Improving Cancer Diagnosis and Care:
Clinical Application of Computational Methods in Precision Oncology
OCTOBER 29 – 30, 2018

Keck Center of the National Academies
500 Fifth Street, NW
Washington, DC Room 100

WORKSHOP AGENDA

October 29, 2018	
7:30 am	**Registration and Breakfast**
8:00 am	**Welcome from the National Cancer Policy Forum and the Board on Mathematical Sciences and Analytics** Christopher Cogle, University of Florida Chair, Workshop Planning Committee David Chu, Institute for Defense Analyses Member, Board on Mathematical Sciences and Analytics
8:15 am	**Session 1: Workshop Overview** Moderator: Hedvig Hricak, Memorial Sloan Kettering Cancer Center **Precision Oncology: The Optimism and Pessimism from Keyboard to Bedside** • Christopher Cogle, University of Florida **Brief Review of** *Improving Cancer Diagnosis and Care: Patient Access to Oncologic Imaging and Pathology Expertise and Technologies* **(February 2018 National Cancer Policy Forum Workshop)** • Hedvig Hricak, Memorial Sloan Kettering Cancer Center **Keynote: A Roadmap for Translating Precision Oncology into Clinical Practice** • Atul Butte, University of California, San Francisco (presenting remotely) **Panel Discussion**
10:00 am	**Break**
10:15 am	**Session 2: Defining Unmet Needs and Challenges of Precision Oncology in Clinical Practice** Moderator: Christopher Cogle, University of Florida

	High Dimensional Data in Precision Oncology: Signal and Hype • Constantine Gatsonis, Brown University **Biologic and Metaphysical Limits to Pursuing Precision Oncology** • Keith Flaherty, Massachusetts General Hospital **The Risks of Bias and Inequities in Precision Oncology Care** • Kadija Ferryman, Data & Society Research Institute **Communication Challenges in Precision Oncology** • Galen Joseph, University of California, San Francisco **Panel Discussion**
12:15 pm	**Lunch**
1:00 pm	**Session 3: Data Considerations for Precision Oncology Care** Moderator: Amy Abernethy, Flatiron Health **Envisioning Critical Features of Datasets for Precision Oncology Care** • Amy Abernethy, Flatiron Health **Opportunities and Lessons Learned from AACR's Project GENIE** • Mia Levy, Vanderbilt University **Data Standardization and Harmonization** • Sean Khozin, Food and Drug Administration **Data Governance, Privacy, and Security** • Deven McGraw, Ciitizen **Panel Discussion** Include speakers and • David Magnus, Stanford University
3:00 pm	**Break**
3:15 pm	**Session 4: Analysis and Interpretation of Computational Methods for Precision Oncology Care** Moderator: Constantine Gatsonis, Brown University **Conceptual Strategies for Reproducibility of Precision Oncology Data and Methods** • Steven Goodman, Stanford University School of Medicine

	Validation and Replicability of Prediction Algorithms in Oncology • Giovanni Parmigiani, Dana-Farber Cancer Institute **Assessing Readiness of an Omics Signature for Use in a Clinical Trial** • Lisa McShane, National Cancer Institute **Regulation and Assessment of Quantitative Imaging Tools Used in Precision Oncology** • Nicholas Petrick, Food and Drug Administration **Digital Clinical Trials for Oncology Patients with Novel Machine Learning and AI Architectures** • Pratik Shah, MIT Media Lab **Panel Discussion**
5:30 pm	**Adjourn Day 1**
5:35 pm	**Reception**
	October 30, 2018
7:30 am	**Registration and Breakfast**
8:00 am	**Session 5: Clinical Application of Precision Oncology: Improving the Translation of Omics Technologies in Cancer Care** Moderator: Mia Levy, Vanderbilt University **Demonstrating Clinical Utility in Cancer Patient Management** • Lincoln Nadauld, Intermountain Healthcare **Health Care Delivery Models and Infrastructure for Precision Oncology Care** • Howard McLeod, Moffitt Cancer Center **Scaling Precision Oncology Care: Lessons Learned from Implementing Artificial Intelligence Across Health Care and Community Settings** • George "Holt" Oliver, Parkland Center for Clinical Innovation **Health Insurance Coverage Issues** • Lee N. Newcomer, Lee N. Newcomer Consulting **Panel Discussion** Include speakers and • Michael Kelley, Duke University and Veterans Health Administration • Lukas Amler, Genentech

10:00 am	**Break**
10:15 am	**Session 6: Panel Discussion: Stakeholder Perspectives of the Path Forward** Moderator: David Magnus, Stanford University • Richard Schilsky, American Society of Clinical Oncology • Frank F. Weichold, Food and Drug Administration • Bray Patrick-Lake, Duke University and All of Us Research Program • Deven McGraw, Ciitizen • Lisa McShane, National Cancer Institute • Lee N. Newcomer, Lee N. Newcomer Consulting • Joseph Chin, Centers for Medicare & Medicaid Services • Lukas Amler, Genentech
11:30 am	**Workshop Wrap Up** Christopher Cogle, University of Florida Chair, Workshop Planning Committee
11:45 am	**Adjourn**