

NCI Virtual Meeting via WebEx Event | June 16-17, 2021

June 16, 2021, Day 1, EDT

10:00 am Introduction

Huiming Zhang, PhD, DCTD, NCI

10:05 am Welcome

Janet Eary, MD, Associate Director, DCTD, NCI

Part I CIRP Program

Moderator: Huiming Zhang, PhD, NCI

10:10 am Session I CIRP Program and Individual Teams

CIRP Status Update

Huiming Zhang, PhD, DCTD, NCI

10:20 am New CIRP Team Presentation

CO-CLINCAL QUANTITATIVE IMAGING OF SMALL CELL NEUROENDOCRINE PROSTATE

CANCER USING HYPERPOLIZED 13C MRI

John Kurhanewicz, PhD, University of California at San Francisco

10:45 am New Associate Member Presentation

DEVELOPMENT OF AN OPEN-SOURCE PRECLINICAL IMAGING INFORMATICS PLATFORM

FOR CANCER RESEARCH

Kooresh Shoghi, PhD, Washington University at St Louis

11:10 am Established CIRP Team Progress

UNIVERSITY OF MICHIGAN QUANTITATIVE CO-CLINICAL IMAGING RESEARCH RESOURCE

Brian Ross, PhD, University of Michigan

11:35 am INTEGRATING OMICS AND QUANTITATIVE IMAGING DATA IN CO-CLINICAL TRIALS TO

PREDICT TREATMENT RESPONSE IN TRIPLE NEGATIVE BREAST CANCER

Mike Lewis, PhD, Baylor College of Medicine

12:00 pm	Lunch Break	

12:40 pm	Established CIRP Team Progress	
12:40 pm	MDACC PREDICT Charles Manning, PhD, MD Anderson Cancer Center	
1:05 pm	PENN QUANTITATIVE MRI RESOURCE FOR PANCREATIC CANCER Rong Zhou, PhD, University of Pennsylvania	
1:30 pm	THE DUKE PRECLINICAL RESEARCH RESOURCES FOR QUANTITATIVE IMAGING BIOMARKERS Cristian Badea, PhD, Duke University	
1:55 pm	WASHINGTON UNIVERSITY CO-CLINICAL IMAGING RESEARCH RESOURCE Kooresh Shoghi, PhD, Washington University at St Louis	

2:20 pm	Break	

2:35 pm	Session II Demonstration of Web-Accessible Research Resources Moderator: Huiming Zhang, PhD, NCI	
2:35 pm	WU-C2IR2 Web-Resource Demo Kooresh Shoghi, PhD, Washington University at St Iouis	
3:00 pm	Voxport- A Multimodal Image Repository for Preclinical Imaging Research G Allan Johnson, PhD, Duke University	

3:25 pm	Session III CIRP Power Pitch (Poster Briefing) Moderator: Charles Manning, PhD, MD Anderson Cancer Center Rong Zhou, PhD, University of Pennsylvania	
	Please preview pre-recorded videos at NIH Box two weeks prior. In this live session, present 1 slide overview ~2 mins. Discussions 60 mins.	
5:05 pm	End of the 1st day	

June 17, 2021, Day 2, EDT

Part II	CIRP Network and Working Groups
10:00 am	Session IV CIRP Network, Status and Progress Moderator: Charles Manning, PhD, MD Anderson Cancer Center
10:00am	CIRP Network Update Charles Manning, PhD, MD Anderson Cancer Center
10:10 am	Session V Animal Model & Co-Clinical Trial (AMCT) Working Group Moderator: Mike Lewis, PhD, Baylor College of Medicine
10:10 am	Presentation Emerging Models of Humanized Mice for Biomedical Research Leonard Shultz, PhD, Jackson Laboratory
10:40 am	Short Team-Centric Update Mike Lewis, PhD, Baylor College of Medicine
11:05 pm	Round Table Discussions Mike Lewis, PhD, Baylor College of Medicine Gary Luker, MD, University of Michigan
11:40 am	Session VI Imaging Acquisition & Data Process (IADP) Working Group Moderators: Tom Chenevert, PhD, University of Michigan Seth Gammon PhD, MD Anderson Cancer Center
11:40 am	IADP Working Group Activities Review Tom Chenevert, PhD, University of Michigan
12:10 pm	Presentations Methods to Lower Dose in Preclinical/Clinical CT Darin Clark, PhD, Cristian Badea, PhD, Duke University
12:30 pm	Acquisition Acceleration Technologies in Preclinical/Clinical MRI Stephen Pickup, PhD. University of Pennsylvania
12:50 pm	Advances in Quantification of Photoacoustic Imaging in Vivo Richard Bouchard, PhD, MD Anderson Cancer Center
1:00 pm	Photoacoustic Imaging Applications Marty Pagel, PhD, MD Anderson Cancer Center
1:10 pm	Lunch Break

1:50 pm	Moderators: Kooresh Shoghi, PhD, Washington University at St Louis Daniel Rubin, MD, Stanford University	
1:50 pm	Working Group Activity Updates Update on Web-Accessible Research Resource Kooresh Shoghi, PhD, Washington University at St Louis	
2:00 pm	Update on Small Animal DICOM & Metadata Kooresh Shoghi, PhD, Washington University at St Louis	
2:10 pm	Presentation and Discussion re Interoperability & AlMs Daniel Rubin, MD, Stanford University	
2:40 pm	<u>Presentations</u> Moderator: Kooresh Shoghi, PhD, Washington University at St Louis	
2:40 pm	ePAD Daniel Rubin, MD, Stanford University	
2:53 pm	Integrative Imaging Informatics for Cancer Research Daniel Marcus, PhD, Washington University at St Louis	
3:06 pm	RadxTools for Assessing Tumor Treatment Response on Imaging Satish Viswanath, PhD, Case Western Reserve University	

3:20 pm	Session VIII CIRP Network: Integration Issues from Working Groups Chair & Moderators: Charles Manning, PhD, MD Anderson Cancer Center Rong Zhou, PhD, University of Pennsylvania	

Part III	CIRP Management and Business	
3:30 pm	Session IX Business Meeting	
	All SC Members and NCI CIRP PDs Chair/moderator: Charles Manning, PhD, MD Anderson Cancer Center Rong Zhou, PhD, University of Pennsylvania Huiming Zhang, PhD, NCI	
4:00 pm	End of the 2 nd day.	



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Power Pitch for CIRP Posters, 3:25 - 5:05 pm, June 16, 2021

 A co-clinical trial in an autochthonous mouse model of soft tissue sarcoma suggests no benefit from addition of anti-PD-1 therapy to standard of care radiotherapy and surgical resection

Rutulkumar Patel, Yvonne M. Mowery, et al., Duke University

- 2. Hyperpolarized 13C MR imaging of metastatic prostate cancer murine models Shubhangi Agarwal, Jinny Sun, et al., University of California at San Francisco
- 3. MR Imaging of murine tibia for co-clinical studies of myelofibrosis Ghoncheh Amouzandeh, Kevin Heist, et al., University of Michigan
- **4. MRI metrics monitor bone marrow therapeutic response in a mouse myelofibrosis model**Tanner Robison, Manisha Solipuram, et al., University of Michigan
- 5. Gene signature associated with ASCT2 inhibitor efficacy against colorectal cancer Seong-Woo Bae, Allison S. Cohen, et al., MD Anderson Cancer Center, Vanderbilt University
- 6. Imaging characterization of NCI Patient Derived Model Repository (PDMR) xenografts Paula M. Jacobs, James L. Tatum, Joseph D. Kalen, et al., NCI, Frederick National Laboratory for Cancer Research
- 7. Dynamic contrast enhanced MR imaging of the mouse abdomen using stack of stars Sampling

Stephen Pickup, Hee Kwon Song, et al., University of Pennsylvania

- 8. Abdominal DWI by under-sampled radial acquisition and deep learning reconstruction Yuemeng Li, Yong Fan, et al., University of Pennsylvania
- 9. Correlating patterns in tumor cytoarchitecture with multiparametric MR signal in preclinical models of sarcoma

Stephanie J. Blocker, James Cook, et al., Duke University

- 10. Murine lung nodule detection via deep learning in micro-CT M. D. Holbrook, D. P. Clark, et al., Duke University
- 11. Deep learning segmentation of Triple Negative Breast Cancer (TNBC) Patient Derived tumor Xenograft (PDX) and sensitivity of radiomic pipeline to tumor probability boundary Kaushik Dutta, Sudipta Roy, et al., Washington University at St Louis
- 12. Advances in pre-clinical and clinical MRI of cancer using experimental and computational models

John Virostko, David A. Hormuth, et al., University of Texas at Austin

13. Integrating omics and quantitative imaging data in co-clinical trials: ePAD platform for extracting and analyzing cancer image features

Daniel Rubin, Mete Akdogan, et al., Stanford university, University of Texas at Austin, Baylor College of Medicine