The UCSF RadOnc RadOnc News & Ideas from the UCSF Radiation Oncology Team

Diversity, Equity, & Inclusion

Dr. Lauren Boreta, MD Dr. Paola Betancur, PhD and Lindsay Williams

This past April, the Diversity Committee Co-Chair, Lindsay Williams, partnered with Neurosurgery's

Community Internships Specialist, Marisa McFarlane, to host students from the Envision Internship program. The event took place on a Saturday at the Radiation Oncology Parnassus clinic. It involved 16 high-school-aged girls from various backgrounds and cultures, who traveled from all over the Bay Area and the Central Valley to participate in eight mini-labs led by volunteers from our department. Each mini lab provided an overview of a role within radiation oncology and involved a hands-on element to keep the students engaged. The goal of the event was to introduce the young women to radiation oncology and the different job opportunities within it, with the hopes that they consider working in the specialty, thus diversifying radiation oncology through ethnicity and gender.

This special and successful experience could not have happened without our Rad Onc volunteers. So, a huge shout out to the folks who spent their free time investing in the youth and future of Radiation Oncology. Thank you, Marina Afable, Dr. Paola Betancur, Dr. Dante Capaldi, Vernon Cheam, Lennie Garcia, Keisha McQueen, Nina Pitts, Karishma Raghuwanshi, David Ramirez, Zeke Ramirez, Misty Reyes, Maasa Seaberg, DaShawnte Smith, Alan Taniguchi, Dr. Horatio Thomas, Justin Wardell, Lindsay Williams, Ludene Wong Teranishi, Dr. Wensha Yang, Dr. Emi Yoshida, Greg Zhovreboff, and Dr. Benjamin Ziemer! Also, a big THANKS to those who helped organize the event but were unable to attend in-person: Cena Bass, Dr. Lauren Boreta, Dr. Jessica Chew, Cherisse Jones, Sherman Lim, and Sam Roemer.

We hope this was the first of many youth community outreach projects organized with Neurosurgery. If you are interested in being a part of or have ideas for future events, please email Lindsay.Williams@ucsf.edu.



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Above: Faculty, staff, and residents host students from the Envision Internship program



Above: Former resident, Dr. Horatio Thomas, with students from the Envision Internship program. More photos from the event can be found <u>here</u>.

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2023 Radiation Oncology Faculty and Resident Research Retreat

The Radiation Oncology Faculty and Resident Research Retreat at the Asilomar Conference Center in June kicked off the 2023 summer of fog. The event showcased the research of seventeen clinical, translational, and physics faculty who presented on topics ranging from imaging to mouse models to EMR predictive modeling. Short talks throughout the day were followed by further discussions over dinner and drinks around the bonfire.

Attendees also engaged in focused conversations during roundtable discussions about the department's various areas of expertise. The roundtable discussions centered around the key areas of Radiotherapy and Immunotherapy, Panomics, Advanced Imaging Methods, Radiobiology Modeling, and Personalized Therapy. These discussions were aimed to jumpstart strategic planning for the upcoming fall retreat.

Attendees identified potential areas for cross-disciplinary research, the importance of deep data and computational modeling, and the innovation of new technologies as key takeaways from the talks. These insights are expected to improve patient outcomes and keep the department at the forefront of cutting-edge research.

Overall, the retreat provided a productive opportunity for faculty members to share their findings and engage in meaningful discussions with one another. Please see the table below for a list of the research presentations delivered by our faculty and residents during the retreat.



Pictured above: Our faculty and residents enjoy conversation around a fire pit during the research retreat.



Pictured above: Our faculty and residents who attended the research retreat.

Presenter:	Title:
Dr. Mekhail Anwar, MD, PhD	Sensing From Within: Personalized Cancer Therapy Through In Vivo Sensing
Dr. Mary Helen Barcellos-Hoff, PhD	Reimaging the TGFβ Landscape
Dr. Paola Betancur, PhD	Super-Enhancers in Tumor and Tumor-Associate Macrophages
Dr. Nam Woo Cho, MD, PhD	Leveraging the Tumor Surfaceome to Treat / Inflammatory Solid Malignancies
Dr. Jean-Philippe Coppé, PhD	Kinome-Directed Senolytic Interventions to Eliminate Residual Tumors
Dr. Julian Hong, MD, MS	Leveraging Date to Improve Cancer Care Delivery
Dr. James C. Lee, MD, MHS	Strategies to Overcome Liver Metastasis Induced Systemic Tumor Immune Tolerance
Dr. Hui Lin, PhD, DABR	Al-Driven Multi-Modality Oncology Modeling
Dr. Olivier Morin, PhD	Development of Personalized Voxel-Wise Prediction of Brain Metastases Using Multi-Parametric MR Imaging to Reduce Treatment Toxicity
Dr. Jean Nakamura, MD	Opportunities in Cancer Metabolism
Dr. David Raleigh, MD, PhD	Genomic, Biochemical, and Cellular Drivers of Tumor Heterogeneity and Evolution
Dr. Jessica Scholey, PhD	Towards Single-Modality (MRI?) Imaging In Radiation Therapy
Dr. Ke Sheng, PhD, FAAPM	Understanding and Exploiting Tumor Heterogeneity Through Mathematical Modeling
Dr. Harish Vasudevan, MD, PhD	Oncogenic Growth Factor Signaling In Nervous System Tumors
Dr. Wensha Yang, PhD	Mitigation of RILD Through Functional Avoidance Liver SBRT Guided by Multi-Task Quantitative MR

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Spotlight On Research:

UCSF Offers New Joint Program to Treat Cardiac Arrythmia

Dr. Lisa Singer, MD, PhD, Assistant Professor Dr. Emily Hirata, PhD, Chief of Clinical Physics Dr. Hui Lin, PhD, Assistant Professor In Residence, Division of Physics

Over the last year, our department has worked closely with colleagues in the UCSF Cardiac Electrophysiology and Arrhythmia Service to develop the first cardiac arrythmia radiotherapy (RT) program at UCSF. This program offers treatment to patients experiencing refractory ventricular tachycardia (VT). VT is a rapid heart rhythm originating from the ventricles, or lower chambers, of the heart. This rhythm impacts heart function and can be fatal. Current treatment options for VT include invasive catheter ablation and medical management. Patients experiencing VT refractory to these treatments may experience repeated shocks from implantable cardioverter-defibrillators (ICDs). ICDs can provide life-saving shocks for patients in VT, but they do not cure VT and repeated shocks can impact quality of life. Recurrent VT is also associated with increased risk of death. Preclinical and early clinical work from around the world has shown promise for stereotactic body radiation therapy (SBRT) as a treatment for refractory VT. Since VT SBRT is an emerging treatment, it is considered off-label at UCSF. Our team worked with electrophysiology (EP), risk management, and established VT SBRT programs, to develop the program at UCSF. This spring, we opened our doors to patients.

Our program is a collaboration between Radiation Oncology and EP. Dr. Edward Gerstenfeld, Chief of Cardiac Electrophysiology and Arrythmia at UCSF, shared, "The Cardiac EP team is excited to partner with the Radiation Oncology team to provide this groundbreaking noninvasive therapy to our patients with refractory VT. We look forward to further collaboration optimizing patient selection and treatment and developing noninvasive RT therapies for other cardiac arrhythmias."

Key team members include: Dr. Lisa Singer (Radiation Oncologist), Drs. Emily Hirata and Hui Lin (Physicists), and Zeke Ramirez (Chief Dosimetrist), Vy Cao (New Patient Coordinator), Sherman Lim (Chief RTT), Keisha McQueen (Revenue Manager), Mary Mok (Nursing Lead), and Drs. Edward Gerstenfeld, Henry Hsia, and Thomas Dewland (Cardiologists and Electrophysiologists). This program was also supported by guidance from Nina Pitts and Drs. Catherine Park and Mary Feng. The team conducts multidisciplinary review of potential candidates, evaluates patients and obtains patient consent, plans SBRT, administers therapy, and conducts clinical follow-up.

The cardiac arrythmia RT program builds on workflows utilized for thoracic SBRT. Like thoracic SBRT, motion management, ablative dosing, and consideration for nearby normal tissues is required. Unlike thoracic SBRT for unresected lung cancers, the target in VT SBRT is not visible on anatomic imaging. Delineation of the target requires careful discussion with EP and integration of electroanatomical maps, ECGs, cardiac imaging, clinical history, and other assessments to delineate an ablation target encompassing critical VT substrate. Subsequently, a planning treatment volume is designed around



Spotlight on Research (continued)

this ablation target, taking into account cardiorespiratory motion and a safety margin to ensure accurate target coverage. Currently, the dose is 25 Gy in 1 fraction. The treatment plan is tailored based on the location of the ablation target to prevent neighboring structures from receiving excessive radiation dose, such as uninvolved heart, lung, spine, stomach, and esophagus. The physicist performs quality assurance checks to ensure that the treatment dose can be effectively delivered to the target without surpassing the tolerances of these surrounding tissues. The treatment plan is refined through an iterative process. This planning stage necessitates close collaboration among all team members.

Due to the high dose delivered adjacent to critical organs, and the motion experienced by the cardiac ablation target with breathing and cardiac motion, the VT SBRT program requires intrafraction motion management during treatment delivery. Our SBRT delivery system (TrueBeam radiotherapy system, Varian) incorporates triggered imaging and safety gating techniques to dynamically manage the target motion during radiation delivery. Triggered imaging involves capturing kV images of the treatment area during a patient's breathing cycle, providing active monitoring of radiation delivery. Safety gating, on the other hand, is a method where the radiation beam is switched on and off based on the patient's breathing pattern, preventing radiation delivery during highrisk periods. A CT scan is taken in conjunction with these techniques. Due to the challenges in delivering this high-dose treatment to a moving target that cannot be visualized on cone-beam CT, independent of the electrophysiological data, a "dry run" or simulated treatment is executed prior to the treatment delivery, to confirm that the therapy can be administered as intended.

To maximize accessibility to patients, in collaboration with Cardiology, the consult and follow-up can, in some cases, take place remotely. SBRT VT does require at least three in-person visits in our department: simulation, dry run, and single fraction treatment. For patients experiencing VT refractory to medications and catheter ablation, SBRT may be a treatment option. Potential cases can be referred to our program for multidisciplinary review.





Pictured clockwise from top left: Dr. Lisa Singer, MD, PhD; Dr. Hui Lin, PhD; Dr. Emily Hirata, PhD; Dr. Edward Gerstenfeld, MD, MS; and Zeke Ramirez, CMD.



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Clinical Trials

Studies open in 2023

PI	Protocol#	Study Title	Funding	6 month Accrual	Study Status
Dr. Park	187513	Hypofractionation after breast reconstruction for breast cancer (FABREC)	DFCI/PCORI	0	Closed
Dr. Yom	162010	Nivolumab + chemoRT for patients with nasopharyngeal cancer	IIT/BMS	1	Open
Dr. Yom	166520	PembroX: Pembrolizumab +/- SBRT prior to surgery for NSCLC (PembroX)	IIT/Merck	0	Closed
Dr. Yom	18201	Phase 1/2 trial of concurrent RT, cisplatin, and BMX-001 in locally advanced H&N cancer	BioMimetix	0	Closed
Dr. Yom	NRG-HN001	Phase II/III studies of individualized treatment for nasopharyngeal cancer based on biomarker EBV DNA	NRG	0	Closed
Dr. Yom	NRG-HN004	Phase II/III trial of RT and concurrent durvalumab vs. RT and concurrent cetux- imab in H&N cancer pts with a contraindication to cisplatin	NRG	0	Closed
Dr. Yom	NRG-HN005	Phase II/III trial of deintensified RT for favorable oropharyngeal cancer	NRG	0	Open
Dr. Chan	RTOG 1216	Phase II/III Trial of adjuvant RT with cisplatin, docetaxel-cetuximab, or cispla- tin-atezolizumab in pathologic high-risk squamous cell cancer of the head and neck	NRG	3	Open
Dr. Wong	CC#20727	STEEL: Phase II trial of salvage RT with standard or enhanced ADT for post-op PSA recurrences with aggressive disease features (RTOG 3506 STEEL)	RTOG Foundation	0	Closed
Dr. Wong	CC#18551	Randomized Phase II Study of Salvage XRT + ADT +/- Abiraterone Acetate and Apalutamide (ARN-509) for Rising PSA after Radical Prostatectomy with Adverse Features. Facilitating Optimal Radiation Management Using Leuprolide, Abiraterone Acetate, and Apalutamide (FORMULA-509 Trial)	DFCI	0	Closed
Dr. Hong	GU008	Phase III trial of abiraterone acetate with prednisone and apalutamide and advanced imaging in salvage treatment for node-positive prostate cancer after prostatectomy	NRG	0	Open
Dr. Feng	CC# 19721	Phase II study of hypofractionated RT to augment immune response in metastatic GI cancers progressing on immune therapy (ARM-GI)	IIT/Varian	4	Open
Dr. Feng	CC# 194522	Phase II trial of palliative hypofractionated RT followed by durvalumab +/- tremelimumab for advanced HCC	IIT/Astra- Zeneca	1	Open
Dr. Wong	CC#21726	Phase II randomized trial of SAbR with or without neurovascular sparing for erectile function preservation in localized prostate cancer (POTEN-C)	UT South- western	1	Closed
Drs. Yom/Chew	CC#22721	Phase III trial addressing taste dysfunction with miraculin in head and neck cancer patients receiving radiation therapy	UCSF- IIT	7	Open
Dr. Yom	CC#21728	SBRT for Early Treatment of Oligometastatic Adenoid Cystic Carcinoma: The SOLAR trial	DFCI	3	Open
Dr. Chan	NRG-HN009	Randomized phase II/III trial of RT with high-dose cisplatin every 3 wks vs. RT with low-dose weekly cisplatin for patients with locoregionally advanced SCC of the head and neck	NRG	0	Open

Studies in the Pipeline

Dr. Hong	NRG-GU 010	Parallel phase III randomized trials of genomic-risk stratified unfavorable inter- mediate risk prostate cancer: De-intensification and intensification clinical trial evaluation (GUIDANCE)	NRG
Dr. Chan	NRG-HN006	Randomized phase II/III trial of sentinel lymph node biopsy vs. elective neck dissection for early stage oral cavity cancer	NRG



Physics Division

The Physics Division has been busy working on many important projects over the last several months. Below is brief overview of what our team has been up to:

- Implementation of the dosimetry assignment workflow change. Emily Hirata*, Dosimetry Team, and Physicians. The new workflow allows more streamlined plan assignment and workload management. The planning directive was also revised to facilitate communications between physicians and dosimetrists.
- Implementation of automated segmentation: Dr. Hui Lin*, Dr. Evan Porter, Dr. Alon Witztum, Zeke Ramirez, and Dr. Emily Hirata. After thorough evaluation, we selected Limbus AI as our automated segmentation software. After clinical testing and trial, the software officially went online in July. Implementation of automated segmentation is expected to reduce physician burden, improve contouring consistency, and workflow efficiency.
- Completion of the Parnassus TrueBeam STX electron commissioning: Monica Hira*, Maasa Seaberg*, and Dr. Evan Porter. Making the full electron capability available on the TrueBeam machine prepares us for the technological transition at Parnassus about to happen in 2023-2024.
- PCMB SDX automated gating interface implemented: Junhan Pan*. The automated interface replaces manual gating, affords the efficient flattening-filter-free mode, and improves patient comfort and safety.

*Denotes Lead Contributor

We would also like to celebrate the individual and team accomplishments of our following Physics Division members:

Drs. Dante Capaldi and **Tomi Nano** received UCSF Spring 2023 RAP funding for a project entitled "Smartphone-Based Surface Guidance in Radiation Therapy as an Emerging Paradigm in Personalized Cancer Care" as Co-PIs (5/26/2023).

The joint UCSF-UC Berkely Nuclear Engineering Graduate Certificate Program has been granted initial accreditation from CAMPEP until 6/30/26. The CAMPEP program director is **Dr. Adam Cunha**.

Dr. Chris Diederich is the recipient of the ESHO-Pyrexar Award in recognition of outstanding contributions to the field of hyperthermia, given by the European Society of Hyperthermic Oncology at their 34th Annual Meeting which was held on September 14-17, 2022, in Gothenburg, Sweden.

Dr. Bruce Faddegon was named an author of a top-cited 2021-2022 Medical Physics paper entitled "Report on G4-Med, a Geant4 benchmarking system for medical physics applications developed by the Geant4 Medical Simulation Benchmarking Group."

Dr. Katelyn Hasse was accepted to the UCSF Teaching Scholars Program for 2023-2024 (04/28/2023).

Drs. Emily Hirata and **Wensha Yang** were both elected 2023 AAPM Fellows.

Dr. Hui Lin received an Uncle Kory Foundation seed grant for a project entitled, "Developing Multimodal Deep Learning for Outcome Prediction in Glioblastoma Patients After Radiation Therapy."

Drs. Hui Lin and **Olivier Morin** received a DOD award [DOD W81XWH-22-1-0695: Integrating Metabolic and Physiologic MRI for Personalized Glioblastoma Radiotherapy Planning] as Co-Investigators (PI: Janine Lupo).

Drs. Tomi Nano and **Dante Capald**i received a Winship Invest Pilot Grant as Co-Investigators (01/2023).

Dr. Jessica Scholey was selected to become an Associate in the AAPM Science Council Associates Mentorship Program (5/26/2023).



Physics Division (continued)

Continued individual and team accomplishments of our Physics Division members:

Dr. Manju Sharma received a pilot award from the Mount Zion Health Fund (MZHF) to develop "Cone Beam CT Image Analysis to Predict Head and Neck Radiotherapy Toxicities for Adaptive Radiotherapy."

In November 2022, **Dr. Manju Sharma** had the privilege of serving as the Guest of Honor at the International Medical Physics Symposium hosted by Panjab University, India. There, she shared invaluable insights from a year of international research and mentorship facilitated by the International Council of AAPM. **Dr. Gilmer Valdes** co-authored a high-impact paper that was selected as one of the Innovative & Transformative Studies of 2022 by the Robert Wood Johnson Foundation: https://www.evidenceforaction. org/blog-posts/innovative-transformative-studies-2022.



Pictured left to right: Drs. Emily Hirata, Qihui Lyu, Katelyn Hasse, Hui Lin, Adam Cunha, and Evan Porter attend the AAPM 2023 Annual Meeting in Houston, Texas, in July.



Educational Programs

Miriam Gray, Educational Programs Manager Dr. Steve Braunstein, MD, PhD, Residency Program Director Dr. Katelyn Hasse, PhD, Director of Medical Physics Residency Program

Recruitment Match Success

The Medical and Physics Residency Training Programs successfully held virtual interviews in compliance with their respective accrediting bodies' policies and Match guidelines. Each year, the programs make concerted efforts to carefully follow UCSF GME recruitment policies to advance equitable and transparent selection processes for all participants.

Faculty, residents, and program leadership effectively engaged qualified candidates by web-based face-to-face interviews and informational sessions which exhibited the training environment.

The virtual interview platform provided the programs the opportunity to connect with a larger pool of potential applicants. Virtual recruitment efforts in part serve to provide equity for applicants who may not have resources for onsite interviews, may reduce the economic burden on applicants, may reduce the interruption of education for students, residents and fellows, and may reduce disruption of patient care if program trainees are preoccupied with onsite recruitment activities.

The Medical Residency Program received approximately 134 applications, interviewed 29 candidates, and successfully matched three residents who joined the department in July 2023.

The Physics Residency Program received approximately 112 applications, interviewed 20 candidates, and successfully matched two Physics Residents who joined the residency program in July 2023.

The Residency Program leadership extends its sincere gratitude to the Selection Committees respectively, and to all faculty and residents who participated and helped to engage candidates. We appreciate faculty and residents who provided a welcoming environment and who communicated the mission and values of UCSF and the department.



Pictured left to right: Drs. Nauman Malik, William C. Chen, Benjamin Li, Katherine Chen, and Horatio Thomas holding their diplomas at the 2023 Resident and Fellow Graduation Event.

2023 Resident and Fellow Graduation Event

The 2023 Resident and Fellow Graduation Event was held on Thursday, May 11th, 2023, at STEM Kitchen and Garden in San Francisco. In addition to all graduating residents and fellows being presented with their diplomas, the following awards were presented:

Physics Residency Training Program Award 2023: The Jean Pouliot, PhD, Teaching Award was awarded to **Annette Villa.**

Medical Residency Training Program Award 2023: The RSNA Research & Education Foundation Roentgen Resident/Fellow Award was awarded to **Dr. William C. Chen, MD.**

The 2023 Lawrence Margolis, MD, Lifetime Teaching Award was awarded to **Dr. Steve Braunstein, MD, PhD.**

The 2023 ARRO Teacher of the Year Award was awarded to **Dr. Lisa Singer, MD, PhD.**

Please join us in congratulating each of the award recipients.





Education Programs (continued)

Looking Forward

Drs. Katherine Chen, William C. Chen, Benjamin Li, and Horatio Thomas successfully completed their medical residency training, and we are pleased that they have transitioned into their new career endeavors.

Drs. José Ramos-Méndez and Kamal Singhrao graduated from the Medical Physics Residency Program and started their appointments at UCSF and Brigham and Women's Hospital Harvard Medical School, respectively.

In July 2023, we welcomed five new Radiation Oncology Residents. Drs. Alexander Qian, Alexander Real, and Krystal Straessler began their PGY-2 Medical Residency training July 1st of the 2023-2024 academic year; and Theodore Geoghegan, PhD, and Garrett Roe, MS, commenced their first year of Medical Physics Residency in July 2023.

Please see the brief biographies of our department's newest trainees in the Welcome column of this newsletter. We look forward to you connecting with each trainee throughout their training.



A photo from the 2023 Resident and Fellow Graduation Event. Above top row: Drs. William S. Chen, Nauman Malik, William C. Chen, Benjamin Li, Katherine Chen, Horatio Thomas, and Christina Phuong. Above bottom row: Drs. Jie Jane Chen, Rachael Conger, Rachel Sabol, and Lisa Ni.



Pictured above: Dr. Steve Braunstein, MD, PhD, is awarded the 2023 Lawrence Margolis, MD, Lifetime Teaching Award by Dr. Christina Phuong at the 2023 Resident and Fellow Graduation Event.





Quality and Safety

Vernon Cheam, RTT Dr. Emily Hirata, PhD Mary Mok, RN Nina Pitts Dr. Nicolas Prionas, MD, PhD Dr. Ke Sheng, PhD Lindsay Williams

2023 has been an eventful year for the department on the Quality and Safety front. We had a successful and well-received Clinical Performance Improvement Committee (CPIC) report. Special recognition was given to the Patient Transportation Program, which increases access to care for our patients facing social determinants of health barriers.

Under the leadership of Operations Director, Nina Pitts, and the Administrative Directors (Haley, Karishma, and Lindsay), the department launched its monthly Stop Light Report which aims to increase communication and transparency around what is going on at each site. The report is sent out to the RadOnc Clin Staff listserv for the widest departmental reach and within it, readers can find updates regarding new and ongoing projects, staffing, equipment and supplies, recognition, and the department's year-to-date "Staff Worked Together" Press Ganey score.

Our Mount Zion location went live with full-scope Guardrails. During a pilot in the spring, there were 11 cases that hit a guardrail bump, but only one case needed to be rescheduled. The process has successfully helped with MD volumes and dosimetry planning by catching overdue tasks in advance and allowing protected time for downstream tasks. The next step in this process is to go live with full-scope Guardrails at PCMB, followed by Parnassus. UNIVERSITY OF CALIFORNIA De Smar About Sala

Radiation Oncology Resident Physician and UCSF Climate Health Fellow, Dr. Katie Lichter, incorporated Uber Green rides into the Patient Transportation Program to address the environmental impact of patient transportation in the healthcare sector (i.e., Scope 3 emissions). This includes those resulting from conventional rideshare services, while simultaneously prioritizing equitable access to essential transportation services for patients, especially those from highrisk and marginalized communities. Katie and her team successfully convinced Uber Health to integrate Uber Green as an advanced scheduling option in their online ride request platform. As of July, all patients enrolled in the Rad Onc Patient Transportation Program will be transported in Uber Green vehicles unless another vehicle type is required (wheelchair accessibility, mobility assistance, etc.).



Operations

Nina Pitts

Dr. Emily Hirata, PhD Dr. Lauren Boreta, MD Dr. Nicolas Prionas, MD, PhD and Alan Taniguchi

As always, the first half of the year has been a busy one and it seems like fall is already fast approaching! In the past six months, we have worked on several process improvement initiatives and operations projects across our sites. We have included highlights of some completed and in-process work being undertaken by our teams (see below). Thank you, everyone, for engaging with this work!

In addition to process improvement, we have also focused on necessary improvements to our equipment and physical site changes at Parnassus, which is related to the New Hospital at Parnassus Heights project. The work at this site is critical to support our growing patient volume, but as with any long-term construction project, comes adjustment and flexibility...so a big shout out to the Parnassus group for their hard work and resilience!

- In February 2023, we went live with our updated DocuSign Digital Consent workflow in alignment with the UCSF-wide launch of E-Consent for Surgical/Treatment Procedures.
- In April 2023, we brought back the use of Care Team Contact Cards within our department, so that our patients have an easy way of keeping track of their care team and contact numbers.
- In April 2023, we also started work on our A3 Care Coordination projects. The first report-out on in-progress work happened at the July Faculty Meeting and highlighted the work below:
 - o PCMB: Video Rooming Workflows and Vitals
 - o PCMB: OTV RN/NP/MD Workflow
 - o Mount Zion: In-person Rooming
 - o Parnassus: In-Basket Triage



- We received final approval this spring for the Artiste replacement at Parnassus. The current timeline has the new TrueBeam ready to treat patients in mid-to-late July 2024.
- In July 2023, we went live with Point-of-Service Scheduling for our highest volume service lines (Breast, Head & Neck, and GU). This means that referring practices' Practice Coordinators have the option to directly schedule consults with our Rad Onc MDs. The hope is that this increases patient access and helps us in meeting our goal of scheduling 85% of referrals within five days!
- In July 2023, the department expanded the parameters of the Patient Transportation Program to provide patients in need with rides to and from their treatment appointments. Now, patients enrolled in the program can receive transportation within a 50-mile radius outside of San Francisco instead of just within San Francisco city limits!
- We will be starting three days in our PCMB HDR procedure suite beginning September 2023!





Welcome

Please join us in welcoming the following new faculty, residents, and staff members to UCSF Radiation Oncology:

Post-Doctoral Fellow and Clinical Instructor:



Dr. William C. Chen, MD, joined our department in July 2023 as a Post-Doctoral Fellow and Clinical Instructor in our department, and as a Helen Diller Family Cancer Center Physician Scientist Program in Clinical Oncology K12 Fellow and a Chan Zuckerburg Physician Scientist Fellow. Dr.

Chen will be located primarily at the Mission Bay campus, working with the GI oncology team. Dr. Chen received his undergraduate degree in Biomedical Engineering from Johns Hopkins University, his MD degree from UCSF, and completed residency at UCSF. Dr. Chen's research focuses on biomarker development and validation to aid in management of meningiomas and other CNS malignancies. He continues to work on clinical translation of his previously developed biomarker, on developing clinical trials for meningioma, and well as on understanding and overcoming mechanisms of radiation resistance in these and other tumors. In his spare time, Dr. Chen has a love of film and digital photography.

Physics Faculty:



Dr. Qihui Lyu, PhD, joined our Physics faculty on Monday, July 17th, 2023, as an Assistant Professor In Residence in our department. Dr. Lyu is located at our PCMB offices at Mission Bay. Dr. Lyu received her bachelor's degree in Physics from Nanjing University in 2016, and her PhD in Medical

Physics from the University of California, Los (UCLA) in 2021. From 2021 to 2023, she received clinical training from the UCLA Medical Physics Residency Program. Her research focuses on image reconstruction, dual-energy CT, treatment plan optimization, machine learning, etc. Dr. Lyu developed optimization algorithms that open new dimensions in imageguided radiotherapy.



Dr. José Ramos-Méndez, PhD, joined our Physics faculty on Monday, July 3rd, 2023, as an Assistant Professor In Residence in our department. He is located on the Mount Zion campus. Dr. Ramos-Méndez received his PhD in Applied Physics from Benemérita Universidad Autónoma

de Puebla, México, in 2014. From 2014 to 2021, he held appointments as a Postdoctoral Employee and Assistant Researcher at UCSF. He graduated from the UCLA CAMPEP Certificate Program and received his clinical training from the UCSF Medical Physics Residency Program. Dr. Ramos-Méndez is an internationally recognized researcher in the field of Monte Carlo for radiation therapy. His research focuses on the development of the Monte Carlo simulation frameworks Geant4, TOPAS, and TOPAS-nBio. These frameworks facilitate the simulations for radiation therapy research and investigate the connection between physics and biology at the cell and sub-cellular scale. Dr. Ramos-Méndez enjoys digging into the fundamental physics of radiotherapy, but his biggest love is family time.

Radiobiology Faculty:



Dr. Jean-Philippe Coppé, PhD, joined our Radiobiology faculty on May 1st, 2023, as an Associate Professor In Residence in our department and a member of the Helen Diller Family Comprehensive Cancer Center. Dr. Coppé's lab is located in the 2340 Sutter Street labs on the Mount Zion

campus. Dr. Coppé is a molecular and cell biologist with expertise in cancer and aging research. A central interest of Dr. Coppé and his team is to understand how tumors adapt and survive under therapeutic pressure, including upon exposure to radiation therapy, chemotherapy, and targeted therapy. By discovering orthogonal modalities of therapeutic resistance in patient-representative tumor models and cell line systems, Dr. Coppé's goal is to design treatment combination strategies that can eliminate residual tumor cells and restore therapeutic response or prevent therapeutic resistance. To accelerate the discovery of actionable kinasedependent pathways, Dr. Coppé has been spearheading the development of innovative methods, including a high-



throughput kinase activity mapping technology (HT-KAM) and a directional kinase-substrate network database (PhosphoAtlas)

Dr. Coppé is particularly fond of collaborative science, whether across fields of medicine, biology and biotechnology, or across academic institutions. Dr. Coppé obtained his PhD from UC Berkeley and trained in the laboratory of Dr. Judith Campisi, an acclaimed investigator in the field of aging and senescence, where he initiated the conceptualization and discovery of mechanisms of senescence-associated inflammation (SASP) and immune evasion. Before joining UCSF as a Professional Researcher in the Department of Laboratory Medicine and initially integrating the group of Dr. Laura van 't Veer, a renowned authority in genomic testing for breast cancer diagnostics, Dr. Coppé was Head of Life Sciences Applications at Kinogea Inc., providing him a unique experience in entrepreneurial leadership and technology development, including biochemical probe-based sensing systems and surface chemistry. Dr. Coppé is fully committed to providing a supportive and inclusive environment for people of all backgrounds, at all stages of education and across all professions, whether students, trainees, scientists, faculty, or staff, and to promoting diversity and equity.

Hospital Physicists:



Maasa Seaberg, PhD, DABR, obtained her BA in Physics from the University of California, Berkeley, and her PhD in Physics from the University of Colorado, Boulder. She completed her medical physics residency and fellowship at the Mayo Clinic in Rochester, Minnesota. Prior to joining

UCSF as a Hospital Physicist on May 2, 2022, Dr. Seaberg was a clinical physicist for eight years and is experienced in external beam and brachytherapy treatment planning, TPS acceptance and commissioning, and linac calibrations and QA. Her primary location is the Parnassus hospital where she is the primary physicist for the Long TrueBeam linac and on the Physics Gamma Knife Team.



Gaurav Shukla, MMP, DABR, joined UCSF on August 7, 2023, and his primary location is the Parnassus hospital. Mr. Shukla obtained his BA in Philosophy and Physics, and his Master of Medical Physics from the University of Pennsylvania. He completed his residency at Geisinger Medical Center

and spent the last four years there as a clinical physicist. He is experienced in linac QA and calibrations, has commissioned Truebeam, Halcyon, and Radixact systems, and has led multiple systemwide projects on automation design, testing, and clinical implementation. Mr. Shukla was also the lead physicist for the Lattice Radiation Therapy program.



Munir Zaman, PhD, DABR, has over 15 years of clinical, research, and industrial experience in Radiation Oncology Physics and advanced technologies, and joined UCSF as a Hospital Physicist on January 30, 2023. He obtained his PhD in Physics from the University of California, Riverside,

in June 2003. Prior to UCSF, Dr. Zaman's experience includes serving as Lead Physicist for Accuray where he validated the fast Monte Carlo based Treatment Planning System. In addition, he was a Physicist at Cyberknife Centers of San Diego, Orange County Cyberknife and Radiation Oncology Center, Riverside Community Hospital Cancer Center, a Supervising Physicist at Atlas Medical Physics, Physicist at Yale-New Haven Hospital, and Director of Clinical Development and Medical Physics at Newport Diagnostic Center. Dr. Zaman's primary location is at Mount Zion, where he is the lead physicist for the Elekta Versa and on the Physics Cyberknife Planning Team.

Medical Residents:



Alexander Qian, MD, went to UC Berkeley for undergrad and UCSD for medical school. A byproduct of the Silicon Valley boom in the 2010s, Alex worked as a software engineer for a year before entering medical school. Through that, Alex always maintained a great interest in technology

and innovation in medicine and spent his first summer of medical school interning for a biotech startup. It was exactly that interest in tech that first drew Alex to Radiation Oncology. With the recent onset of telehealth through COVID, and now the exciting boom of generative AI captivating the public, Alex hopes to explore more ways we can use technology to improve patient experience and outcomes.





Medical Residents:



Alexander Real, MD, PhD, comes to UCSF from New York City, where he completed his transitional year at Memorial Sloan Kettering, as well as his MD-PhD at the Icahn School of Medicine at Mount Sinai. Prior to pursuing a career as a physician-

scientist, Alex was an avid ballet dancer for many years-training at the School of American Ballet and later dancing professionally with the Los Angeles Ballet. He made the transition from dance to medicine after an injury ended his performing career but exposed him to a new way of examining the human body and its function. He graduated from Stanford University with a BS in Biomaterials Engineering and BA in English Literature, as well as an MS in Materials Science and Engineering. His masters work, under the direction of Jennifer Cochran, PhD, and Sarah Heilshorn, PhD, focused on engineered proteins as building blocks for bio-inspired materials and molecular therapeutics. His PhD work under the supervision of Arvin Dar, PhD, focused on smallmolecule protein interactions specifically in the kinase-inhibitor space, and his thesis work on the structural mechanism of the drug Trametinib was published in Nature in 2021. Clinically, Alex is drawn to oncology because of the deep interplay between scientific discovery and care, as well as the meaningful relationships built between patients, clinicians, and the entire care team. During his transitional year at MSK, he was particularly motivated during his rotations in the inpatient pediatric and palliative oncology services by the current unmet clinical needs of these patient populations, as well as the special care needed while taking care of children and those in unusually vulnerable positions. Additionally, he is deeply committed to addressing social determinants of health, especially in the LGBTQIA+ population. Alex is excited to return to the west coast to continue his medical training at UCSF in Radiation Oncology as well as his scientific work in protein and small molecule drug development.



Krystal Straessler, MD, PhD, received her PhD in Human Genetic at University of Utah in the laboratory of Professor Mario Capecchi. Her doctoral research was focused primarily on identifying the genomic driver of Sarcoma initiation and progression. She completed her

post-doctoral fellowship at Stanford University in Cancer Systems Biology. She earned her medical degree from the University of Utah.

Physics Residents:



Theodore (Teddy) Geoghegan,

MS, PhD, received his MS in Medical Physics from San Diego State University and his PhD in Biomedical Engineering from the University of Iowa. Throughout his education, his research primarily focused on particle

therapy, including proton CT, nanodosimetry/ionization detail of proton and carbon ions, and developing the Dynamic Collimation System (DCS) for proton therapy spot scanning. Teddy is a Bay Area native and was thrilled to match with UCSF to start his medical physics residency and professional development. When he's not in the clinic or doing research, he enjoys hiking, reading, disc golfing, working out, and socializing.



Garett Roe, MS, is a Medical Physics Resident in the UCSF Department of Radiation Oncology. He obtained his BS in Physics from the University of California, Davis, followed by his MS in Medical Physics from Wayne State University. He was recently

a Junior Specialist at Crocker Nuclear Labs, where he worked on QA Automation for the UCSF Ocular Beamline as well as aided in Air Quality research for the DELTA group. As a physicist in medicine, he enjoys collaborating with others on research projects and learning about different treatment modalities. Outside of clinic, Garett enjoys climbing, scuba diving, dancing, and electronics projects.



A DECEMBER OF THE OWNER OF

Staff:

Emily Eidemiller started on July 11, 2023, as a RTT at PCMB.

Alexis Garcia Kelsey started in May 2023 as a Practice Coordinator for the Breast service at Mission Bay.

Irma Ramirez started in May 2023 as the Front Desk Practice Coordinator at Mission Bay.

Rosanne Wong started on Dec 12, 2022, as a RTT at PCMB.



Accolades

On April 27th, 2023, after several years of efforts, that included creating or updating no fewer than seven graduate courses and clinical rotations, the departments of Nuclear Engineering at UC Berkeley and Radiation Oncology at UCSF are excited to announce the official CAMPEP accreditation of the medical physics concentration within the nuclear engineering doctoral program. This is the ONLY accredited graduate program in Northern California and now compliments the only other accredited program in the State of California—our fellow UC in Los Angeles. This bay-spanning partnership deepens the ties between UC Berkeley and UC San Francisco, expands opportunities for didactic and clinical education, and promises to catalyze research collaboration in the field of Medical Physics. Special thanks to **Dr. Adam Cunha, PhD**, for spearheading this effort.



Dr. Katelyn Hasse, PhD, became the Program Director for the Physics Residency Program effective July 1, 2023. Prior to this, she served three years as Associate Program Director. She is committed to continuing to foster a supportive learning environment for the residents and is excited for the opportunity to continue working with all of the outstanding residents and mentors at UCSF!

Dr. James Lee, MD, MHS, and his lab received funding from the Department of Defense Office of the Congressionally Directed Medical Research Programs, for their Team Science Award application entitled "Establishing and Overcoming the Mechanisms of Liver Metastasis-Induced Systemic Tumor Immune Tolerance and Immunotherapy Resistance in Melanoma". Congrats to Dr. Lee and the members of his lab!

Leslie Longoria was awarded the 2022 Lab Manager Professional Development Award for her registration to the OSCON database conference in St Louis. Congratulations to Leslie! This award can help pay for lab staff development courses or meeting registrations, and more information on the award can be found via the hyperlink above. Please contact <u>Sandy DeVries</u> with any questions regarding this award

Mary Manning and Lu Wang, was two NRG Biospecimen Bank staff, both recently reached employee milestones with Mary reaching 10 years and Lu reaching five years with the Bank. Both Lu and Mary started at the Bank as City College Bridge to Biotech interns and were later hired on as career employees. Congratulations to Lu and Mary!

Dr. Jade Moore, PhD, was spoke at the 3rd Annual ImmunoDiverse Colloquium on Parnassus in May 2023.

The ADs would like to thank the New Patient PCs (Allyson, Cherisse, Krshna, and Vy) and for their contributions to the go-live of point-of-service scheduling in Radiation Oncology; the MD Support PCs (Alexis, Ashley, Brittany, Broderick, Grace, Josh, Greg, Jessica, Jiana, Ket, Misty, Shayla, and Susan) for their ability to stay on top of perpetually changing sim scheduling workflows; and the Front Desk PCs (Africa, Irma, La'Rina, Lauren, Mindy, and Rosa) for their ongoing efforts with the DocuSign eConsent workflow!



Coffee Talk



What drew you to the field of Radiation Oncology?

I originally became interested while supporting the department of Radiology and coincidentally learning the CT machine in our department was also used for simulation. I learned how complex the specialty was, and I was instantly intrigued. I fell in love with how mechanical everything was, but yet so critical when it comes to saving patients' lives.



What is the most interesting part of your job?

The most interesting part would have to be learning new things about the clinical side of the department. My role can be consumed with numbers, data, and reporting, so it is refreshing to understand from all perspectives not just the revenue cycle.



With Keisha McQueen, CPC, CRCR

Radiation Oncology Revenue Manager Department of Radiation Oncology



What's the best spot for lunch on campus?

I am based at Mount Zion and love Pete's deli directly across the street. There is something about a greasy burger and fries that just hits the spot for me.



What do you do to unwind?

I love to shop especially for vintage/thrifted items. I also love a good book that involves critical thinking skills.

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