UCSF Helen Diller Family Comprehensive Cancer Center

Precision Imaging of Cancer & Therapy
5th Annual Symposium: February 25th, 2021 | 2-5pm
Virtual Meeting

This internal event is a forum for students, basic, translational and clinical scientists to present their work and brainstorm ideas about new areas for collaborative research.

Webinar link: https://ucsf.zoom.us/webinar/register/WN_fdxl3pKaRI2MpcsUreP45w

AGENDA	
2:00 - 2:05pm	Opening Remarks: **Sabrina Ronen, PhD**.
2:05 - 2:30pm	Translating a Trillion Points of UC Health Data into Therapies, Diagnostics, and New Insights into Disease **Atul Butte, MD PhD**
2:30 - 2:55pm	*Rethinking the immune effectors for cancer immunotherapy* **Larry Fong, MD**
3:00 - 3:25pm 3:00 - 3:08pm 3:08 - 3:16pm 3:16 - 3:24pm	**Scientific Talks:** *Exosome Enhanced Immunotherapy & Imaging of Prostate Cancer Response with Hyperpolarized ^{13}C-MRI -* ***Robert Bok, MD PhD.*** *Molecular Imaging of Multiple Myeloma Targeting CD46 Using ImmunoPET-* ***Sinan Wang, PhD.*** *Improving the noninvasive classification of glioma genetic subtype with deep learning and diffusion weighted imaging –* ***Janine Lupo, PhD.***
3:30 - 4:15pm	**Power Pitch Breakout Sessions (4 sessions, 4min per pitch)** 1. Artificial Intelligence 2. Immunotherapy / Theranostics 3. Preclinical Cancer Imaging 4. Human/Clinical Cancer Imaging **See breakout session details below*
4:20 - 4:55	Keynote Speaker: *ImmunoPET: Engineered antibodies for imaging immune responses* **Anna Wu, PhD.**
4:55 - 5:00	Closing Remarks

UCSF Helen Diller Family Comprehensive Cancer Center

Precision Imaging of Cancer & Therapy
5th Annual Symposium: February 25th, 2021 | 2-5pm
Virtual Meeting

Power Pitch Breakout Sessions

4 Power Pitch Breakout Sessions (4min per pitch)

Artificial Intelligence
Chair: Janine Lupo, PhD.

1. *Towards higher accuracy mapping of MRI to electron density using a 3D CNN for radiotherapy treatment planning* - **Jessica E Scholey**
2. *A Parsimonious Assessment of Breast Density Classes from Quantitative, AI-based FGT Volume Segmentations* - **Pablo F. Damasceno, PhD.**
3. *Background Parenchymal Enhancement Radiomic Features for Neoadjuvant Treatment Response Prediction in Breast Cancer Patients* - **Alex Nguyen**
4. *Early prediction of progression free survival (PFS) and overall survival (OS) of patients with glioblastoma using machine learning and multi-parametric MRI* - **Nhat Tran**
5. *Clinically Integrated Validation of Automated Glioma Progression Detection via Deep Learning* - **Pablo F. Damasceno, PhD.**
6. *Improving the generalizability of convolutional neural networks for T2-lesion segmentation of gliomas in the post-treatment setting* - **Jacob Ellison**
7. *3D Y-Net for Mixed-Supervision of Prostate Cancer Detection, Localization, and Classification from MRI* - **Abhejit Rajagopal, PhD.**
8. *Subtype-specific MRI models to guide selection of candidates for de-escalation of neoadjuvant therapy* - **Wen Li, PhD.**

Immunotherapy / Theranostics
Chair: Robert Flavell, MD PhD.

1. *Proteomic profiling of the cellular surface-ome reveals new targets for potential theranostic applications in cancers driven by TERT promoter mutations* - **Zhuo Chen, PhD.**
2. *Incidence of sarcoidosis-like reaction in patients treated with immunotherapy* - **Yan Li, MD.**
3. *Targeting CUB domain containing protein 1 (CDCP1) for cancer theranostics* - **Shalini Chopra, PhD.**
4. *Ferronostics: Measuring Tumoral Ferrous Iron with PET to Predict Sensitivity to Iron Targeted Cancer Therapies* - **Ning Zhao, PhD.**
5. *Development of Prostate-Specific Membrane Antigen Targeted Theranostic Nanoparticles to Treat Prostate Cancer Using Boron Neutron Capture Therapy* - **Niranjan Meher, PhD.**
6. *Potentiation of PSMA Radioligand Therapy by PARP* Inhibition - **Tanu Shenoy, PhD.**
7. *89Zr-fresolimumab PET imaging to localize TGFβ activation in glioblastoma* - **Oliver Reiners, PhD.**
8. *A novel system for in-vivo imaging of Ac-225* - **Javier Caravaca, PhD.**
9. *Impact of cellularity and heterogeneity on deposited absorbed dose patterns of alpha and beta emitters in a model of tumoral clusters* - **Jonathan Tranel, PhD.**

Preclinical Cancer Imaging
Chair: Sabrina Ronen, PhD.

1. *An Analysis of Isoclonal Antibody Formats Suggests a Role for Measuring PD-L1 with Low Molecular Weight PET Radiotracers* - **Yung-Hua Wang**
2. *Deuterium metabolic imaging of tumor burden and response to therapy in mutant IDH gliomas in vivo* - **Celine Taglang, PhD.**
3. *MRS based biomarkers of IDH1 mutant glioma response to the IDH inhibitor BAY-1436032* - **Donghyun Hong, PhD.**
4. *Deuterium magnetic resonance spectroscopy using 2H-pyruvate allows non-invasive in vivo imaging of TERT expression in brain tumors* - **Georgios Batsios, PhD.**
5. *Metabolic signatures of TERT positive human glioblastoma detected by MR spectroscopy* - **Noriaki Minami, PhD.**
6. *Magnetic Resonance Imaging Comparisons of Renal Cell Carcinoma Patient-derived Xenografts* - **Joao Piraquive Agudelo, PhD.**
7. *Optimization of Hyperpolarized Carbon-13 pH Imaging Methods in Preparation for Clinical Translation in Prostate Cancer* - **Changhua Mu, PhD.**
8. *Hyperpolarized 13C MR imaging of prostate cancer patient derived xenograft models and their response to therapy* - **Shubhangi Agarwal, PhD.**
9. *Prostate cancer patient-derived xenograft model development and MR imaging* characterization - **Emilie Decavel-Bueff**

Human/Clinical Cancer Imaging
Chair: Spencer Behr, MD.

1. *Denoising of Hyperpolarized 13C MR Images Using Patch-based Higher-order Singular Value Decomposition* - **Yaewon Kim, PhD.**
2. *Multi-parametric hyperpolarized 13C/1H imaging of human gliomas expressing diverse pathologic mutations* - **Adam Autry, PhD.**
3. *Variable Resolution Hyperpolarized [2-13C]Pyruvate MRI in Healthy Volunteers and Patients with IDH-Mutant Glioma*
4. - **Sana Vaziri, PhD.**
5. *Hyperpolarized 13C Metabolic Imaging of Patients with Pancreatic Ductal Adenocarcinoma* - **Jeremy Gordon, PhD.**
6. *Quantifying Renal Cell Carcinoma Metabolism with metabolite-specific bSSFP hyperpolarized [1-13C]pyruvate MR* - **Sule Sahin**
7. *Circulating tumor DNA and magnetic resonance imaging to predict neoadjuvant chemotherapy response and recurrence risk* - **Mark Jesus Magbanua, PhD.**
8. *Neoadjuvant therapy for breast cancer in the I-SPY 2 TRIAL: Radiologic review of breast MRI to refine selection of candidates for therapy de-escalation* - **Natsuko Onishi, PhD.**
9. *Relationship of dedicated breast PET and MRI features in breast cancer patients receiving neoadjuvant chemotherapy* - **Deep K. Hathi, PhD.**