Achieving Excellence in Cancer Diagnosis: A Workshop

Speaker Biosketches

Andrew H. Beck, M.D. Ph.D earned his MD from Brown Medical School and completed residency and fellowship training in Anatomic Pathology and Molecular Genetic Pathology from Stanford University. He completed a PhD in Biomedical Informatics from Stanford University, where he developed one of the first machine-learning based systems for cancer pathology. He's been certified by the American Board of Pathology in Anatomic Pathology and Molecular Genetic Pathology. Prior to co-founding PathAI, he was on the faculty of Harvard Medical School in the Department of Pathology at Beth Israel Deaconess Medical Center. He has published over 110 papers in the fields of cancer biology, cancer pathology, and biomedical informatics.

Gwen Darien is a longtime patient advocate who has played leadership roles in some of the country's preeminent nonprofit organizations. As executive vice president for patient advocacy, engagement and education at the National Patient Advocate Foundation and the Patient Advocate Foundation, Gwen leads programs that link PAF's patient service programs to NPAF initiatives, with the goal of improving access to equitable, affordable, quality health care. As a three-time cancer survivor herself, Gwen came into cancer advocacy expressly to change the experiences and outcomes for the patients who came after her and to change the public dialogue about cancer and other life-threatening illnesses. Over the past 25 years, Gwen has championed placing patients at the center of health system change, whether it is for research, public policy or direct services. Gwen serves on a wide range of program committees and workshop faculties. She is the Chair PCORI's Patient Engagement Advisory Panel, founding Chair of Community Engagement in Genomics Working Group of the National Human Genome Research and a member of the National Cancer Policy Forum. Gwen serves on the Board of Trustees of the USP. Since her first diagnosis of cancer, she has written extensively about her experiences as an advocate and cancer survivor. A recent piece, Transformation: My Experience as a Patient and an Advocate in Three Chapters appeared in the National Academy of Medicine Perspectives.

Chyke A. Doubeni, M.D., M.P.H., is Professor of Family Medicine and the inaugural director of the Mayo Clinic Center for Health Equity and Community Engagement Research at Mayo Clinic. He is also serves as the Associate Director for Community Outreach and Engagement in the Mayo Clinic Cancer Center. Dr. Doubeni is a member of the U.S. Preventive Services Task Force and has served on scientific panels. He received the 2010 Presidential Early Career Award for Scientists and Engineers, the highest honor bestowed by the U.S. government on science and engineering professionals in the early stages of their career for accomplishments in research, mentoring, and community service. He also received the Sadie Gerson Distinguished Scholar Award from the University of Pittsburgh. Dr. Doubeni has expertise in clinical and public health interventions to improve access to care and reduce disparities in the burden of chronic disease in

communities. He has conducted extensive research in delivery systems and communities to improve the process, quality, and effectiveness of cancer prevention and screening that has informed guidelines and efforts internationally on improving cancer screening, with a focus on colorectal cancer. Dr. Doubeni authors topics on colorectal cancer screening for UpToDate, an online point-of-care, evidence-based clinical information resource. He directs the transdisciplinary National Center for Integrated Behavioral Health in Primary Care, supported by the Health Resources & Services Administration to advance innovative models for improving access to care for mental health and substance use disorders. He has directed NIH-funded training program in cancer clinical epidemiology (T32) and concurrent investigator development during clinical residency (R38). Dr. Doubeni is a Physician Leadership Academy (PHLA) Aresty Scholar from the Wharton School Executive Education program (with Deloitte). He is certified by both the American Board of Family Medicine and the American Board of Preventive Medicine. Dr. Doubeni previously served as Chair of Family Medicine and Community Health at the Perelman School of Medicine - University of Pennsylvania, where he was the Harrison McCrea Dickson, M.D. and Clifford C. Baker, M.D. Presidential Professor. He had served as Interim Associate Vice Provost for Diversity at the University of Massachusetts Medical School.

Tamika Felder is a cancer survivor and award-winning women's health advocate, as well as Chief Visionary at Cervivor - a nonprofit dedicated to cervical cancer advocacy and support. Named a "Cancer Rebel" by Newsweek in a 2017 cover story, Tamika is a highly sought-after speaker on cervical cancer advocacy, cancer prevention, HPV education, and living life with purpose after cancer. She is the author of "Seriously, What Are You Waiting For? 13 Actions To Ignite Your Life & Achieve The Ultimate Comeback." Tamika currently serves on the steering committee of the National HPV Vaccination Roundtable. She has shared her story and experiences on Presidential Cancer Panels convened by the White House. An award-winning television producer, Tamika is currently filming a documentary about cervical cancer, the women living with it, and the vaccine to prevent it. Her story of patient-to-advocate/survivor-to-Cervivor inspires and mentors not only patients and medical communities, but anyone who has struggled with obstacles in their life. Learn more about Tamika's work at Cervivor.org and TamikaFelder.com.

James M. Ford, M.D. is a medical oncologist and geneticist at Stanford, devoted to studying the genetic basis of breast and GI cancer development, treatment and prevention in families and populations. Dr. Ford graduated in 1984 from Yale University where he later received his M.D. degree from the School of Medicine in 1989. He was an internal medicine resident and oncology fellow at Stanford, and joined the faculty in 1998. He is currently Professor of Medicine (Oncology) and Genetics, Director of the Stanford Cancer Genetics Clinic and the Cancer Genomics Program at the Stanford Medicine. Dr. Ford's clinical interests include the diagnosis and treatment of patients with a hereditary pre-disposition to cancer. He runs the Stanford Cancer Genetics Clinic, that sees patients for genetic counseling and testing of hereditary cancer syndromes for prevention and early diagnosis of cancer in high-risk individuals and populations. He is also Director of Stanford's Cancer Genomics Program, performing next-generation tumor profiling to identify novel genetic targets for personalized targeted therapies, and directs the Stanford Molecular Tumor Board. Dr. Ford is devoted to the training and mentoring of future scientists and physician-investigators. He is the Associate Director for Training and Education for the Stanford Cancer Institute, and a founding advisor for the Stanford Master's Program in

Genetic Counseling. He is also a current and former editor of numerous scientific journals, including *Cancer Research, DNA Repair,* and *PLoS Genetics,* and he is the founding Editor-in-Chief of *JCO Precision Oncology.*

Maryellen Giger, Ph.D. is the A.N. Pritzker Distinguished Service Professor of Radiology, Committee on Medical Physics, and the College at the University of Chicago. She has been working, for multiple decades, on computer-aided diagnosis /machine learning/deep learning in medical imaging and cancer diagnosis / management. Her AI research in breast cancer for risk assessment, diagnosis, prognosis, and therapeutic response has yielded various translated components, and she is using these "virtual biopsies" in imaging-genomics association studies. She has now extended her AI in medical imaging research to include the analysis of COVID-19 on CT and chest radiographs, and is contact PI on the NIBIB-funded Medical Imaging and Data Resource Center (MIDRC). Giger is a former president of AAPM and of SPIE; is a member of the NIBIB Advisory Council of NIH; and is the Editor-in-Chief of the Journal of Medical Imaging. She is a member of the National Academy of Engineering; Fellow of AAPM, AIMBE, SPIE, SBMR, IEEE, IAMBE and COS; and was cofounder of Quantitative Insights [now Qlarity Imaging], which produces QuantX, the first FDA-cleared, machine-learning driven CADx (AI-aided) system.

Mia A. Levy, M.D., Ph.D. is currently Chief Medical Officer for Foundation Medicine. Previously, she was the Director of the Cancer Center at Rush University Medical Center and the System Vice President for Cancer Services at Rush System for Health. She was an Associate Professor of Medicine in the Division of Hematology and Oncology and a practicing medical oncologist specializing in the treatment of breast cancer and precision oncology. Levy's research mission is to develop and disseminate learning cancer systems that deliver data and knowledge driven clinical decision support across the continuum of cancer care and research. To accomplish this, she applies biomedical informatics and implementation science methods to real-world problems in healthcare delivery systems. As the former director of the Cancer Center at Rush University Medical Center, Levy was leading efforts to create a learning healthcare system as part of the strategic direction for continuous discovery and improvement of cancer outcomes embedded into routine clinical practice. Precision cancer medicine implementation continues to be a driving use case for the learning systems framework, combining integration of genomic data into clinical workflows within the electronic health record, knowledge driven clinical decision support systems driven by the My Cancer Genome knowledge base, and infrastructures for secondary use of data for discovery both locally and as part of the international data consortium AACR GENIE.

Electra D. Paskett, Ph.D., became the Marion N. Rowley Professor of Cancer Research at The Ohio State University in 2002. She is the Director of the Division of Cancer Prevention and Control in the College of Medicine, a professor in the Division of Epidemiology in the College of Public Health and the Associate Director for Population Sciences and Community Outreach and Co-Program Leader of the Cancer Control Program in the Comprehensive Cancer Center of the Ohio State University (OSU). She is also Founding Director of the Center for Cancer Health Equity at the James Cancer Hospital, and immediate past-Chair of the Cancer Control and Health Outcomes Committee of Cancer and Leukemia Group B. She received her doctorate in epidemiology from

the University of Washington. Dr. Paskett's almost 400 peer-reviewed publications show-case her work in intervention research directed at cancer prevention, early detection and survivorship issues. Her studies use multi-level interventions in transdisciplinary teams with community-based participatory research to identify and intervene on factors causing disparities among underserved populations such as social and ethnic minority groups and rural/underserved populations. Dr. Paskett successfully competed for an NCI-funded P50, Center for Population Health and Health Disparities, to examine why rates of cervical cancer are high in Appalachia Ohio and is the Multiple Principal Investigator (MPI) of a large cervical cancer prevention program project in Appalachian regions of four states. She was the Principal Investigator of the Ohio Patient Navigator Research Program. She also has received funding from the Breast Cancer Research Foundation since 2001. She continues to work with the Women's Health Initiative (WHI) and is one of the multiple PI's of the WHI Cancer Survivor Cohort. Recently, she received funding for a UG3 that is looking at improving colorectal cancer screening through implementation science. Most recently, Dr. Paskett is a MPI of the RADx-UP Initiative Large Network proposal, RADx-UP Ohio, which leverages the vast community partnership networks of the Ohio Center for Clinical and Translational Science Award and the OSU Comprehensive Cancer Center to identify reasons for and intervene to reduce disparities in COVID-19 education, testing, contact tracing, follow-up and treatment among minority, underserved and vulnerable populations in Ohio. Dr. Paskett was elected as a Fellow to the American Association for the Advancement of Science in 2004. She is a past-President of the American Society of Preventive Oncology, past Deputy Editor of the journal Cancer, Epidemiology, Biomarkers & Prevention, and current Section Editor of the journal, Cancer. She is Director of the Cancer Control program in Alliance. She also has numerous awards such as the American Society of Preventive Oncology Distinguished Achievement Award, The Alliance for Clinical Trials in Oncology Jimmie Holland Award, the American Association for Cancer Research (AACR) Distinguished Lecture Award on the Science of Cancer Health Disparities and the AACR Team Science Award for her long-standing role in the WHI. In 2016, she was appointed by President Obama as a member of the National Cancer Institute's National Cancer Advisory Board, and in 2020 she was appointed by Governor Mike DeWine as a member of the Ohio Commission on Minority Health.

Blase Polite, M.D., is a Professor of Medicine at the University of Chicago the Deputy Section Chief for Strategy and Network Development, Executive Medical Director for Cancer Accountable Care and a GI oncologist specializing in the treatment of patients with colorectal anal pancreatic and neuroendocrine cancers. He is a past board member of the American Society of Clinical Oncology (ASCO), is Past-Chair of the ASCO Health Disparities Committee and a two-time chair of the ASCO Government Relations Committee. He served 5 years on the American Cancer Society Cancer Control and Prevention: Health Policy and Health Services (CPHPS) Review Committee including the role of vice-chair and Chair of that committee. He is a graduate of ASCO's Leadership Development Program, a recipient of an ASCO Career Development Award, and was named a Fellow of the Society in 2018. He is a past Associate Editor of the Journal of Oncology Practice and has received awards recognizing his clinical and teaching efforts. He is actively involved at the federal and local level in developing alternative payment models for cancer care. He has authored more than 100 peer-reviewed publications. His primary research focus is in cancer health disparities with a particular emphasis on the psychosocial and spiritual aspects of

health disparities. He currently is the CO-PI of a 5-year NCI Moonshot grant, Accelerating Colorectal Cancer Screening and Follow-up through Implementation Science in Chicago (ACCSIS-Chicago) aimed at improving colorectal screening among Federally Qualified Health Centers in Chicago and Northwest Indiana.

Elizabeth Sarma, Ph.D, M.P.H., is a Program Director in the National Cancer Institute's Health Systems and Interventions Research Branch of the Healthcare Delivery Research Program. In this role, she manages a portfolio of grants and conducts research on early cancer detection and healthcare delivery. Dr. Sarma's interests and research focus on early diagnosis of symptomatic cancers, including defining and operationalizing cancer diagnostic pathways in the United States and developing multilevel strategies to promote earlier diagnosis of symptomatic cancers. Prior to joining the branch as a Program Director, Dr. Sarma was a Cancer Prevention Fellow conducting research focused on better understanding psychosocial, sociodemographic, and healthcare delivery factors influencing the timeliness of diagnosis for symptomatic cancers. She completed her doctorate in Social Health Psychology from Stony Brook University and her MPH, with a concentration in Quantitative Methods, from the Harvard T.H. Chan School of Public Health.

Luke Sato, M.D. is Chief Medical Officer (CMO) and Senior Vice President for CRICO/RMF (Risk Management Foundation of the Harvard Medical Institutions) and Assistant Professor of Medicine at Harvard Medical School (HMS). His current responsibilities include overseeing development of all Patient Safety and Risk Management programs for CRICO/RMF and coordinating these initiatives across the Harvard medical system. Dr Sato's clinical training is in neurology as well as in computer science/medical informatics through the Division of Health Sciences and Technology at HMS and Massachusetts Institute of Technology, a National Library of Medicine sponsored post-doctoral fellowship program. He has applied industry principles and best practices to clinical risk management and patient safety and has developed several methodologies to analyze medical malpractice claims and patient safety data. One approach is to analyze malpractice data through the eyes of the patient by identifying care process failures which include individual risk and safety issues as well as systems-based process failures embedded in legal documents such as plaintiff depositions and claims adjuster reports. Dr. Sato is developing methodologies that take various data sources outside of malpractice claims data, such as patient complaint and satisfaction data, demographic, root cause analysis, sentinel event data, as well as other available public data sources to identify potential precursors or "leading indicators" to malpractice claims using decision analysis and statistical regression models. Our experience has shown these predictive analytic methods have added value to understanding future risks within an organization or with individuals using multiple data sources. The extension of this method would be applied to update and generate new taxonomies, ontology, and coding structures at CRICO/RMF based on newly identified relationships between data attributes and to focus our limited resources on those areas of risk most likely to contribute to malpractice.

Gordon Schiff, M.D. is a practicing general internist and Associate Director of Brigham and Women's Center for Patient Safety Research and Practice, Quality and Safety Director for the Harvard Medical School (HMS) Center for Primary Care, and Associate Professor of Medicine at HMS. Before coming to Boston in 2007, he worked for more than three decades at Cook County Hospital and was Professor of Medicine at Rush Medical College. He has published widely in the

areas of medication and diagnosis safety and was a reviewer and contributor to the 2015 National Academy of Medicine (IOM) Report Improving Diagnosis in Health Care. He chairs the editorial board of Medical Care. He is PI of multiple AHRQ, CRICO, FDA, NSPF, and Moore Foundation-funded projects related to improving medication safety and application of health IT to safer medication use, including the Massachusetts based PRIDE (Primary-care Research in Diagnosis Errors) Learning Network which is a coalition of groups sharing and learning from cases of diagnostic error. He has authored more than 200 papers and chapters including several recent papers detailing conservative prescribing and diagnosis practices as ways to transform current unsafe and costly use of drugs and diagnostic testing. He is recipient of an award from the Arnold P. Gold Foundation for Medical Humanism to study professional-patient boundaries and relationships, the Institute for Safe Medication Practices Lifetime Achievement Award in 2006, the 2019 Mark Graber Diagnosis Safety Award by the Society for Improving Diagnosis in Medicine (SIDM), and in 2020 was awarded the John Eisenberg Award by the National Quality Forum (NQF) and the Joint Commission.

Caroline A. Thompson, Ph.D, M.P.H., is a cancer epidemiologist dedicated to understanding and improving disparities in healthcare delivery for cancer. She has published over 50 articles and several book chapters related to cancer epidemiology, cancer health disparities, and quality of care. She also has a strong quantitative focus in her research, with over 20 years of experience in data science, and having made important methodological contributions in using complex, longitudinal sources of routine healthcare data, like medical claims and electronic health records. Dr. Thompson received her MPH and PhD in Epidemiology from the University of California Los Angeles and obtained postdoctoral training as an AcademyHealth Delivery Systems Science Fellow at the Sutter Health Palo Alto Medical Foundation Research Institute. She completed a 3-year career development award studying pathways of breast cancer care using electronic health records, has been co-investigator on two National Cancer Institute (NCI) funded studies that use cancer registry linked electronic health records to investigate disparities in the epidemiology of lung and liver cancers among ethnic minority groups, and she is the Principal Investigator of a recently awarded NCI R01 "Cancer Diagnosis in the Emergency Department: Explaining Persistent Disparities". She recently relocated from San Diego California, where she was appointed at San Diego State University School and University of California San Diego, back to her home state of North Carolina to join the faculty at The University of North Carolina Gillings School of Global Public Health as Associate Professor of Epidemiology.

Jasmin Tiro, Ph.D. is trained in behavioral sciences and public health, and is a professor at UT Southwestern and Associate Director for Community Outreach, Engagement, and Equity at the Simmons Comprehensive Cancer Center. In collaboration Parkland Health and Hospital System, the safety-net system in Dallas, she has designed, implemented, and evaluated interventions to address HPV vaccine hesitancy and improve cancer screening. Currently, Dr. Tiro leads the Cervical Screening Research Center of the National Cancer Institute's PROSPR Consortium (UM1CA221940). She is committed toward disseminating behavioral interventions aimed at ending cancer disparities.

Kathy Tossas, Ph.D., M.S. is an assistant professor and Harrison Endowed Scholar in the Department of Health Behavior and Policy, with a joint appointment in the Department of Family

Medicine and Population Health, Epidemiology division. In addition to her membership within Massey, Dr. Tossas is responsible for the Catchment Area Data Access and Alignment (CADA) initiatives which promote collaboration, innovation, and excellence in catchment-focused cancer research through outstanding, rigorous analytical support for MCC members. Her work and research are grounded in health equity, and center on elucidating how the community-ome (the interactive elements encompassing our individual and aggregate community experiences) impact cancer outcomes for underserved and underrepresented populations (e.g. racial and ethnic, sexual gender and geographic). Her most recent research focus centers on exploring the influence of the microbiome on HPV-related cancers.

Victor E. Velculescu, M.D., Ph.D. is internationally known for his discoveries in genomics and cancer research. He and his colleagues performed the first genome-wide sequence analysis in human cancers, identifying key genes and pathways dysregulated in tumorigenesis. He developed methods for global gene expression analyses and coined the word “transcriptome" to describe the patterns that could now obtained in cancer and other cells. This research has revealed the genomic landscape of human cancers, including in breast, colorectal, brain, pancreatic, ovarian, head and neck, and lung cancers. These analyses identified a variety of genes not previously known to be involved in neoplasia, including PIK3CA as one of the most highly mutated genes in human cancer. More recently, his group has developed non-invasive liquid biopsies approaches for early detection and monitoring of cancer patients. These discoveries provide new paradigms for our understanding of human cancer, and have created opportunities for precision diagnostics and personalized medicine for oncology and other diseases. Dr. Velculescu is Professor of Oncology and Pathology and Co-Director of Cancer Biology at the Sidney Kimmel Cancer Center at the Johns Hopkins University School of Medicine. He has a B.S. from Stanford University, and M.D., Ph.D. degrees from Johns Hopkins University School of Medicine. Dr. Velculescu has served as a member of the Board of Directors of the American Association of Cancer Research (AACR), as a member of scientific advisory boards of Ludwig Cancer Research, Cancer Research UK, Harvard Cancer Center, Tisch Cancer Center at Mount Sinai, Mark Foundation, and the White House Cancer Moonshot, and is a founder of Personal Genome Diagnostics. He is the recipient of several awards for his work including the Grand Prize Winner of the Amersham/Pharmacia & Science Young Scientist Prize (1999), Judson Daland Prize of the American Philosophical Society (2008), the European Association of Cancer Research and Carcinogenesis Young Investigator Award (2008), the AACR Award for Outstanding Achievement in Cancer Research (2009), the Paul Marks Prize for Cancer Research (2011), the EY Entrepreneur of the Year Award for Maryland (2016), and with his colleagues, the AACR Team Science Award for Research in Pancreatic Cancer (2013), Brain Cancer (2014), and Liquid Biopsies (2017).

Fiona Walter. M.D., M.A., is Professor of Primary Care Cancer Research and Director of the Wolfson Institute of Population Health at Queen Mary University of London, UK. She also hold honorary posts at the University of Cambridge UK and the University of Melbourne, Australia. Her team deliver world-class research focusing on the cancer pathway, from prevention, screening, early detection and diagnostics to post-treatment care; they also focus on translating genetics advances into primary care. Fiona has won research grants totalling more than £30 million in the UK and AU$7 million in Australia, and published over 220 peer reviewed articles including in

Nature, Lancet, BMJ and JAMA. She co-leads the Cancer Research UK-funded multi-institutional multi-national CanTest Collaborative, aiming to accelerate progress towards improving cancer outcomes by focussing on the transformative implementation in primary care of tests to support early detection of cancer. She also co-leads the NIHR Global Research Group on Advancing Early Diagnosis of Cancer in Southern Africa, and is co-investigator on the £5m NIHR Policy Research Unit in Cancer Awareness, Screening and Early Diagnosis.

Sallie J. Weaver, Ph.D., M.H.S., is a Program Director in the Health Systems and Interventions Research Branch (HSIRB) at the National Cancer Institute. Sallie manages and conducts research focused on organizational factors that influence clinical team performance, and interventions designed to optimize patient safety, care quality, and coordination within and across health system boundaries. She co-directs the NCI Healthcare Teams & Teamwork Processes in Cancer Care Delivery initiative that aims to improve the outcomes and experiences of people facing cancer through research on teaming in cancer care. The initiative also focuses on translation of evidence-based team performance and care coordination interventions into practice. Sallie's interests also include research addressing disparities in care quality and access. She currently supports the NCI Division of Cancer Control and Population Sciences Rural Cancer Control Research initiatives.