AACR VIRTUAL PATIENT ADVOCATE FORUM

THE POTENTIAL OF BIG DATA, MACHINE LEARNING (ML), AND ARTIFICIAL INTELLIGENCE (AI) FOR ONCOLOGY

Speakers

-in order of appearance

DAVID A. TUVESON, MD, PHD, FAACR
Director and Roy J. Zuckerberg Professor of Cancer Research
Cold Spring Harbor Laboratory (CSHL) Cancer Center
Cold Spring Harbor, NY

Dr. Tuveson is the director of the Cold Spring Harbor Laboratory Cancer Center, where he is also the Roy J. Zuckerberg professor of cancer research. Additionally, he is the chief scientist for the Lustgarten Foundation, a medical staff affiliate at Memorial Sloan Kettering Cancer Center, and serves on the Board of Scientific Advisors of the National Cancer Institute. Dr. Tuveson is a world-renowned physician-scientist whose basic and translational research focuses on increasing our understanding of the biology of pancreatic cancer and on identifying and testing new approaches for diagnosing and treating the disease in preclinical and clinical settings. An AACR member since 2003, Dr. Tuveson is a scientific editor of the AACR journal *Cancer Discovery*, a member of the Scientific Advisory Committee for Stand Up To Cancer, and a Fellow of the AACR Academy. He is also the AACR President for 2021-22.

CORRIE PAINTER, PHD
Associate Director of Operations and Scientific Outreach for the Broad Cancer Program
Deputy Director of Count Me In
Cambridge, MA

Corrie Painter is the associate director of operations and scientific outreach in the Cancer Program of the Broad Institute of MIT and Harvard. She leads the Angiosarcoma Project, a nationwide direct-to-patient genomics initiative aimed at generating the genomic landscape of this orphan disease, and she is working to build scientific resources to enable broad-scale rare cancer research across many indications. A trained cancer researcher with a Ph.D. in biochemistry, Painter serves as the deputy director of *Count Me In*, which launches patient-driven research projects across multiple cancer types. In this role, she partners with advocacy groups and engages patients with metastatic breast cancer, angiosarcoma, and other cancers through social media in order to carry out the Metastatic Breast Cancer Project, the Angiosarcoma Project, and other patient-driven genomic initiatives where patients can consent online to donate their stored tumor samples, saliva samples, medical records, and their voices in order to directly accelerate the pace of discovery.

Prior to joining the Broad Institute in 2015, Painter was vice president and cofounder of Angiosarcoma Awareness Inc., a nonprofit devoted to fostering a collaborative atmosphere between researchers in order to generate data and reagents that can be shared by the sarcoma community as a whole. She continues in this role alongside her work at the Broad Institute.

SYLVIA K. PLEVRITIS, PHD

Professor and Chair in the Department of Biomedical Data Science and Professor in the Department of Radiology in the Stanford School of Medicine
Stanford, CA

Dr. Plevritis is a Professor and Chair in the Department of Biomedical Data Science and Professor in the Department of Radiology in the Stanford School of Medicine. Dr. Plevritis holds a PhD in Electrical Engineering (Stanford, 1992) with concentration on MRI spectroscopic imaging of tumors. She also holds an MS in Health Services Research (Stanford, 1996), with concentration on the evaluation of cancer screening programs on reducing cancer mortality. Dr. Plevritis is the Director of the Stanford Center for Cancer Systems Biology (CCSB), Director of the Cancer Systems Biology Scholars (CSBS) Program, and the co-Section Chief of the Integrative Biomedical Imaging Informatics at Stanford (IBIIS).

Dr. Plevritis is a Principal Investigator of the Stanford Cancer Intervention Surveillance Network (CISNET), which develops mathematical models of cancer progression and evaluates the effectiveness of mammography and MRI in screening for breast cancer and CT in screening for lung cancer.

OLGA G. TROYANSKAYA, PHD

Professor in the Department of Computer Science and the Lewis-Sigler Institute for Integrative Genomics at Princeton University
Deputy Director of Genomics at the Flatiron Institute
Princeton, NJ

Olga Troyanskaya is a professor at the Lewis-Sigler Institute for Integrative Genomics and the Department of Computer Science at Princeton University, where she has been on the faculty since 2003. In 2014 she became the deputy director of Genomics at the Center for Computational Biology at the Flatiron Institute, a part of the Simons Foundation in NYC. She holds a Ph.D. in Biomedical Informatics from Stanford University, has been honored as one of the top young technology innovators by the MIT Technology Review, and is a recipient of the Sloan Research Fellowship, the National Science Foundation CAREER award, the Overton award from the International Society for Computational Biology, and the Ira Herskowitz award from the Genetic Society of America.

STEPHEN GRUBER, MD, PHD, MPH
Vice President, City of Hope National Medical Center
Director, Center for Precision Medicine
Duarte, CA

An internationally recognized cancer geneticist and oncologist, Stephen Gruber, M.D., Ph.D., M.P.H., is a physician-scientist who focuses his clinical practice and research program on precision medicine and the genomics of cancer in order to improve treatment and care for cancer patients and their families. Dr. Gruber is an expert in Lynch syndrome and hereditary susceptibility to colorectal cancer, and he has broad experience in the care of patients and families with inherited susceptibility to cancer.

Dr. Gruber leads the Center for Precision Medicine at City of Hope. Precision medicine uses genomic-driven insights, clinical expertise, and advanced analytics to pioneer personalized prevention and treatment plans to transform the outcomes and quality of life for patients, their families and the community. His research program focuses on the genetic epidemiology of cancer, with an emphasis on colorectal cancer, melanoma and other solid tumors, bringing clinical cancer genetics and translational research to cancer prevention.

Moderator

ANNA D. BARKER, PHD
Chief Strategy Officer of the Lawrence J. Ellison Institute for Transformative Medicine of USC
Distinguished Visiting Fellow, Complex Adaptive Systems Arizona State University
Los Angeles, CA

Dr. Barker develops information-based strategies through internal research and engagement of networks of leading experts in medicine, science, and engineering to solve complex problems in cancer and other diseases. Previously, she served as the principal deputy director of the National Cancer Institute (NCI) where she led the development of Foundational platforms (Clinical Proteomics and National Cancer Nanotechnology Centers) and national programs (e.g., TCGA, Physical-Sciences Oncology Centers) to support the emerging concept of precision medicine. Hallmarks of these strategic innovative programs were networks of global institutions, team science and publicly available data. Post NCI, Dr. Barker served as Director of Transformative Healthcare Networks, co-director of Complex Adaptive Systems -Biomedicine (CAS) and professor of practice, School of Life Sciences at Arizona State University (ASU), where she maintains a courtesy academic appointment. At ASU, she employed CAS approaches through "knowledge networks" to enable progress in areas ranging from clinical trial designs to biomarker discovery and applying concepts from the physical sciences to fundamentally understand and control complex diseases such as cancer. Dr. Barker spent several years at Battelle Memorial Institute, a nonprofit transdisciplinary research organization, where she progressed from a research scientist to serve in several senior executive roles. She has received numerous awards for her contributions to cancer research, cancer patients and patient advocates, professional organizations, and the ongoing national effort to prevent and cure cancer. Dr. Barker received her MA and PhD from the Ohio State University.

AACR American Association for Cancer Research®
FINDING CURES TOGETHER®