needle aspiration biopsy, direct smear preparation, and specimen triage for rapid on-site evaluation. Finally, I created and maintained a digital microscopy teaching set for cytopathology geared towards residents and other interested learners.

FORMAL TEACHING

Academic Yr	Course No. & Title	Teaching Contribution	School	Class Size
2016 - 2016	IDS 121B Airways, Blood and Circulation	Small group facilitator	Medicine	12
2016 - 2021	IDS 121A Ground School	Small group facilitator	Medicine	12
2017 - 2022	IDS 121C Renal, Endocrine, GI, Nutrition	Small group facilitator	Medicine	12
2018 - present	IDS 122A Life Stages	Small group facilitator	Medicine	12
2019 - 2019	IDS 121D Pathogens and Host Defenses	Small group facilitator	Medicine	12
2023 - present	IDS 115 PATH COBIE: Introduction to Microscopy Skills	Small group facilitator	Medicine	5
2023 - present	IDS 115 PATH COBIE: Pathology Trainee Perspectives	Small group facilitator	Medicine	5
2024 - present	Anatomic Pathology Resident Orientation: Helped develop orientation curriculum. Created and led Microscopy Skills course.	Lead	Medicine	10

INFORMAL TEACHING

- 2009 2009 Life Sciences 1a course facilitator (Harvard Life Sciences Department)
- 2024 present Anatomic Pathology Fellow Scope Sessions: Led didactic and slide-based teaching sessions in breast pathology and cytopathology for residents and fellows.
- 2024 present Near-peer Boards Preparation Session: Helped to create and lead an annual session to help junior residents understand strategies for preparing for Anatomic Pathology and Clinical Pathology Boards.
- 2024 present Ultrasound-guided fine needle aspiration skills sessions: Taught residents on the ZSFG Cytopathology rotation how to perform ultrasound-guided fine needle aspiration, make direct smears, and triage specimens for rapid on-site evaluation.

2025 - present Cytopathology rotation orientation sessions: Taught residents on the Mission Bay Cytopathology rotation how to perform palpation-guided fine needle aspiration, make direct smears, and triage specimens for rapid on-site evaluation.

MENTORING SUMMARY

As the co-founder of the UCSF-LSRP (see Service Activities Summary above), I personally advised and mentored dozens of Lowell High School students in their summer research endeavors and in their career development. As a member of the Lowell Alumni Association Young Alumni Mentoring Program, I also mentored young Lowell alumni seeking to build careers in STEM.

PREDOCTORAL STUDENTS SUPERVISED OR MENTORED

Dates	Name	Program or School	Mentor Type	Role	Current Position
2011 - 2013	Andrew Chan	Lowell High School	Research/Schola rly Mentor,Project Mentor,Career Mentor	Mentor in UCSF Lowell Science Research Program	Senior Principal AI Software Engineer, Northrop Grumman
2013 - 2015	Amy Tam	Lowell High School	Research/Schola rly Mentor,Project Mentor,Career Mentor	Mentor in UCSF-Lowell Science Research Program	Clinical Research Specialist, Boston Children's Hospital
2013 - 2015	Srinand Paruthiyil	Lowell High School	Career Mentor	Mentor in UCSF-Lowell Science Research Program	MSTP student, Washington University in St. Louis
2013 - 2015	Willa Li	Lowell High School	Career Mentor	Mentor in UCSF-Lowell Science Research Program	General Surgery resident, University of California, San Francisco
2014 - present	Jerry Wang	Lowell High School	Career Mentor	Mentor in UCSF-Lowell Science Research Program	MSTP student, University of California, San Francisco

Dates	Name	Program or School	Mentor Type	Role	Current Position
2015 - 2017	Kirby Leo	Lowell High School	Career Mentor	Mentor in UCSF-Lowell Science Research Program	MSTP student, Weill Cornell/Rock efeller/Sloan Kettering Tri- Institutional MSTP program
2019 - 2024	Chloe Zimovets	Lowell High School	Career Mentor	Mentor in Lowell Alumni Association Young Alumni Mentoring Program	Ph.D. student in Chemistry, Carnegie Mellon

RESEARCH AND CREATIVE ACTIVITIES

RESEARCH AND CREATIVE ACTIVITIES SUMMARY

My research interests lie predominantly in cytopathology and breast pathology. I am interested both in studying morphological and molecular features of pathologic entities and in studying the clinico-pathologic correlations of disease. My long-term goal is to participate in, enable, and establish interdisciplinary, as well as cross-institutional, studies that bring the power of pathology to work that may be clinically practice-changing.

With the support of Dr. Ron Balassanian and Dr. Poonam Vohra, I am collaborating with Dr. Jennifer Rosenbluth's lab on a study on DCIS organoids established from DCIS cells obtained through FNA and core biopsy of surgical excision specimens. Using DNA and RNA sequencing methodologies, we are studying the pathogenesis of DCIS as well as the mechanisms of treatment resistance, and we are screening for novel therapeutics.

In addition, with the support of Dr. Rick Baehner and Dr. Yunn-Yi Chen, I helped to establish a collaboration with Dr. Zoran Gatalica (Exact Sciences and Reference Medicine) and Dr. Semir Vranic (Qatar University). Together, we are studying the genomic features of invasive and in situ apocrine carcinomas, as well as benign apocrine proliferations, in an attempt to query their genetic relatedness and assess for the presence of therapeutically actionable mutations.

Finally, with the support of Dr. Sara Venters (I-SPY Pathology Liaison), I am leading a project within the I-SPY 2 breast cancer clinical trial to study potential pathologic markers of partial tumor response to neoadjuvant therapies to better characterize treatment effect on breast tumors that do not achieve pathologic complete response. A long-term goal would be to recommend updates to standard pathology reporting guidelines for breast cancers.

RESEARCH AWARDS - PAST

1. F30HD084120	Principal Investigator	100% % effort	Ye (PI)
NIH (NICHD)		04/01/2015	03/31/2018

Role of interleukin enhancer-binding factor 2 (IIf2) in mouse embryonic stem cells

2.	Co-Investigator		Rabban (PI)
,	Clinical Research Endowment of the UCSF Department of Anatomic Pathology (mentors: Joseph Rabban, Cynthia Gasper)	01/01/2022	12/31/2022

3. Rabban (PI)

Health Disparities Research Award, UCSF Departments of Anatomic Pathology and Laboratory Medicine Diversity, Equity, and Inclusion Committee (mentors: Joseph Rabban, Cynthia Gasper)

PEER REVIEWED PUBLICATIONS

1. 2014	Parchem RJ, <u>Ye J</u> , Judson RL, LaRussa MF, Krishnakumar R, Blelloch A, Oldham MC, Blelloch R. Two miRNA clusters reveal alternative paths in late-stage reprogramming. Cell Stem Cell. 2014 May 01; 14(5):617-31. PMID: 24630794
2. 2014	Ye J, Blelloch R. Regulation of pluripotency by RNA binding proteins. Cell Stem Cell. 2014 Sep 04; 15(3):271-280. PMID: 25192462
3. 2016	Kishi N, MacDonald JL, <u>Ye J</u> , Molyneaux BJ, Azim E, Macklis JD. Reduction of aberrant NF-κB signalling ameliorates Rett syndrome phenotypes in Mecp2-null mice. Nat Commun. 2016 Jan 29; 7:10520. PMID: 26821816
4. 2017	Ye J, Jin H, Pankov A, Song JS, Blelloch R. NF45 and NF90/NF110 coordinately regulate ESC pluripotency and differentiation. RNA. 2017 08; 23(8):1270-1284. PMID: 28487382
5. 2021	Ye J, Sheahon KM, LeBoit PE, McCalmont TH, Lang UE. BAP1-inactivated melanocytic tumors show prominent centrosome amplification and associated loss of primary cilia. J Cutan Pathol. 2021 Nov; 48(11):1353-1360. PMID: 34085298

6. 2022 Ye AQ, Reyes MF, Lester F, Ye J, Umetsu S, Poder L, Shum DJ, Choi HH. Boba sign with a twist - A variant presentation of a mature cystic teratoma complicated by torsion and rupture. Clin Imaging. 2022 Mar; 83:28-32. PMID: 34952488 7. 2022 Chen JV, Ohliger MA, Chung M, Sugi MD, Ye J, Nishimura SL, Choi HH. Diagnosis of acute mesenteric ischemia assisted by dual-energy CT: a case report. Emerg Radiol. 2022 Jun; 29(3):611-614. PMID: 35128620 8. 2023 Ye J, Croom N, Troxell ML, Kambham N, Zuckerman JE, Andeen N, Dall'Era M, Hsu R, Walavalkar V, Laszik ZG, Urisman A. Non-Full House Membranous Lupus Nephritis Represents a Clinically Distinct Subset. Kidney360. 2023 07 01; 4(7):935-942. PMID: 37257088 9. 2024 Menke JR, Aypar U, Bangs CD, Cook SL, Gupta S, Hasserjian RP, Kong CS, Lin O, Long SR, Ly A, Menke JAS, Natkunam Y, Ruiz-Cordero R, Spiteri E, **Ye J**, Zadeh SL, Gratzinger DA. Performance of MYC, BCL2, and BCL6 break-apart FISH in small biopsies with large B-cell lymphoma: a retrospective Cytopathology Hematopathology Interinstitutional Consortium study. Front Oncol. 2024; 14:1408238. PMID: 38903717 10. 2024 Ye J, Theparee T, Bean GR, Rutland CD, Schwartz CJ, Vohra P, Allard G, Wang A, Hosfield EM, Peng Y, Chen YY, Krings G. Targeted DNA Sequencing in Diagnosis of Malignant Phyllodes Tumors With Emphasis on Tumors With Keratin and p63 Expression. Mod Pathol. 2024 Aug 21; 37(12):100593. PMID: 39154782 11. 2024 Ye J, Boileau RM, Parchem RJ, Judson-Torres RL, Blelloch R. The miR-290 and miR-302 clusters are essential for reprogramming of fibroblasts to induced pluripotent stem cells. bioRxiv. 2024 Sep 03. PMID: 39282363 12. 2025 Schwartz CJ, Ye J, Devine WP, Chen YY. NTRK-fusion spindle cell tumour in the breast; expanding the differential of challenging spindle cell lesions on core biopsy. Histopathology. 2025 Jan 30. PMID: 39888039 13. 2025 Ye J, Boileau RM, Parchem RJ, Judson-Torres RL, Blelloch R. The miR-290 and miR-302 clusters are essential for reprogramming of fibroblasts to induced pluripotent stem cells. Stem Cells. 2025 Feb 12; 43(2). PMID: 40037390. PMCID: PMC11879289

SIGNIFICANT PUBLICATIONS

- 1. 2014 Parchem RJ, <u>Ye J</u>, Judson RL, LaRussa MF, Krishnakumar R, Blelloch A, Oldham MC, Blelloch R. Two miRNA clusters reveal alternative paths in late-stage reprogramming. Cell Stem Cell. 2014 May 01; 14(5):617-31. PMID: 24630794
- 2. 2014 Ye J, Blelloch R. Regulation of pluripotency by RNA binding proteins. Cell Stem Cell. 2014 Sep 04; 15(3):271-280. PMID: 25192462
- 3. 2017 Ye J, Jin H, Pankov A, Song JS, Blelloch R. NF45 and NF90/NF110 coordinately regulate ESC pluripotency and differentiation. RNA. 2017 08; 23(8):1270-1284. PMID: 28487382
- 4. 2023 Ye J, Croom N, Troxell ML, Kambham N, Zuckerman JE, Andeen N, Dall'Era M, Hsu R, Walavalkar V, Laszik ZG, Urisman A. Non-Full House Membranous Lupus Nephritis Represents a Clinically Distinct Subset. Kidney360. 2023 07 01; 4(7):935-942. PMID: 37257088
- 5. 2024 Ye J, Theparee T, Bean GR, Rutland CD, Schwartz CJ, Vohra P, Allard G, Wang A, Hosfield EM, Peng Y, Chen YY, Krings G. Targeted DNA Sequencing in Diagnosis of Malignant Phyllodes Tumors With Emphasis on Tumors With Keratin and p63 Expression. Mod Pathol. 2024 Aug 21; 37(12):100593. PMID: 39154782

CONFERENCE ABSTRACTS

- Ye, J., Sheahon, K.M., Urisman, A., LeBoit, P.E., McCalmont, T.H., and Lang, U.E. BAP1-inactivated melanocytic tumors demonstrate prominent centrosome amplification and associated loss of primary cilia. Poster presented at: United States and Canadian Academy of Pathology (USCAP) annual meeting; abstract #2275; 2020 Feb 28-Mar 5; Los Angeles, CA.
- Ye, J., Long, S., Wang, L., and Balassanian, R. Tattoo ink lymphadenitis diagnosed by fine needle aspiration biopsy. Poster presented at: United States and Canadian Academy of Pathology (USCAP) annual meeting; abstract #1000; 2024 Mar 23-Mar 28; Baltimore, MD.
- Thomas, A., Wolf, D.M., Balassanian, R., Chen, Y.Y., Ye, J., Vohra, P., Gulbahce, E.H., Borowsky, A.D., Brown Swigart, L., Hirst, G.L., Venters, S., Nanda, R., Shatsky, R.A., D\Agostino Jr., A., Mukhtar, R.A., Hatcher, S., Yau, C., DeMichele, A., van\tout Veer, L., and Esserman, L. (2024) Therapeutic response and outcomes with less common breast cancer subtypes in the I-SPY trial 2011-2022. Poster presented at: American Society of Clinical Oncology (ASCO) annual meeting; abstract #582; 2024 May 31-June 4; Chicago, IL.

Tatem, A.R., Dodelzon, K., <u>Ye, J.</u>, Kelil, T., Strachowski, L.M., Greenwood, H.I. (2024) An Ounce of Prevention is Worth a Pound of Cure--Screening Guidelines and Imaging of Breast Cancer in BRCA Mutation Careers. Educational exhibit presented at Radiological Society of North America (RSNA) annual meeting; abstract #BREE-95. 2024 Dec 1-Dec 5; Chicago, IL.

Ye, J., Goldhammer, N., Vohra, P., Park, C., Maldonado Rodas, C., Moasser, M., Abe, S.E., Alvarado, M., Ewing, C., Goodwin, K., Mukhtar, R., Wong, J., Esserman, L., Balassanian, R., Rosenbluth, J. (2025) Fine needle aspiration biopsy of breast specimens effectively harvests cells for patient-derived organoids modeling breast ductal carcinoma in situ. Poster presented at: United States and Canadian Academy of Pathology (USCAP) annual meeting; abstract #1412 2025 Mar 22-Mar 27; Boston, MA.