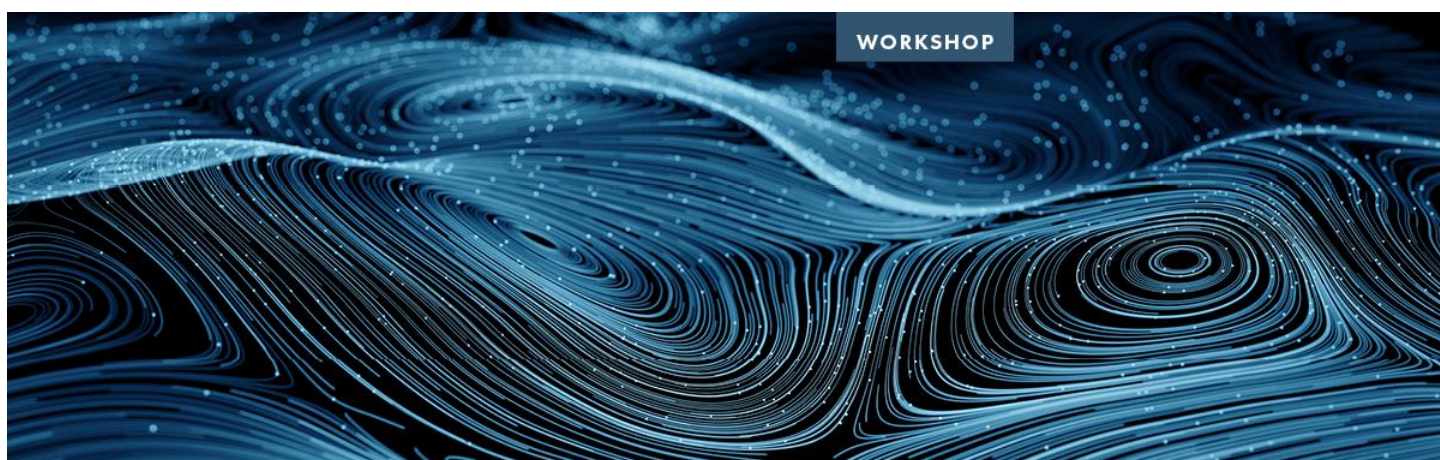


Biological Effectors of Social Determinants of Health in Cancer: Identification and Mitigation

A National Cancer Policy Forum Workshop



WORKSHOP

NATIONAL ACADEMIES Sciences
Engineering
Medicine

Biological Effectors of Social Determinants of Health in Cancer

Identification and Mitigation

March 20, 2024 • 8:30AM – 5:00PM ET
Poster Session • 5:00PM – 7:00PM ET
March 21, 2024 • 8:30AM – 11:30AM ET

The Keck Center – Room 100
500 5th Street, NW
Washington, DC 20001

Link to view the live webcast:

[Biological Effectors of Social Determinants of Health in Cancer:
Identification and Mitigation: A Workshop | National Academies](#)

March 20, 2024

Dear Colleagues,

Welcome to the National Academies of Sciences, Engineering, and Medicine workshop, *Biological Effectors of Social Determinants of Health in Cancer: Identification and Mitigation*. This workshop is being convened by the National Cancer Policy Forum.

The intent of the workshop is to examine the complex interactions among biological variables and the social determinants of health (SDOH) and how these factors affect cancer-related health outcomes. Workshop presentations and discussions will provide an overview of biological effectors and SDOH; emerging research in these areas, including the development and validation of biomarkers and strategies to improve the evidence base; as well as policy, research, and clinical practice opportunities to improve health equity and address the impact of SDOH on cancer outcomes. We hope the workshop will spur multi-disciplinary collaboration to improve cancer research, policy, patient care, and health outcomes.

We welcome your involvement in the workshop. Please use the microphones in the room or the chat box on our [website](#) to ask questions, and please mention your name and affiliation. The proceedings of the workshop will be published by the National Academies Press and may incorporate your comments and ideas. Archived presentations and videos from the workshop will also be available on the website.

We look forward to your involvement in this workshop.

Sincerely,

Chanita Hughes-Halbert, PhD
Vice Chair for Research and Professor
Department of Population and
Public Health Sciences
Dr. Arthur and Priscilla Ulene Chair in
Women's Cancer
Keck School of Medicine
Associate Director for Cancer Equity
Norris Comprehensive Cancer Center
University of Southern California

Stanton L. Gerson, MD
Dean and Senior Vice President for Medical Affairs
School of Medicine
Asa & Patricia Shiverick-Jane Shiverick
(Tripp) Professor of Hematological Oncology
Distinguished University Professor
Case Western Reserve University
School of Medicine
Director, National Center for Regenerative Medicine
Case Western Reserve University

Biological Effectors of Social Determinants of Health in Cancer: Identification and Mitigation

March 20-21, 2024

National Cancer Policy Forum

[Workshop Website](#)
Keck Center Room 100
500 Fifth Street, NW
Washington, DC 20001



WORKSHOP AGENDA

WEDNESDAY, MARCH 20, 2024 EASTERN TIME ZONE	
8:00 am	Breakfast and Registration
8:30 am	Welcome and Workshop Overview (30 minutes) Chanita Hughes-Halbert, University of Southern California Stanton Gerson, Case Western Reserve University
9:00 am	Session 1: Multi-Level Approach to Understanding Biological Effectors and Social Determinants of Health (1 hour, 30 minutes) <i>Co-Moderators</i> Chanita Hughes-Halbert, University of Southern California Stanton Gerson, Case Western Reserve University Overview of Health Disparities in Cancer (15 minutes) • Otis Brawley, Johns Hopkins University Social Determinants of Health (15 minutes) • Reginald Tucker-Seeley, Health Equity Strategies and Solutions Overview of Biological Effectors of SDOH and Influence on Cancer Risk and Outcomes (15 minutes) • Lauren McCullough, Rollins School of Public Health, Emory University Panel Discussion (45 minutes) Include speakers and: • Beverly Rogers, From Momma's House
10:30 am	Break
10:45 am	Session 2: Review of Emerging Research on SDOH, Biological Pathways, and Cancer Outcomes (1 hour 30 minutes) <i>Co-Moderators</i> Scarlett Lin Gomez, University of California, San Francisco Lawrence Shulman, University of Pennsylvania What Can the Health Care Sector Do About Social Conditions? The NASEM 5A Framework (12 minutes) • Laura Gottlieb, Social Interventions Research and Evaluation Network (SIREN), University of California, San Francisco (<i>participating virtually</i>)

	Allostatic Load and Breast Cancer: Tracing Social Determinant of Health Pathways (12 minutes) - Samilia Obeng-Gyasi, The Ohio State University An Interplay Between Social and Structural Determinants of Health and Stress in Cancer (12 minutes) - Adana Llanos, Mailman School of Public Health, Columbia University Irving Medical Center Emerging Genomic Pathways for Social Risk Exposure and Health Outcomes (12 minutes) - Ruth Carlos, University of Michigan Panel Discussion (42 minutes) Include speakers and: - Wayne Lawrence, National Cancer Institute - Alma McCormick, Messengers for Health (<i>participating virtually</i>)
12:15 pm	Lunch
1:15 pm	Session 3: Improving the Development and Validation of Biomarkers and Models Assessing the Effects of SDOH on Biological Pathways and Patient Outcomes (1 hour 45 minutes) <i>Co-Moderators</i> Smita Bhatia, University of Alabama at Birmingham (<i>participating virtually</i>) Robert Winn, Virginia Commonwealth University Global Networks Approaches (15 minutes) - Clayton Yates, Johns Hopkins University Chronic Social Stressors and Breast Cancer Biology: Laboratory Insights (15 minutes) - Suzanne Conzen, University of Texas Southwestern Medical Center Cancer Prevention and Biomarker Development (15 minutes) - Victoria Seewaldt, City of Hope The Biological Influences of Social Determinants of Health: Challenges, Surprises, and Complexities (15 minutes) - Michele Evans, National Institute on Aging Panel Discussion (45 minutes) Include speakers and: - Andrea Ferris, LUNgevity Foundation
3:00 pm	Break
3:15 pm	Session 4: Opportunities to Advance Progress on Biological Effectors of SDOH Research (1 hour, 45 minutes) <i>Co-Moderators</i> Olive Mbah, Flatiron Health Stanton Gerson, Case Western Reserve University Innovations in Population-Based Research Approaches to Advance Endometrial Cancer Equity: The Carolina Endometrial Cancer Study (15 minutes) - Victoria Bae-Jump, The University of North Carolina at Chapel Hill SDOH at the Intersection of Cancer Health Equity Research and Real-World Evidence Generation (15 minutes) - Olive Mbah, Flatiron Health

	Equity in Access to Oncology Biomarker Testing (15 minutes) - Gregory Vidal, West Cancer Center Minimizing the Impact of Biological and Social Drivers on Cancer Disparities: Prostate Cancer (15 minutes) - Timothy Rebbeck, Dana-Farber Cancer Institute, Harvard University Panel Discussion (45 minutes) Include speakers and: - Stanley Frencher, Martin Luther King Jr. Community Hospital - Karriem Watson, All of Us Research Program
5:00 pm	Poster Session with Reception
7:00 pm	Adjourn
THURSDAY, MARCH 21, 2024 EASTERN TIME ZONE	
8:00 am	Breakfast and Registration
8:30 am	Session 5: Policy Opportunities to Address SDOH on Cancer Outcomes and Improve the Evidence Base on the Impact of SDOH on Biological Outcomes (1 hour 45 minutes) <i>Co-Moderators</i> Cathy Bradley, Colorado School of Public Health Gwen Darien, National Patient Advocate Foundation National Policy (10 minutes) - Batsheva Honig, Centers for Medicare & Medicaid Services Innovation Center (<i>participating virtually</i>) Institutional Policy and Implementation (10 minutes) - Cardinale Smith, Mount Sinai Health System (<i>participating virtually</i>) Research Perspective (10 minutes) - Oluwadamilola "Lola" Fayanju, University of Pennsylvania Perelman School of Medicine National Consumer Advocacy Perspective (10 minutes) - Staci Lofton, Families USA (<i>participating virtually</i>) Panel Discussion (1 hour, 5 minutes) Include speakers and: - Christopher Cogle, University of Florida & Florida Medicaid - Jasmine McDonald, Columbia University Irving Medical Center - Lawrence Shulman, University of Pennsylvania
10:15 am	Break
10:30 am	Session 6: Concluding Discussion and Next Steps (1 hour) <i>Co-Moderators</i> Chanita Hughes-Halbert, University of Southern California Stanton Gerson, Case Western Reserve University Session 1: Chanita Hughes-Halbert and Stanton Gerson Session 2: Scarlett Lin Gomez and Lawrence Shulman Session 3: Smita Bhatia (<i>participating virtually</i>) and Robert Winn Session 4: Olive Mbah and Stanton Gerson Session 5: Cathy Bradley and Gwen Darien
11:30 am	Adjourn

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We are grateful for the support of our sponsors, which is crucial to the work of the Forum.

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Planning Committee Roster

Chanita Hughes-Halbert, PhD (Co-chair)

Vice Chair for Research and Professor
 Department of Population and Public Health
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 Dr. Arthur and Priscilla Ulene Chair in
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 Keck School of Medicine
 Associate Director for Cancer Equity
 Norris Comprehensive Cancer Center
 University of Southern California

Stanton L. Gerson, MD (Co-Chair)

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Smita Bhatia, MD, MPH

Director, Institute for Cancer Outcomes and
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Cathy Bradley, PhD

Professor and Dean, Colorado School of
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 Paul A. Bunn, Jr. Endowed Chair in
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 FASCO, FACE**

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Massey Cancer Center
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Johns Hopkins School of Medicine

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Speaker, Panelist, and Moderator Roster

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 Division of Gynecologic Oncology
 Director
 Lineberger Endometrial Cancer Center of Excellence
 Medical Director
 Lineberger Clinical Trials Office
 University of North Carolina at Chapel Hill

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 Journal of the American College of Radiology

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Professor
 University of Florida
 Chief Medical Officer
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 Department of Internal Medicine
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 National Institute on Aging
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Community Health

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CMS Innovation Center
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Founder and Chief Executive Officer
From Momma's House
Founder and Chief Executive Officer
Bev J Rogers Enterprises, LLC

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Ruth Ziegler Professor and Chair
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Chief Quality Officer for Oncology
Director of the Supportive
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Principal and Owner
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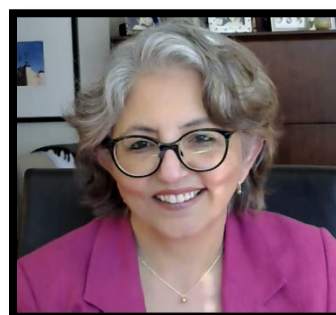
Speaker, Panelist, Moderator, and Planning Committee Biosketches



Victoria Bae-Jump, MD, PhD

The University of North Carolina at Chapel Hill

Dr. Bae-Jump is a Professor in the Division of Gynecologic Oncology at the University of North Carolina (UNC) at Chapel Hill. Dr. Bae-Jump's research focuses on understanding the inter-relationships among obesity, metabolism, racial disparities, the microbiome, and endometrial/ovarian cancer pathogenesis as a means to develop innovative targeted therapies and interventions for gynecologic cancers via mouse models and translational clinical trials. She is the Leader of the UNC Lineberger Endometrial Cancer Center of Excellence (ECCE), Medical Director-Clinical Operations of the UNC Lineberger Clinical Trials Office (CTO), the Director of Gynecologic Oncology Translational Research within her division, the Leader of the UNC Lineberger Gynecologic Oncology Clinical Trials Pod, and she runs an NIH-funded translational laboratory. Dr. Bae-Jump also serves as Co-Chair of the National Cancer Institute (NCI) Gynecologic Cancers Steering Committee's Uterine Task Force.



Smita Bhatia, MD, MPH

University of Alabama at Birmingham

Dr. Bhatia has completed her training in Blood Banking and Hematology/ Oncology and Epidemiology from the University of Minnesota. She served as founding chair of the Dept. of Population Sciences at City of Hope from 2006 to 2014. Dr. Bhatia joined the University of Alabama at Birmingham (UAB) in 2015 to establish the Institute for Cancer Outcomes and Survivorship. She is the White Endowed Professor in Pediatric Oncology at UAB. With over 380 peer-reviewed publications and continuous funding from NCI and LLS since 2000, she is an internationally renowned leader in cancer outcomes and survivorship. She serves as Associate Editor for the *Journal of Clinical Oncology* and Senior Editor for *Cancer Epidemiology Biomarkers and Prevention*. She is an elected member of the American Society for Clinical Investigation and the Association of American Physicians. She is the recipient of the Frank H Oski Lectureship Award from ASPHO, the Clinical Scholar Award from LLS, and the Outstanding Investigator Award from the NCI. She was the recipient of the Dean's Excellence Award in Mentoring (2020), and the Distinguished Professor Award from UAB (2021).



Cathy Bradley, PhD

Colorado School of Public Health

Cathy J. Bradley, PhD, is the Dean of the Colorado School of Public Health and the Deputy Director of the University of Colorado Cancer Center. Dr. Bradley is a health economist and holds the Paul A. Bunn, Jr. Endowed Chair in Cancer Research. Prior to joining the University of Colorado, she was the founding Chair of the Department of Healthcare Policy and Research, at the Virginia Commonwealth University School of Medicine.

Dr. Bradley received a Bachelor's degree from Old Dominion University and a Master's of Public Administration and PhD in Health Policy and Administration from the University of North Carolina Gillings School of Public Health.

Dr. Bradley's research focuses on decisions made at the intersection of work, health insurance, and cancer, and seeks to explain how when faced with a serious and expensive path to treat illness such as cancer, many workers remain employed

to keep employer-based health insurance, despite needs for treatment and convalescence. This research has extended to families and caregivers and their financial consequences. Within this realm, Dr. Bradley concentrates on policies that reduce disparate outcomes and financial burden among people who must make these stark choices. She is also an expert in Medicaid and using administrative datasets to explore research questions related to health disparities. Since 1998, she has been continuously funded as a principal investigator by the National Institutes of Health, and has received funding from the American Cancer Society, the Commonwealth Fund, and other state and international agencies.

Dr. Bradley served on national advisory committees including the National Academies of Science, Engineering, and Medicine National Cancer Policy Forum and formerly served on the National Advisory Committee to the Agency for Healthcare Quality & Research. She currently serves on the Patient-Centered Outcomes Research Institute (PCORI) Methods Committee. She is also an Associate Editor for *Journal of the National Cancer Institute*, on the Editorial Board of the *Journal of Cancer Survivorship*, and was formerly an Associate Editor of *Health Economics*.

Dr. Bradley has received numerous awards and honors including the Women in Science, Dentistry, and Medicine Professional Achievement Award in Leadership, the Distinguished Faculty Award at Michigan State University, and the Distinguished Faculty Scholar Award at Virginia Commonwealth University.



Otis W. Brawley, MD, MACP, FRCP(L), FASCO, FACE
Johns Hopkins University

Dr. Brawley is the Bloomberg Distinguished Professor of Oncology and Epidemiology at Johns Hopkins University. He is an authority on cancer screening and prevention and leads a broad interdisciplinary research effort focused on cancer health disparities at the Johns Hopkins School of Medicine, the Bloomberg School of Public Health, and the Sidney Kimmel Comprehensive Cancer Center. Brawley is a Fellow of the Royal College of Physicians (London), a Fellow of the American Society of Clinical Oncology, a Fellow of the American College of Epidemiology, and one of the few physicians to be named a Master of the American College of Physicians. He is an elected member of the National Academy of Medicine.

Dr. Brawley is a graduate of the University of Chicago Pritzker School of Medicine. He completed an internal medicine residency at Case-Western Reserve University and a fellowship in medical oncology at the National Cancer Institute. He is board certified in Internal medicine and medical oncology.



Ruth C. Carlos, MD, MS
University of Michigan

Ruth C. Carlos, MD, MS is a Professor of Radiology at the University of Michigan, Visiting Scientist at Mass General Brigham Integrated Health Care System, and serves as the Editor-in-Chief of the *Journal of the American College of Radiology* (JACR) that informs the management and practice of radiology. She is the President of the Academy of Radiology and Biomedical Imaging Research. She held the position of Vice-Chair of the University of Michigan Senate Advisory Committee on University Affairs, advising the President and Provost on faculty issues. She holds leadership positions in numerous organizations including the Eastern Cooperative Oncology Group-ACR Imaging Network (ECOG-ACRIN) and National Lung Cancer Round Table. Dr. Carlos currently chairs the GE AUR Research Radiology Academic Fellowship (GERRAF), a 30-year national program supporting early-stage investigators in health services research and care delivery.



Christopher R. Cogle, MD
University of Florida & Florida Medicaid

Dr. Christopher R. Cogle is Chief Medical Officer for Florida Medicaid, Professor at the University of Florida, and Founding Director of the Florida Health Policy Leadership Academy at the Bob Graham Center for Public Service. His pioneering work spans discoveries in the basic science of blood stem cells to clinical trials of anti-cancer drugs, alongside shaping innovative health policies and leading state health improvement initiatives. Dr. Cogle's recognitions by the Harvard Business School, Leukemia & Lymphoma Society, Milbank Memorial Fund, and the National Academy of Medicine Emerging Leaders in Health and Medicine Fellowship highlight his impact in bridging the gap between research and societal change.



Suzanne D. Conzen, MD
University of Texas Southwestern Medical Center

Suzanne D. Conzen, M.D., is a Professor in the Department of Internal Medicine and Chief of the Division of Hematology and Oncology at UT Southwestern Medical Center. She specializes in the diagnosis and treatment of breast cancer.

Dr. Conzen earned her medical degree at Yale School of Medicine and completed an internal medicine residency at New York Hospital-Cornell Medical Center. She then received advanced training in hematology and medical oncology through a clinical fellowship at Dartmouth-Hitchcock Medical Center and in molecular oncology through a research fellowship at Dartmouth Medical School supported by the Howard Hughes Medical Institute. She also holds a master's degree from the London School of Hygiene & Tropical Medicine.

Certified by the American Board of Internal Medicine in medical oncology, she joined the UT Southwestern faculty in 2019 as Chief of Hematology and Oncology after a 20 year career as a physician-scientist at The University of Chicago.

An established scientist with multiple National Cancer Institute grants and a CPRIT established investigator award, Dr. Conzen's laboratory studies glucocorticoid receptor function and the systemic response to social stressors in prostate, breast, and ovarian cancers. Her previous research in Chicago led to the recognition of a role for stress hormone signaling in breast cancer biology and, more recently, in cancer progression and therapy-resistance in prostate and ovarian cancer. She was an Investigator in the NIH-funded Center for Interdisciplinary Health Disparities Research (CIHDR) in Chicago examining the role of environmental stressors and the individual stress response on triple-negative breast cancer biology.

Dr. Conzen is a past member of the TBCRG endocrine resistance working group, and she previously served on the CALGB/Alliance breast committee. In addition, she has served as senior editor of *Cancer Research* and as Chair of the National Institutes of Health's Cancer Etiology Study Section.

She is also an elected member of the American Society for Clinical Investigation and the American Association of Physicians.



Gwen Darien, BA

National Patient Advocate Foundation

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 and engagement, Gwen leads programs that link Patient Advocate Foundation's direct patient service programs to NPAF system change initiatives, with the goal of improving access to affordable, equitable quality health care.

Called "a bit of a renegade" by People magazine, Gwen has long insisted on pushing boundaries while maintaining a safe space for patients. As editor and publisher of Mamm, a magazine for women with breast or reproductive cancer, Gwen published features on previously taboo subjects, such as dating after a mastectomy, along with the more

expected academic features on news and policy analysis. Her media leadership was recognized by the Avon Foundation, which honored her as one of "the most powerful women in breast cancer."

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. With these goals in mind, in 2005 she started the first stand-alone advocacy entity in a professional cancer research organization at the American Association for Cancer Research, causing outside observers to note the organization's "progressive commitment to patient advocacy." At AACR, she launched CR magazine – a magazine for people with cancer and those who care for them. Later, she served as the executive director of the Samuel Waxman Cancer Research Foundation; director of The Pathways Project; and executive vice president of programs and services at the Cancer Support Community. In each role, Gwen 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 past Chair of PCORI's Patient Engagement Advisory Panel and founding Chair of Community Engagement in Genomics Working Group of the National Human Genome Research. Gwen serves on the Board of Trustees of the USP and is a member of the National Cancer Policy Forum. Gwen also writes 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.

Gwen is a graduate of Sarah Lawrence College, where she also served as an advisor for their Health Advocacy program. She grew up in Milwaukee, but now lives in New York City, where she cooks Persian dishes, collects earrings, and improves her friends' personal libraries, one book at a time.



Michele K. Evans, MD

National Institute on Aging

Dr. Michele K. Evans, an internist and medical oncologist, received her undergraduate degree in biology from Barnard College, Columbia University and her medical degree from Rutgers University, The Robert Wood Johnson Medical School. She received her postgraduate training in internal medicine at Emory University School of Medicine and fellowship training in medical oncology within the Medicine Branch of the Clinical Oncology Program at the National Cancer Institute (NCI). Dr. Evans, a tenured Senior Investigator, also serves as Deputy Scientific Director, National Institute on Aging (NIA) Intramural Research Program (IRP) and is the Training Director for the NIA IRP. A previous National Health Service Corp Scholarship recipient, Dr. Evans served as a scholar internist in the South Bronx and Bedford Stuyvesant, Brooklyn where she practiced in a storefront and in the basement of a public housing development. She is the recipient of numerous awards, author of over 320 publications and currently serves on the editorial

board of *The New England Journal of Medicine*. Trained as a physician scientist, she conducts epidemiologic clinical research in health disparities and basic bench research on the biology of health disparities.



Oluwadamilola “Lola” Fayanju, MD, MA, MPHS, FACS

University of Pennsylvania Perelman School of Medicine

Dr. Oluwadamilola “Lola” Fayanju is the Helen O. Dickens Presidential Associate Professor in the Perelman School of Medicine at the University of Pennsylvania (PENN) and Chief of the Division of Breast Surgery for the University of Pennsylvania Health System, aka Penn Medicine. She is also Surgical Director of the Rena Rowan Breast Center in the Abramson Cancer Center, Director of Health Equity Innovation at the Penn Center for Cancer Care Innovation (PC3I), and a Senior Fellow in the Leonard Davis Institute of Health Economics (LDI) at PENN. Dr. Fayanju is an academic breast surgical oncologist whose research spans four areas: (1) addressing disparities and promoting equity in breast cancer presentation, guideline-concordant treatment, outcome, and clinical trial participation; (2) improving prognostication and treatment for biologically aggressive variants of breast cancer including inflammatory, lobular, and metaplastic carcinoma; (3)

optimizing oncologic care through the collection and application of patient-reported outcomes (PROs) and data on social determinants of health (SDOH); and (4) elucidating the importance of race, ethnicity, and gender in the conduct of research and the promotion of a diverse healthcare and medical research workforce.

She received her undergraduate degree in History and Science and an MA in Comparative Literature from Harvard. She received her MD and a master’s of population health sciences (MPHS) from Washington University in St. Louis, where she also completed her residency in General Surgery. She completed fellowship training in Breast Surgical Oncology at The University of Texas MD Anderson Cancer Center. In 2019, she was recognized by the National Academy of Medicine as an Emerging Leader in Health and Medicine Scholar. Her research is supported by a diverse array of organizations including the National Institutes of Health (NIH) and the Breast Cancer Research Foundation (BCRF), and she has published in a variety of journals including Annals of Surgery, Cancer, the Journal of Clinical Oncology, JCO Oncology Practice, JAMA Oncology, JAMA Surgery, and JAMA.

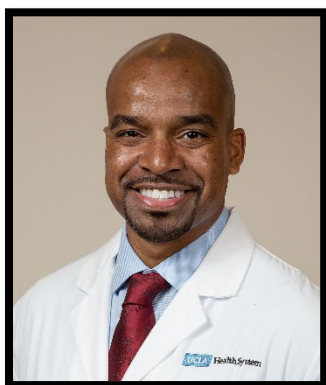


Andrea Ferris, MBA

LUNGeVity Foundation

Andrea is President and CEO of LUNGeVity Foundation. She became involved with lung cancer advocacy following her mother’s death from the disease in 2008. After receiving a diagnosis of stage IV lung cancer in 2006, Andrea’s mother underwent numerous treatments and clinical trials at several major academic institutions to no avail. Together with her father, Andrea was her mother’s primary caregiver during this time. Determined to drive more money into lung cancer research, Andrea left the successful software company that she helped launch, to found Protect Your Lungs, an organization focused 100% on funding early detection research. In 2010, Andrea merged Protect Your Lungs with LUNGeVity, a Chicago based organization, to form the nation’s leading lung cancer focused non-profit.

Andrea’s strong business background combined with her connections to the worlds of research and advocacy have enabled her to build one of the preeminent patient advocacy organization in the lung cancer space. LUNGeVity funds translational research into both early detection and more effective treatments of lung cancer as well as a highly coveted Career Development Awards program. LUNGeVity also fills unmet needs for people diagnosed with lung cancer by providing education, support and survivorship programs. Recognizing the need to build awareness and understanding about lung cancer, LUNGeVity has built the largest grassroots network of events and advocates across the country.



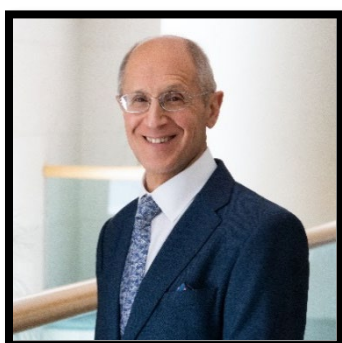
Stanley K. Frencher Jr., MD, MPH
Martin Luther King, Jr. Community Hospital

Stanley Frencher Jr, MD MPH, is the Director of Urology, Chair of Perioperative Services, and Medical Director of Surgical Outcomes & Quality at Martin Luther King, Jr. Community Health. He is also the Lead Physician of Urology at Martin Luther King, Jr. Outpatient Center, a multispecialty ambulatory center serving a historically marginalized community in South Los Angeles.

His dedication to underserved communities started as early as an undergraduate at the University of Michigan as a Summer Enrichment in Public Health student international, continued at his time at Albert Einstein College of Medicine where he was awarded the first Jean L. Cook, M.D. Memorial Award for Medical Excellence, and was honed during his training as a Robert Wood Johnson Clinical Scholar while a urology resident at Yale

where he co-led the Black Barbershop Health Outreach Program, a national initiative aimed at improving health of Black men. Currently, he is an Associate Clinical Professor and the Director of Justice, Equity, Diversity, and Inclusion for UCLA Urology. Dr Frencher is also the Chief Executive Officer of HubMD, and Chief Medical Officer and EVP Afya Global.

A driving force in optimization and improving efficiency, he leads a diverse team of medical and administrative professionals in the day-to-day activities of a growing start-up company focused on artificial intelligence, virtual care, and workflow engineering. Furthermore, his clinical efforts as a board-certified Urologist have led him to be the recipient of the "Top Doctor Choice Award" from the LA County Department of Healthcare Services as well as the "Top Healthcare Professionals Under 40" award from the National Medical Association (NMA). He's married, father of 3 children, and enjoys playing basketball, powerlifting, and coaching his kids' sports teams.



Stanton L. Gerson, MD
Case Western Reserve University

Stan Gerson, MD, is the Dean and Senior Vice President for Medical Affairs at Case Western Reserve University School of Medicine, where he is the Asa and Patricia Shiverick-Jane Shiverick (Tripp) Professor of Hematological Oncology and Case Western Reserve University Distinguished University Professor. In 2012, he was the recipient of the Case Western Reserve Medal for Excellence in Health Science Innovation, the highest honor bestowed by the School of Medicine to those advancing research, education, and health care. He is the past president of the Association of American Cancer Institutes (2016-2018) and a member of the American Association of Physicians since 1997, and has been a member and Chair of numerous NIH study

sections, including the National Cancer Institute (NCI) Board of Scientific Advisors. He serves on the Executive Advisory Board of 11 NCI-designated cancer centers. He has earned multiple National Institutes of Health (NIH) grants and published more than 258 journal articles, 275 abstracts, 37 book chapters, and 18 patents. Dr. Gerson has distinguished himself in a number of realms, including his research in DNA repair and stem cell therapy, which has resulted in numerous publications and patents. Three of his discoveries are in clinical trials as new cancer therapies. He is also the co-editor of the internationally recognized textbook, "Gene Therapy of Cancer Translational Approaches from Preclinical Studies to Clinical Implementation 3" (Elsevier Limited, Oxford, United Kingdom) and the textbook "Clinical Hematology." Dr. Gerson is foremost, a mentor and educator for the next generation of compassionate cancer research scientists and clinicians.

Dr. Gerson's research interests are in the areas of stem cells and DNA repair. In his stem cell research, he developed mesenchymal stem cells as a therapeutic infusion for blood stem cell transplantation and for the correction of genetic disorders. This therapy is approaching FDA approval. He identified a gene therapy strategy method that creates drug-resistant stem cells capable of selectively repopulating the recipient without the need for high dose toxic therapy. This strategy is now used experimentally and clinically throughout the country. In the area of DNA repair, he developed inhibitors of DNA repair to improve the efficacy of anti-cancer agents. Both are currently in clinical trials. Finally, Dr.

Gerson has developed transgenic mouse models that examine the role of critical genes in the stability of stem cell populations over the lifetime of the animal. These studies may predict stem cell diseases of aging and cancer. His research has generated 12 patents in the area of gene therapy and cancer drug development that have been licensed to three companies.



Scarlett Lin Gomez, MPH, PhD
University of California, San Francisco

Scarlett Lin Gomez is Professor and Vice Chair for Faculty Development in the Department of Epidemiology and Biostatistics and Co-Leader of the Cancer Control Program of the Helen Diller Family Comprehensive Cancer Center, at the University of California, San Francisco. She is Director of the Greater Bay Area Cancer Registry, a participant in the NCI SEER (Surveillance, Epidemiology, End Results) program and the California Cancer Registry. Her research focuses primarily on cancer health disparities and aims to understand the multilevel drivers, particularly the structural and social determinants of health, of those disparities.



Laura Gottlieb, MD, MPH
Social Interventions Research and Evaluation Network (SIREN), University of California, San Francisco

Dr. Gottlieb is the founding co-director of the Social Interventions Research and Evaluation Network, a national research network that advances research on health care strategies to improve social conditions, and Professor of Family and Community Medicine at the University of California, San Francisco. Her research explores health care sector programs and policies related to identifying and addressing social risk factors in the context of care delivery. Dr. Gottlieb is also Associate Director of the Robert Wood Johnson Foundation Evidence for Action National Program Office.



Batsheva Honig, MPH, MHSA
Centers for Medicare & Medicaid Services Innovation Center

Batsheva Honig is a Health Insurance Specialist at the Centers for Medicare & Medicaid Services (CMS) Innovation Center where she supports the Enhancing Oncology Model (EOM) and the Oncology Care Model (OCM). She is the EOM Model Lead and previously served as the OCM Operational Lead and EOM Quality Strategy and Health Equity Lead. Ms. Honig has her MPH and MHSA from the University of Michigan School of Public Health, in Health Behavior and Health Education and Health Management and Policy.



Chanita Hughes-Halbert, PhD
University of Southern California

The goal of Dr. Hughes-Halbert's research program is to improve the precision of multilevel strategies for achieving health equity by identifying diverse determinants of minority health and cancer health disparities and by translating this information into sustainable interventions in clinic and community-based settings to improve cancer outcomes and chronic disease management in disparity populations in local and regional geographic areas. Dr. Hughes-Halbert is a nationally recognized expert in cancer prevention and control among diverse populations and her research is supported by numerous grants from the National Cancer Institute, the National Institutes on Minority Health and Health Disparities, and the Veteran's Affairs Medicine Center. Previously, she was a member of the

Board of Scientific Advisors at the National Cancer Institute and the National Human Genome Research Institute Advisory Council. Dr. Hughes-Halbert is a past recipient of the AACR Distinguished Lecture in Cancer Health Disparities Award and is a member of the National Academy of Medicine.



Wayne R. Lawrence, DrPH, MPH
National Cancer Institute

Dr. Wayne Lawrence is a social epidemiologist whose research focuses on understanding how the social environment contributes to disparities in disease risk and mortality among structurally marginalized populations. His research seeks to understand the relationship between the neighborhood environment and health. More specifically, how do the residential area circumstances in which individuals are born, grow, live, work, and age affect their health and quality of life. Currently, Dr. Lawrence is investigating the contributions of racial residential segregation, psychosocial stressors, and barriers to quality medical care to exacerbating cancer disparities and premature mortality. His research also examines national trends in leading causes of death by race and ethnicity, and socioeconomic status.



Adana A.M. Llanos, PhD, MPH
Mailman School of Public Health, Columbia University Irving Medical Center

Adana A.M. Llanos, PhD, MPH (she/her) is an Associate Professor of Epidemiology at the Mailman School of Public Health at Columbia University. As a cancer and molecular epidemiologist and health equity scholar her research investigates the molecular and sociobiologic underpinnings of cancer outcomes inequities. Dr. Llanos' research portfolio – largely funded by the National Cancer Institute (NCI) and the National Institute on Minority Health and Health Disparities (NIMHD) – is driven by an immense desire to identify effective strategies for reducing the rates of poorer cancer outcomes in vulnerable populations to move the needle towards greater health equity.

Dr. Llanos has established a multidisciplinary research program that has three broad objectives: (1) understanding molecular and sociobiologic mechanisms that contribute to inequities in cancer outcomes, particularly breast and cervical cancers; (2) improving cancer survival among vulnerable populations and those with a disproportionately high cancer burden; and (3) advancing the current understanding of the impact of chemical exposures from the use of hair products and other personal care products on hormone-related cancer risk and outcomes, particularly among racially and ethnically diverse groups. In recognition of her impactful, innovative research, Dr. Llanos has received numerous awards and honors, including a Buckeyes under 40 Award (2016, The Ohio State University Black Alumni Society), Minority Faculty Scholar Award (2018, American Association for Cancer Research), Excellence in Research Award (2018, New Jersey Health Foundation), and an Emerging Scholar Award (2021, Diverse: Issues in Higher Education).

In addition to her academic research, scholarship, teaching, and mentoring, Dr. Llanos is actively involved in service through engagement with various non-profit organizations whose mission includes providing timely public health advocacy, education and outreach, and cancer survivorship support, particularly organizations serving racial and ethnic minority and medically underserved communities.



Staci Lofton, JD, MPH
Families USA

Staci Lofton is the Senior Director of health Equity at Families USA. In her role, Staci is responsible for developing strategic priorities that propel health equity. As a fierce advocate, Staci works to ensure that health equity is central to health policy solutions at the Federal and State levels. Staci also oversees the development and execution of Families USA's growing health equity portfolio — including its new Health Justice Now Network, the Center on Health Equity Action for System Transformation, the Health Equity Task Force for Delivery & Payment Transformation, Families USA's Community Advisory Council, the Health Equity Academy in System Transformation and other initiatives.

Prior to joining Families, Staci worked with the Harris County Public Health (HCPH) Department in Texas, one of the largest health departments in the nation as a Senior Policy Planner responsible for advancing health, housing, food, and economic security for disenfranchised county residents. As the leader of HCPH's COVID-19 equity response, Staci has been responsible for designing and executing a strategic plan to ensure equitable testing, contact tracing, and vaccination, and co-chaired the COVID-19 and Health Task Force to help the county equitably manage the pandemic.

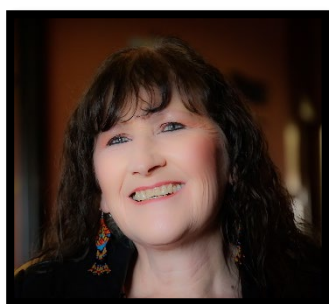
Staci has also previously worked in various roles on public health priorities during her eight-year tenure at the Centers for Disease Control and Prevention (CDC), and on healthcare issues as an attorney. She received a Bachelor of Arts in English from Mount Holyoke College, a Master of Public Health in sociomedical sciences from Columbia University, and a Juris Doctorate in health law and ethics from the University of Houston.



Olive Mbah, PhD, MHS
Flatiron Health

Olive Mbah, PhD, MHS, is a Senior Health Equity Scientist at Flatiron Health and a health services researcher with over 10 years experience in health equity research methods, cancer outcomes research, community engaged-research, clinical trial diversity, and the measurement of social drivers of health. Olive is broadly interested in the drivers of inequities in cancer care and outcomes and the multilevel interventions needed to address them. At Flatiron, she provides subject matter expertise on a range of projects across the organization and serves as Project Lead within the Health Equity Research Lab. Prior to Flatiron, Olive was a Health Equity Researcher at Mathematica where she provided health equity thought leadership and quantitative research expertise in evaluating national healthcare programs and policies. Olive holds a PhD in Health Policy and Management

from the University of North Carolina at Chapel Hill Gillings School of Global Public Health and an MHS in Epidemiology from the Johns Hopkins Bloomberg School of Public Health.



Alma McCormick, BS
Messengers for Health

Alma McCormick is a member of the Crow Nation and the Executive Director of Messengers for Health, a Crow Indian 501 (c) (3) nonprofit organization located on the Crow reservation in Montana. Alma is a leader and a community activist for improved health and wellness amongst her people. Her educational background is in Community Health and she furthered her education receiving a Bachelor's of Science in Health and Wellness at the Montana State University-Billings. She has been actively involved in cancer awareness outreach and advocacy amongst Native American women in Montana since 1996. She has extensive experience in conducting community-based participatory research projects addressing various health needs of the Crow people while working in partnership with Montana State University-Bozeman. She has traveled nationwide to present at health conferences to share the program's successes. She has also co-authored numerous peer reviewed journal articles. Alma's passion for her work in community outreach stems from her personal experience of losing a young twin daughter to neuroblastoma cancer in 1985.



Lauren E. McCullough, PhD, MSPH
Rollins School of Public Health, Emory University

Dr. Lauren E. McCullough is an Associate Professor in the Department of Epidemiology at the Rollins School of Public Health and Visiting Scientific Director at the American Cancer Society. Her overarching research interests are in cancer epidemiology, specifically the role of social and structural determinates of health to the breast tumor microenvironment, as well as disparities in cancer outcomes. Her research program integrates molecular epidemiology, epigenetics, and other biomarkers for disease risk and progression; environmental and social epidemiology; health services research; and causal inference methods. The goals of her research program, BRIDGE, is to improve cancer outcomes in underserved populations by *bridging* clinical and population research, molecular and social epidemiology, and scientist with the communities they serve. In doing so, she hopes to identify culturally relevant and sustainable targets for pharmacologic, behavioral, and policy intervention.



Jasmine McDonald, PhD
Columbia University Irving Medical Center

Jasmine McDonald, Assistant Professor at Columbia University's Mailman School of Public Health, began her academic journey with a degree in Biochemistry and Molecular Biology from the University of Maryland, Baltimore County. As a Meyerhoff and U*STAR Scholar, she laid the foundation for her career.

McDonald earned her Doctorate in the Biological Sciences in Public Health from Harvard University, specializing in Immunology and Infectious Diseases. Postdoctoral training in breast cancer epidemiology at the University of Pennsylvania and Columbia University refined her expertise.

Her research explores critical windows of breast development, examining periods of heightened susceptibility to carcinogenesis. Integrating individual factors, environmental elements, and biological outcomes, her work holds the potential for understanding early-onset breast cancer. She is currently examining the etiology behind postpartum breast cancer.

Recognized for her commitment to education, McDonald received the 2021 Columbia University Presidential Teaching Award. She teaches Cancer Epidemiology and serves as Assistant Director at the Cancer Research, Training, and Education Center at the Herbert Irving Comprehensive Cancer Center (HICCC). As Co-Director of the YES in THE HEIGHTS Program at HICCC, she engages in discussions on cancer health equity with students, teachers, and the community.

Raised in Tuskegee, Alabama, McDonald values education and progress, a legacy from her parents and grandparents. Her career embodies dedication to public health and cancer research, reflecting the ideals of service and community engagement.



Larissa Nekhlyudov, MD, MPH, FASCO

Brigham and Women's Hospital/Dana-Farber Cancer Institute, Harvard Medical School

Dr. Larissa Nekhlyudov is a Professor of Medicine at Harvard Medical School and is a practicing primary care physician at the Brigham & Women's Hospital in Boston, Massachusetts. She is also the Clinical Director, Internal Medicine for Cancer Survivors at the Dana-Farber Cancer Institute where she offers clinical care for long term survivors of childhood and adult cancers. Dr. Nekhlyudov is particularly interested in improving the care of cancer survivors and the interplay between primary and oncology care. Her publications (including journal articles, book chapters, and two books), as well as her broad-ranging educational programs, have promoted global awareness among health care providers about the ongoing needs of cancer patients across the care continuum. Dr. Nekhlyudov has been at the forefront of the field of cancer survivorship, nationally and internationally, by leading and participating in the development of policies, clinical

guidelines, educational programs, and research.

Dr. Nekhlyudov is an active member of the American Society of Clinical Oncology, the National Comprehensive Cancer Network, and the Society of General Internal Medicine, and is an Executive Member of the Cancer and Primary Care Research International Network (Ca-PRI). She is a member of the National Academies of Sciences, Engineering and Medicine (NASEM) National Cancer Policy Forum. Dr. Nekhlyudov has previously served on several NASEM activities including the *Committee on the Quality of Cancer Care: Addressing the Challenges of an Aging Population* and the *Committee on Diagnosing and Treating Adult Cancers and the planning committees for Long-Term Survivorship Care after Cancer Treatment: A Workshop* and *Improving the Evidence Base for Treatment Decision-Making for Older Adults with Cancer: A Virtual Workshop*. During her tenure as the Inaugural National Cancer Institute (NCI)-AcademyHealth Visiting Scholar, she developed a framework for quality survivorship care that has now been adapted by the NCI Office of Cancer Survivorship and has led to numerous national and international initiatives. Throughout her career, Dr. Nekhlyudov has been dedicated to teaching and mentoring students, residents, fellows, and faculty. She has also been committed to empowering cancer survivors and caregivers through educational programs.

Dr. Nekhlyudov received her M.D. from the Mount Sinai School of Medicine and completed residency training at Yale-New Haven Hospital/Yale Primary Care Residency Program. She completed the Harvard Medical School Fellowship in General Medicine and Primary Care and received a Master of Public Health degree from the Harvard School of Public Health. Dr. Nekhlyudov has been on faculty at Harvard Medical School since 1999.



Samilia Obeng-Gyasi, MD, MPH

The Ohio State University

Dr. Samilia Obeng-Gyasi is a breast surgical oncologist and associate professor of surgery at The Ohio State University. Her practice focuses on surgery for breast cancer and benign breast diseases. She obtained her BS in Biology (with highest distinction and departmental honors) from Indiana University-Bloomington and her MD from The University of Michigan. She completed her general surgery residency at the Cleveland Clinic, and a Society of Surgical Oncology (SSO) accredited breast surgical oncology fellowship at Duke University. Due to her interest in health services research, after finishing her residency, she completed a Master's in Public Health (MPH) at the Harvard T.H. Chan School of Public Health with a focus on quantitative research methods. As a health services researcher with

an emphasis on health equity, the overarching goal of her work is to understand how ancestry, race, social determinants of health, and stress interact to influence cancer initiation, progression, and mortality.



Timothy R. Rebbeck, PhD

Dana-Farber Cancer Institute, Harvard University

Timothy R. Rebbeck is the Vincent L. Gregory Professor of Cancer Prevention at the Harvard TH Chan School of Public Health and the Dana-Farber Cancer Institute. Professor Rebbeck's studies the etiology and prevention of cancer, with an emphasis on cancer disparities and global health. He has directed large, multicenter studies and international consortia that have identified genetic, molecular, and epidemiological factors associated with cancer risk, outcomes, and disparities. He leads the international Men of African Descent and Carcinoma of the Prostate (MADCaP) network and has led a number of consortia studying hereditary cancer risk and prevention. Dr. Rebbeck has received continuous federal research funding since 1994.

In addition to his research activities, Professor Rebbeck leads a number of initiatives on the Harvard Campus. He serves as Associate Director for Cancer Equity and Engagement in the Dana-Farber / Harvard Cancer Center. He is the founding director of the Zhu Family Center for Cancer Prevention at the Harvard TH Chan School of Public Health and Director for the Center for Global Health at Dana-Farber Cancer Institute. In these roles, he fosters a variety of cancer research and educational activities to ensure that Harvard research engages with and positively impacts communities with the greatest disease burden worldwide.



Lisa C. Richardson, MD, MPH

Centers for Disease Control and Prevention

Lisa C. Richardson, MD, MPH, is Director of the Division of Cancer Prevention and Control (DCPC), the largest unit within the Centers for Disease Control and Prevention's National Center for Chronic Disease Prevention and Health Promotion. As director of DCPC, she works with partners at the national, state, and local levels to break down barriers to good health and create opportunities for everyone to live a long and healthy life. Under her leadership, DCPC's four foundational programs, the National Breast and Cervical Cancer Early Detection Program, National Program of Cancer Registries, National Comprehensive Cancer Control Program, and Colorectal Cancer Control Program, have helped the cancer control community better understand, prevent and control cancer in all populations. Dr. Richardson also provides guidance for the Division's research agenda that

includes the National Cancer Prevention and Control Research Network. A medical oncologist by training, she has authored or coauthored more than 150 peer-reviewed journal articles examining multi-sectoral approaches to improving cancer care access, delivery, and outcomes.



Beverly Rogers

From Momma's House

Beverly was an employee at the American Hospital Association (AHA) as an Executive Director for 2 personal membership groups - The American Society for Healthcare Human Resources Administrators and The American Society for Healthcare Education and Training where she provided leadership, strategic directions, orientation, and support to 2 boards of directors, 22 committees and 120 affiliated chapters. After retiring due to a diagnosis of breast cancer, Beverly volunteered for Y-ME National Breast Cancer Organization as a hotline counselor, volunteer trainer, and support group facilitator. Within 3 years, she was hired as Director of Chapter Services, acting as liaison, trainer, and resource to 23 affiliate groups. Beverly is also the founder of From Momma's House, where she has created coaching conversations, retreats, and workshops to help women reach their desired goals.

Her career in healthcare has proven invaluable when engaging on patient, caregiver, and beneficiary advisory panels. It is an essential communication skill to support the elderly, women, caregivers, and patients who may struggle to advocate for themselves. Beverly's experience as a parent raising a juvenile diabetic, an adult child managing elderly parents, and as a caregiver for my husband who was diagnosed with Alzheimer's, makes her familiar and capable of helping others find their voice to navigate a complicated healthcare system.

As a PCORI Ambassador and an active member on several patient advocate advisory panels, Beverly is an advocate for the perspectives of family caregivers and elderly patients. She remains committed to empowering individuals through the design, review, and dissemination of healthcare information.



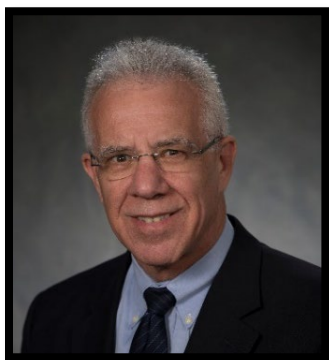
Cleo Ryals, PhD
Flatiron Health

Cleo is a nationally recognized and widely published health equity and cancer outcomes researcher, with expertise in health equity research methods and data analytics, clinical trial diversity, and community engagement. In 2019, she was honored as a '40 Under 40' Leader in Minority Health by the National Minority Quality Forum and Congressional Black Caucus. At Flatiron, Cleo leads the development and execution of Flatiron's company-wide strategy to advance cancer health equity through real-world evidence generation. Cleo earned a PhD in Health Policy from Harvard University.



Victoria Seewaldt, MD
City of Hope

Victoria Seewaldt, MD is an internationally recognized expert in translational research, the interface between diabetes and cancer, and the health science disparities. Dr. Seewaldt leads a bench to community research program focusing on identifying molecular targets and multi-disciplinary targets for early detection of biologically aggressive cancers and studying the role insulin has on promoting aggressive cancer biology. Dr. Seewaldt has been continuously funded by NIH since 2000 to develop basic/translational research strategies identifying signaling networks that promote cancer initiation to provide early detection of interval breast cancers and reduce cancer health disparities and most recently diabetes. The unique feature of Dr. Seewaldt's program is that biomarkers identified in the laboratory can be immediately translated to develop novel pharmacologic agents and strategies to reduce cancer health disparities and prevent type-2 diabetes. Dr. Seewaldt is the first generation born in this country; Dr. Seewaldt is a strong advocate for women, particularly women from diverse backgrounds; to this end she was awarded the 2017 NIH/CAP/CURE Champion Mentorship Award. Dr. Seewaldt currently is MPI of a T32 training grant to study the interface of diabetes, metabolism, and cancer. She is also MPI of the U54 University California, Riverside-City of Hope partnership to build capacity in translational research, drug development focusing on cancer and type-2 diabetes in diverse populations.



Lawrence N. Shulman, MD, MACP, FASCO

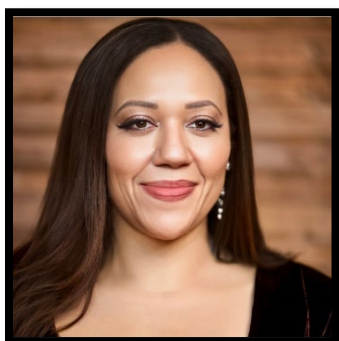
University of Pennsylvania

Lawrence N. Shulman, MD, is Professor of Medicine at the Perelman School of Medicine, the Associate Director for Special Projects at the Abramson Cancer Center at the University of Pennsylvania, and Director of the Center for Global Cancer Medicine. He received his MD from Harvard Medical School and trained in Hematology and Oncology at the Beth Israel Hospital in Boston, MA.

Dr. Shulman is the immediate Past-Chair of the Commission on Cancer and serves on the National Cancer Policy Forum of the National Academy. He is the former Chair of the American Society of Clinical Oncology Quality of Care Committee and the Commission on Cancer's Quality Integration Committee.

A specialist in the treatment of patients with breast cancer, his research includes development of new cancer therapies, and implementation of cancer treatment programs in low-resource settings.

In this regard, Dr. Shulman serves as Senior Oncology Advisor to the non-profit organization Partners In Health (PIH). The PIH mission includes the establishment of national cancer treatment programs with the Ministries of Health in Rwanda, Lesotho, and Haiti, programs for which he plays a seminal leadership role.



Cardinale B. Smith, MD, PhD

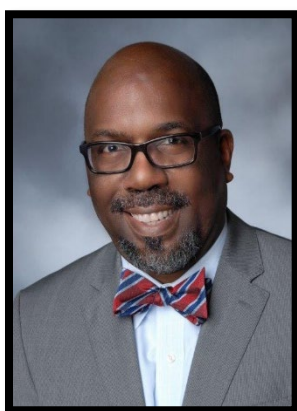
Mount Sinai Health System

Dr. Smith is Professor of Medicine (Hematology and Medical Oncology) and Professor of Geriatrics and Palliative Medicine at the Icahn School of Medicine at Mount Sinai. She is the Chief Medical Officer for the Tisch Cancer Hospital and Vice President of Cancer Clinical Affairs. In addition, Dr. Smith is Chief Quality Officer for Oncology and Director of the Supportive Oncology Program for the Mount Sinai Health System, and Associate Director for Community Outreach and Engagement at The Tisch Cancer Institute.

Dr. Smith has an active clinical practice in both oncology and palliative medicine. As a member of Mount Sinai's Center for Thoracic Oncology, Dr. Smith treats patients with thoracic malignancies, including non-small cell lung cancer, small cell lung cancer, malignant pleural mesothelioma, and thymoma. In recognition of her excellence in clinical service, teaching and research, Dr. Smith has been the recipient of Mount Sinai's Dr. Solomon Silver Award in Clinical Medicine, the Division of Hematology and Medical Oncology's Richard E. Rosenfeld Award and The Mount Sinai Graduate School Alumni Award. She was selected as one of 40 Inspiring Hospice and Palliative Medicine Leaders by the American Academy of Hospice and Palliative Medicine.

A highly regarded health services research scientist with a robust grant portfolio supported by the National Institutes of Health and the American Cancer Society, Dr. Smith works with her interdisciplinary research team to improve the quality of care for patients with cancer with a focus on health equity, development of novel models of equitable cancer care delivery and doctor-patient communication. She is also a nationally recognized leader in the field of oncology and palliative care. She is the 2023 Chair of the American Society of Clinical Oncology (ASCO) quality symposium, a member of the nominating committee for the ASCO Board of Directors, and past Chair of the Diversity, Equity and Inclusion Committee for the American Academy of Hospice and Palliative Medicine.

Since 2012, Dr. Smith has served as Director for Mount Sinai's OncoTalk program, a part of the national VitalTalk organization, which provides communication skills training for clinicians caring for cancer patients and their families. Dr. Smith believes in empowering patients to participate in their care plans and determine their care preferences.



Reginald Tucker-Seeley, MA, ScM, ScD
Health Equity Strategies and Solutions

Dr. Tucker-Seeley is the Principal/Owner of Health Equity Strategies and Solutions, a consulting firm focused on advising health/healthcare related organizations, departments, and committees/coalitions in three topic areas: 1) addressing the social determinants of health; 2) defining, measuring, and intervening on health disparities; and 3) health equity strategy development, implementation, and evaluation. Prior to establishing Health Equity Strategies and Solutions, Dr. Tucker-Seeley was the Vice-President of Health Equity at ZERO Prostate Cancer, where he led the development and implementation of ZERO's health equity strategy to reduce racial/ethnic and place-based disparities in prostate cancer. Dr. Tucker-Seeley completed master's and doctoral degrees in public health at the Harvard T.H. Chan School of Public Health (HSPH) and a postdoctoral fellowship in cancer prevention and control at HSPH and the Dana-Farber Cancer Institute (DFCI). His research has

focused on social determinants of health across the life course, such as the association between the neighborhood environment and health behavior; and on individual-level socioeconomic determinants of multi-morbidity, mortality, self-rated physical, mental, and oral health. His research has also investigated the association of financial hardship with health across the cancer continuum from prevention to end-of-life care.

Dr. Tucker-Seeley has a longstanding interest in the impact of health policy and social policy on racial/ethnic minorities and across socioeconomic groups. He has experience working on local and state level health disparities policy, and he has developed and taught courses focused on measuring and reporting health disparities. In 2017-2018, Dr. Tucker-Seeley was a Robert Wood Johnson Health Policy Fellow with a placement in the United States Senate. Prior to joining ZERO, he was the inaugural holder of the Edward L. Schneider chair in gerontology and Assistant Professor in the Leonard Davis School of Gerontology at the University of Southern California (USC). Prior to joining USC, he was an Assistant Professor of Social and Behavioral Sciences at DFCI and HSPH.



Gregory Vidal, MD, PhD
West Cancer Center

Gregory Vidal MD, PhD, is a Medical Oncologist at West Cancer Center, Memphis Tennessee and Associate Professor at the University of Tennessee Health Science Center. Throughout his career, Dr. Gregory Vidal has had a keen interest in breast cancer research and treatment. His PhD thesis has contributed to the understanding of how the EGFR/HER family of proteins influences breast cancer cells. While at Stanford University, his research focused on bridging the gap between the laboratory and the clinic in order to develop safe and effective treatments for breast cancer. He has been trained by world leading clinicians and researchers in the field of breast cancer. He now brings this expertise to West Cancer Center with the hopes of establishing a national and regional center of excellence in the treatment and research of breast cancer.



Karriem S. Watson, DHS, MS, MPH

All of Us Research Program

Dr. Karriem S. Watson, DHS, MS, MPH, is the Chief Engagement Officer of the National Institutes of Health's *All of Us* Research Program. Karriem leads the *All of Us* Research Program's efforts to foster relationships with participants, communities, researchers, and providers across the United States to help build one of the largest, most diverse health databases of its kind to study health and illness.

Prior to joining the NIH, Karriem spent over 15 years as a community-engaged research scientist with research funding from the NIH addressing cancer prevention and control. Karriem also held administrative roles in leading research and engagement in Federally Qualified Health Centers (FQHCs) in the Chicagoland area.



Robert A. Winn, MD

Virginia Commonwealth University

Robert A. Winn, MD, is the Director of Virginia Commonwealth University (VCU) Massey Comprehensive Cancer Center. He is also senior associate dean for cancer innovation at the VCU School of Medicine, and professor at the Division of Pulmonary Disease and Critical Care Medicine at VCU. His current basic science research focuses on the translational aspects of the role that proliferation pathways and cellular senescence play in lung cancer. As a pulmonologist, Robert is committed to community-engaged research centered on eliminating health disparities. He is a principal investigator on several community-based projects funded by the NIH and National Cancer Institute. Robert is the president-elect of the Association of American Cancer Institutes (AACI); Chair of the National Cancer Policy Forum of the National Academies

of Sciences, Engineering, and Medicine; and a member of the Board of Directors for the American Cancer Society and LUNgevity Foundation. Robert holds a BA from the University of Notre Dame and an MD from the University of Michigan Medical School in Ann Arbor. He completed an internship and residency in internal medicine at Rush-Presbyterian-St. Luke's Medical Center in Chicago and a fellowship in pulmonary and critical care medicine at the University of Colorado Health Sciences Center in Denver.



Robin Yabroff, PhD, MBA

American Cancer Society

Robin Yabroff, PhD, is an epidemiologist and Scientific Vice President, Health Services Research, at the American Cancer Society. She conducts research on the economic burden of cancer; patterns of cancer care, including high cost prescription drugs; health insurance benefit design; and patient, provider, and health system factors associated with the quality and value of cancer care.

Dr. Yabroff has more than 20 years of health services research experience and currently has adjunct positions within the Department of Medicine, Johns Hopkins University, and the Rollins School of Public Health, Emory University. Prior to joining the American Cancer Society, she held positions within the Office of Health Policy, Assistant Secretary for Planning and Evaluation (ASPE) in the US Department of Health and Human Services, the

Health Services and Economics Branch of the National Cancer Institute, and the faculty of the Lombardi Cancer Center, Georgetown University. She earned her PhD in epidemiology from the Johns Hopkins School of Public Health and received an MBA from the University of Rochester.

Dr. Yabroff has co-authored over 300 peer-reviewed journal articles and invited editorials, commentaries, and book chapters. She is a Deputy Editor for the *Journal of the National Cancer Institute*, a founding member of the editorial board of the *Journal of Cancer Survivorship*, and a member of the editorial board of the *JCO Oncology Practice*. Dr. Yabroff has received multiple National Institutes of Health Merit Awards for her research leadership and mentorship.



Clayton C. Yates, PhD
Johns Hopkins University

Dr. Clayton Yates is a recognized expert in health disparity research. Dr. Yates earned his Ph.D. from the University of Pittsburgh School of Medicine in molecular pathology, as well as a certificate of training in Tissue Engineering and Regenerative medicine from the McGowan Institute of Regenerative Medicine. He then went on to complete a postdoctoral fellowship at Emory University School of Medicine Department of Urology.

After completing his post-doctoral training, Dr. Yates started as a tenure track Assistant Professor at Tuskegee University in the Department of Biology and Center for Cancer Research. Dr. Yates was promoted through the ranks to Full Professor. He holds Adjunct faculty positions at Clark Atlanta University Department of Biology and the Department of Pathology at the University of Alabama at Birmingham (UAB).

Cell-MENTOR recognized Dr. Yates (an online resource from Cell Press and Cell Signaling Technology) among the 100 most inspiring Black Scientists in America. Dr. Yates's lab focuses on prostate and breast cancer, particularly in African Americans. His lab has established several cell lines based models derived from African American patients used by many labs today to study molecular events that lead to prostate cancer development and metastasis. Additionally, Dr. Yates identified a subtype of Breast cancer called "Quadruple Negative Breast Cancer" (QNBC), which is more frequent in women of African Ancestry. This novel approach used genetic admixture analysis and identified a specific ancestry-associated immune-related signature in both Breast and Prostate Cancers. Using this signature, Dr. Yates's lab was able to identify and develop a novel therapeutic that targets a specific immune cell termed tumor-associated macrophages (TAMs) that contributes to increased tumor aggressiveness and therapeutic resistance. This novel therapy was recently licensed to Aurinia Pharma in October 2021 for clinical development and is poised to enter clinical trials. Dr. Yates's lab has been continuously funded by NIH and DoD CMDRP/PCRP for over the last 15 years. He has trained 17 Ph.D. students, 28 master's level students, and 5 postdoctoral trainees during this time. He has mentored 10+ junior faculty through the MSM/TU/UAB Health Disparities Training Program, for UAB and TU faculty. Currently, five of these mentees have received tenure at their respective universities.

Dr. Yates has spoken at many universities and conferences including the inaugural NCI Health Disparities Conference and the AACR Plenary Session and numerous grand rounds, and distinguished lecture series. Dr. Yates is featured on NCI's website for the *NCI Annual Plan & Budget Proposal for Fiscal Year 2023* which was provided to Congress President Joe Biden and the public. Dr. Yates currently serves on the UAB External Advisory Board (EAB) for Training of Oncology Surgeons, University of North Carolina (UNC) NCI T32 External Advisory Board, Chair of the University of Florida (UF), University of Southern California (USC), Florida Agricultural and Mechanical University (FAMU) U54- NCI CPACHE. He has also received numerous research honors and awards, authored over 100+ peer-reviewed publications, and is a member of the editorial board of Scientific Reports. Dr. Yates also serves as Co-Director for the Transatlantic Prostate Cancer Consortium, which focuses on understanding the tumor biology in native African men in Nigeria. Dr. Yates co-chaired the 2022 American Association for Cancer Research (AACR) Conference in April 2022. In addition, Dr. Yates was the 2022-2023 Chair of the Minorities in Cancer Research Council (MICR) within (AACR), which serves 7,000+ minority cancer-focused scientists. Prior to joining JHU, Dr. Yates previously served as the principal investigator (PI) of the NIH/NIMHD Research Centers at Minority Institutions (RCMI), site PI of CTSA (jointly with UAB-hub institution), and PI of NIH/NCI U54 Cancer Health Disparities with Morehouse School of Medicine and the University of Alabama at Birmingham.

POSTER ABSTRACTS



WORKSHOP

NATIONAL ACADEMIES Sciences
Engineering
Medicine

**Biological Effectors of
Social Determinants of Health in Cancer**
Identification and Mitigation

March 20, 2024 • 8:30AM – 5:00PM ET
Poster Session • 5:00PM – 7:00PM ET
March 21, 2024 • 8:30AM – 11:30AM ET

The poster session will take place during the workshop reception:
Wednesday, March 20, 2024, from 5:00pm to 7:00pm ET

Find the poster PDFs archived online at
www.nationalacademies.org/biological-effectors-of-SDOH

Title: Genetic Ancestry and Epigenetic Age in Colorectal Tumors from The Cancer Genome Atlas

Authors:

Christopher L. Benson II^{1,2} (presenting author), Marco Matejcić², Fredrick R. Schumacher^{1,3}, Stephanie L. Schmit^{2,3}

¹Department of Population and Quantitative Health Sciences, Case Western Reserve University, ²Genomic Medicine Institute, Cleveland Clinic, ³Population and Cancer Prevention Program, Case Comprehensive Cancer Center

Abstract:

Colorectal cancer (CRC) is the third most diagnosed cancer in individuals living in the United States and the third leading cause of cancer-related deaths in men while fourth in women. Among racial/ethnic populations, American Indian/Alaska Natives and Blacks have the highest rate of CRC. Utilizing publicly available data on 311 CRC cases from The Cancer Genome Atlas (TCGA), we examined the association between global genetic ancestry and epigenetic age (i.e., biological age) among CRC patients. Proportions of African (AFR), Admixed American (AMR), East Asian (EAS), and European (EUR) global ancestry were estimated using ADMIXTURE software. We performed a compositional data analysis using an additive log ratio transformation, where the individual ancestral components (i.e., AFR, EAS, NAT) were expressed in terms of additive log ratios with respect to a fixed reference component. Beta values were generated from the DNA methylation (DNAm) array data on primary tumor samples, and these values were used to estimate their epigenetic ages using two epigenetic clocks. The PhenoAge/Levine method estimated epigenetic age using the ENmix package, while epiTOC estimated epigenetic age based on the relative stem cell division rate. We examined associations between epigenetic age for each clock and global genetic ancestry, using linear regression, after adjusting for age at diagnosis, sex, stage, and anatomical site (colon or rectum). The overall contribution of genetic ancestry to somatic mutational status was also tested through a 3-degree of freedom likelihood-ratio test (3-df LRT). We did not observe a statistically significant association between genetic ancestry and epigenetic age (p-value= 0.7737 (PhenoAge) and 0.731 (epiTOC)). Our next step is to test the associations between individual global ancestry proportions and epigenetic age in both tumors and normal tissue to determine if one or more components may be associated with epigenetic age.

Title: Differential gene expression in pancreatic neuroendocrine tumors among those living with adverse SDOH

Authors:

Andrea Gillis¹ (presenting author), Brendon Herring¹, Vinodh Srinivasasainagendra², Weisheng Chen¹, Rachael Guenter¹, Tiwari Hemant², Dai Chen³, Herbert Chen¹, J Bart Rose¹, Upender Manne⁴, Smita Bhatia³

¹University of Alabama at Birmingham, Department of Surgery, ²University of Alabama at Birmingham, School of Public Health, ³University of Alabama at Birmingham, Department of Pediatrics, ⁴University of Alabama at Birmingham, Department of Pathology

Abstract:

Background: There are known health outcome disparities among those with pancreatic neuroendocrine tumors (pNET) of minority race and those living with adverse social determinants of health (SDOH) (rurality, uninsured, unmarried) influencing overall survival compared to their peers. The potential biologic mechanism of these factors is unknown.

Methods: With IRB approval, we reviewed patients who underwent surgical resection for Grade 1 and 2 pancreatic neuroendocrine tumors (pNETs) at our institution between 2006-2022. We identified 11 black patients (based on self-identified race) and matched them to age, sex, and tumor grade white controls. Formalin-fixed, paraffin-embedded (FFPE) pNET specimens were demarcated and dissected to isolate cancer cells with supervision from a board-certified pathologist before RNA isolation. Sequencing was performed by Illumina NextSeq550 at 200 million read depth paired-end samples. GRCh38 transcriptome alignments were performed using Salmon and differentially expressed genes (DEGs) determined using DESeq2 after normalization. Significance was determined by FDR-adjusted p-value (q-value; qv) < 0.05 and log2 fold-change (log2FC) ≥ ±2.

From the gene enrichment analysis, we created a linear regression predicting adverse residential community SDOH including poverty, social vulnerability index, low educational attainment and uninsured neighborhood based on publicly available census data using geocoded patient billing address. Our final model controlled for confounding variables including patient age, gender, race, BMI, and smoking status.

Results: Of the 24 patients identified, median age was 57years, 18 were grade 1 pNET, 30% resided in neighborhoods below federal poverty level. We identified 48 DEGs between those patients living in adverse SDOH communities compared to those who were not. Differential expression was seen in tumor suppression (TMEFF2), cell membrane (MBLAC2), and inflammatory (DAPK1-IT1) pathways for patients living in high poverty, low educational attainment, and low insurance access neighborhoods compared to controls.

Conclusion: Significant biologic changes are seen in the epigenome of those living in neighborhoods characterized by adverse SDOH.

Association of Gene Expression and adverse social determinants of health (SDOH)					
SDOH	Gene	t-statistic	p-value	B	SE
Poverty	PPM1K divergent transcript(PPM1K-DT)	5.28	1.30 E-07	18271.39	3461.36
	SPATA31 subfamily G member 1(SPATA31G1)	-5.22	1.78 E-07	-9.57	1.83
Educational attainment	DAPK1 intronic transcript 1(DAPK1-IT1)	-6.38	1.71 E-10	-0.10	0.02
	chromosome 16 open reading frame 96(C16orf96)	6.20	5.79 E-10	0.14	0.02
	transmembrane protein with EGF like and two follistatin like domains 2(TMEFF2)	-5.69	1.217 E-08	-0.12	0.02
	calcium homeostasis modulator 1(CALHM1)	-5.61	2.04 E-08	-0.06	0.01
	H1.10 linker histone(H1-10)	5.30	1.17 E-07	0.25	0.05
Uninsurance Rate	metallo-beta-lactamase domain containing 2(MBLAC2)	-5.93	3.11 E-09	-8.00	1.35
	syntaxin 2(STX2)	5.74	9.35 E-09	4.98	0.87
	cyclin dependent kinase 5 regulatory subunit 1(CDK5R1)	5.43	5.68 E-08	6.86	1.26
	heat shock protein 90 alpha family class B member 7, pseudogene(HSP90AB7P)	5.41	6.43 E-08	8.31	1.54
	junction mediating and regulatory protein, p53 cofactor(JMY)	-5.34	9.55 E-08	-10.61	1.99
	leishmanolysin like peptidase(LMLN)	-5.16	2.42 E-07	-6.64	1.29
	ADP ribosylation factor GTPase activating protein 1(ARFGAP1)	5.13	2.90 E-07	8.02	1.56
	<i>Most strongly DEGs shown.</i> Educational attainment = % of census block that has graduated from high school Uninsurance rate = % CB without health insurance Poverty = % of CB living below federal poverty level				
	All models controlling for patient age, gender, self reported race, bmi, and smoking, p value calculated with two way t test				

Title: Social Risk Factors and Receipt of Cancer Prevention Care in Community Health Center Patients

Authors:

Mateo Banegas¹, Jean O'Malley², Laura Gottlieb³, Nathalie Huguet⁴, Miguel Marino⁴, Jorge Kaufmann⁴, Rachel Gold^{2,5} (presenting author)

¹University of California, San Diego, ²OCHIN Inc., ³University of California, San Francisco, ⁴Oregon Health & Science University, ⁵Kaiser Permanente Center for Health Research

Abstract:

Background: Social risks (individual-level adverse social determinants of health) can pose barriers to receipt of cancer screening; this drives cancer disparities. To improve cancer screening equity requires understanding specific social risks' associations with different cancer screening processes.

Methods: Electronic health record data were extracted from n=458,552 adult patients with documented social risk screening results and an ambulatory visit at one of 186 community clinics (across 13 states) during 07/2016-02/2020. Outcomes of interest were associations between reported food, housing, or transportation insecurity and: 1) Proportion of study period in which patients were up to date on cervical (CVC), colorectal (CRC), and/or breast cancer (BC) screening; 2) Among patients due for a given screening, likelihood of receiving a relevant screening order; 3) Among those receiving an order, likelihood of order completion.

Findings: Patients reporting social risks were less likely to be up to date on CVC, CRC, or BC screening at baseline, and in most cases spent fewer study months up to date on these screenings. Receipt of screening orders was less likely for food insecure patients compared to those who were food secure. Completion of BC screening orders did not differ by social risk status. Order completion for CVC and CRC screenings was lower among food insecure than food secure patients. No clear relationship was seen between housing instability or transportation insecurity and cancer screening order receipt or completion.

Patients with social risks are less likely to be up-to-date with cancer screening than those without such risks. Different social risks influence whether patients receive and / or complete screening orders for different cancers. Findings advance D&I science by providing evidence that strategies intended to advance equitable adoption of these preventive care elements should consider the diverse pathways through which social risks create barriers to receipt of cancer screenings.

Title: Exploring the Mediating Effects of BMI on the Association between Social Deprivation and Neoadjuvant Chemotherapy Response in Pancreatic Cancer Patients

Authors:

Ming S. Lee¹ (presenting author), Mary P. Martos², Iago de Castro Silva², Anna Bianchi², Niles U Deshpand², Prateek Sharma^{2,3}, Siddharth Mehra², Vanessa Tonin Garrido², Shannon Jacqueline Saigh¹, Jonathan England⁴, Peter Joel Hosein^{1,5}, Deukwoo Kwon⁶, Nipun B Merchant^{1,7}, Jashodeep Datta⁷

¹Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine; ²Department of Surgery, University of Miami Miller School of Medicine; ³Department of Surgery, University of Nebraska Medical Center; ⁴Department of Pathology, University of Miami; ⁵Department of Medicine, University of Miami; ⁶Department of Public Health Sciences, University of Texas Health Science Center at Houston; ⁷Division of Surgical Oncology, Dewitt Daughtry Department of Surgery, University of Miami Miller School of Medicine

Abstract:

Background: Studies in public health have established that the social deprivation level of a neighborhood is associated with its obesity rate, which is a known risk factor for many types of cancer, including pancreatic cancer. It has also been reported that breast cancer patients with higher body mass indices (BMI) are more likely to have poor or no response from chemotherapy. This study aims to establish the connection between social deprivation and chemo responses by analyzing neighborhood social deprivation levels, BMIs, and neoadjuvant chemotherapy (NAC) responses in a group of pancreatic cancer patients.

Methods: A group of patients (n=119) with localized pancreatic ductal adenocarcinoma who received NAC with either mFOLFIRINOX, gemcitabine/abraxane, or both and underwent pancreatectomy between July 2015 and October 2022 at a tertiary academic center were enrolled in this study. Area Deprivation Index (ADI), based on socioeconomic data from US Census, for all Census block groups in the study area were obtained from the Center for Health Disparities Research of the University of Wisconsin. Residential addresses of the patients were geocoded to identify the associated ADIs. Contingency tables were used to explore the relationships among ADI, BMI, and chemo response.

Results: ADI was found to be negatively associated with neoadjuvant chemotherapy response in the patients, with higher rates of non-response in patients from neighborhoods of higher deprivation levels (e.g., lower income). Patients from areas with higher levels of deprivation tend to have higher BMIs, which are associated with higher rates of non-response for NAC. In addition, patients who were not responding to NAC have higher average neutrophil-to-lymphocyte ratios prior to surgery than those responded.

Conclusions: Results of this study suggest that social deprivation can negatively impact chemotherapy response, and BMI is a mediating biological factor between social deprivation and treatment outcomes in pancreatic cancer patients.

Title: Exploring Social Determinants of Health as Risk Factors for Cancer Treatment-Related Lymphedema

Authors:

Nicole L. Stout^{1,2,3} (presenting author), Timothy Dotson⁴, Sijin Wen^{2,3,4}, Morgan Denney⁴, McKinzey Dierkes⁴ (presenting author), Brian Witrick^{4,5}

¹Department of Cancer Prevention and Control, West Virginia University, Morgantown, WV, ²Department of Public Health, West Virginia University, Morgantown, WV, ³West Virginia University Cancer Institute, Morgantown, WV, ⁴West Virginia Clinical and Translational Science Institute, Morgantown, WV, ⁵Clemson University, Clemson, SC

Abstract:

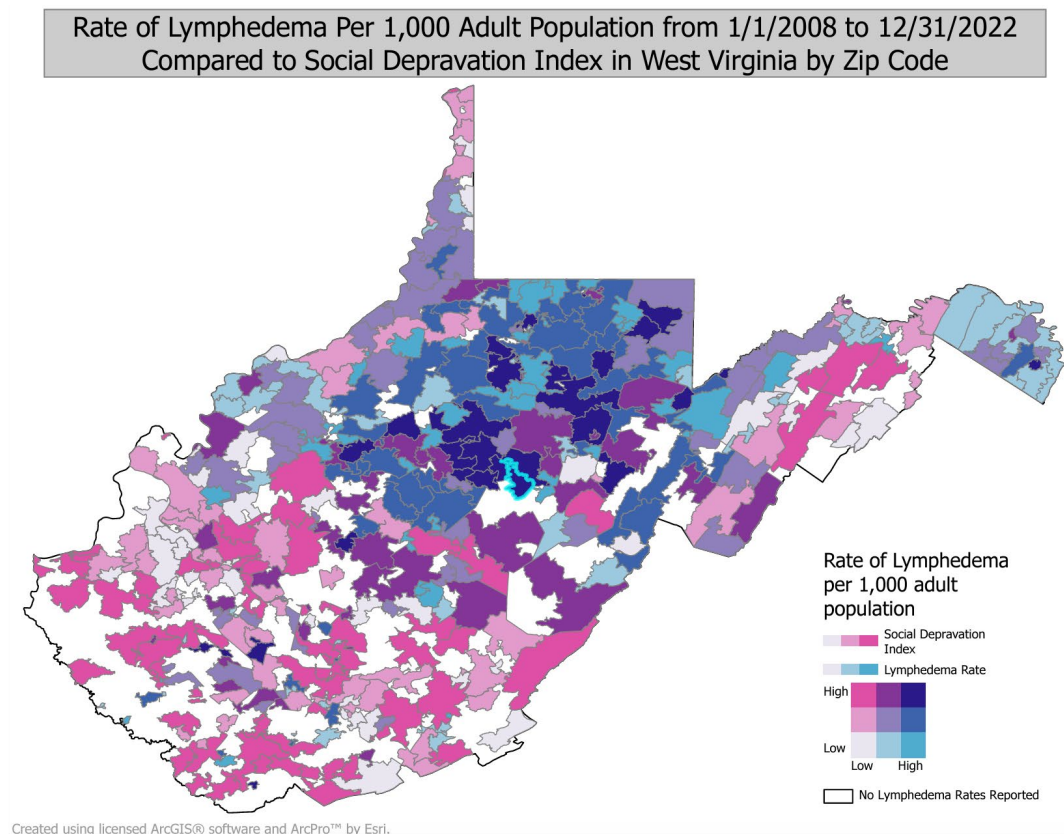
Background: There is a need to understand how social determinants of health influence the severity of cancer treatment related side effects, such as cancer treatment-related lymphedema (LE).¹ Risk factors for LE have been attributed to cancer treatment (removing lymph nodes/irradiating tissue) and comorbidity (vascular conditions/obesity). Emerging research suggests these risk factors are not independent, but interrelated factors that co-occur with other disease conditions to influence LE onset.¹ Considering the influence of social, behavioral, and environmental factors on cancer-related health outcomes,³ we hypothesize that interrelationships exist between disease and social determinants and influence risk for LE. This exploratory analysis sought to identify the geographic relationship between social factors and LE.

Methods: Using retrospective EHR data 5500 patients from a single medical center in West Virginia were identified with a history of cancer and an ICD-10 code for LE. Patient zip code was mapped to the Social Deprivation Index (SDI), a zip code tabulation area composite score of seven demographic factors that reflect local social determinants.⁴ We created a bivariate choropleth map to explore the relationship between the population rate of LE (per 1000 adults) in a geographic zip code and SDI. Tertials for SDI and lymphedema rate were identified and mapped for comparison.

Results: Mapping rates of lymphedema/1000 adults in the population alongside SDI demonstrated that high rates of LE and high SDI co-occurred (**Figure 1**). Analysis is ongoing to understand between zip code comparisons and to examine SDI factors that drive LE risk using a non-LE control group. Preliminary results will be presented.

Conclusions: This map can help inform further investigation regarding resources allocation through policy and targeted interventions These findings suggest that future research should explore epigenetic changes related to social factors and their association with medical and comorbidity risk factors for LE.

Figure 1. Rate of Co-occurrence of Cancer-Related Lymphedema and Social Deprivation



References:

1. Rochlin, D. H., Barrio, A. V., McLaughlin, S., et al. (2023). Feasibility and Clinical Utility of Prediction Models for Breast Cancer-Related Lymphedema Incorporating Racial Differences in Disease Incidence. *JAMA Surg*, 158(9), 954-964. <https://doi.org/10.1001/jamasurg.2023.2414>
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3. Afshar, N., English, D. R., & Milne, R. L. (2021). Factors Explaining Socio-Economic Inequalities in Cancer Survival: A Systematic Review. *Cancer Control*, 28, 10732748211011956. <https://doi.org/10.1177/10732748211011956>
4. Social deprivation index (SDI). Robert Graham Center - Policy Studies in Family Medicine & Primary Care. (2018, November 5). Retrieved November 2023 from <https://www.grahamcenter.org/rgc/maps-data-tools/sdi/social-deprivation-index.html>.

Title: A Multidisciplinary Approach to Explore the Intersection of Biology with Social Determinates of Health in the Development of Pain in Survivors of Head and Neck Cancer

Authors:

Monica A. Wagner^{1,5} (presenting author), Fredrick R. Schumacher^{2,5}, Cheryl Cameron², Mark J. Cameron^{2,5}, Susan R. Mazanec^{1,4,5}, Yvette P. Conley³, and Quintin Pan^{2,4,5}

¹Case Western Reserve University Frances Payne Bolton School of Nursing, ²Case Western Reserve University School of Medicine, ³University of Pittsburgh School of Nursing, ⁴University Hospitals Seidman Cancer Center, ⁵Case Comprehensive Cancer Center

Abstract:

Up to 85% of head and neck cancer (HNC) survivors report pain at diagnosis. Pretreatment pain is an independent predictor of survival in newly diagnosed HNC and is associated with recurrence within the first year. Currently, opioids are mainstay for pain relief in this population. Yet, this analgesic strategy relies on clinician interpretation of patient reported pain and overlooks social and biological factors that may influence pain perception, opioid tolerance, and risk of dependence. Research exploring the biological and social factors of HNC-related pain is needed to better stratify and provide pain management. This study explores drivers of HNC-related pain in the context of social/demographic, and biological (transcriptome, methylome) factors (biomarkers) prior to definitive treatment in newly diagnosed oral cavity or oropharyngeal patients (n=15). Using the Brief Pain Inventory-Worst Pain item, 10 participants self-reported any pain, while 7 reported a score of ≥ 4 (moderate to severe pain). Six total participants had evidence of perineural invasion (PNI). The area deprivation index (ADI) of those reporting pain ≥ 4 was 74.0 ± 5.3 while those reporting no pain had an ADI of 64.2 ± 12.2 . Those reporting pain ≥ 4 also lived twice the distance from where they received treatment than those who reported no pain (52.3 ± 11.2 vs. 22.6 ± 5.6 mi). A systems biology approach will be employed to correlate transcriptome and methylome data with PNI status and pretreatment pain scores. Our interdisciplinary approach to understanding HNC-related pain will provide insight for clinicians and researchers on the intersection of biology and social determinants. This information can be leveraged to construct predictive risk models, potential therapeutic targets, and strategies to ensure that HNC survivors receive precision pain management to enable more pain free days, lessen morbidity and disability, and substantially improve the quality of their lives.

Title: Social genomics as a framework for understanding health disparities among adolescent and young adult cancer survivors.

Authors:

Brad Zebrack¹ (presenting author), Steve Cole², John M. Salsman³, Lynne Wagner⁴, Fenghai Duan⁵, Ilana Gareen⁵, Susan K. Parsons⁶, Andrew Evens⁷, Christabel Cheung⁸, Lauren Lux⁴, Lauren V. Ghazal⁹, Brad Kahl¹⁰, Pinki Prasad¹¹, Shira Dinner¹²

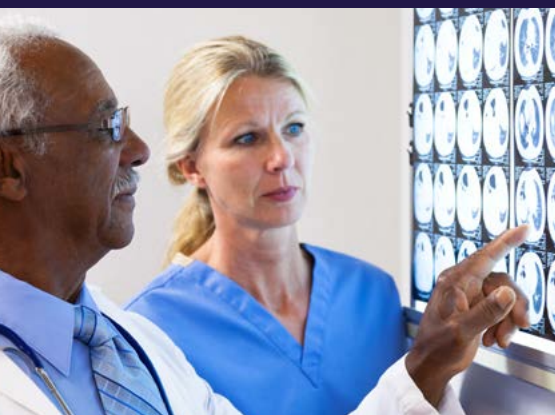
¹University of Michigan, ²University of California, Los Angeles, ³Wake Forest University, ⁴University of North Carolina, ⁵Brown University, ⁶Tufts University, ⁷Rutgers University, ⁸University of Maryland, ⁹Rochester University, ¹⁰ECOG-ACRIN Lymphoma Committee Chair, ¹¹ECOG-ACRIN Community Cancer Center Chair, ¹²Northwestern University

Abstract:

Background/Purpose: AYA cancer survivors (aged 18-39 years at diagnosis) experience unique psychosocial stressors and life disruptions having ramifications for their health, mental health, and quality of life (QOL). Health outcomes, and disparities in outcomes, may be partially a function of social determinants of health, including socioeconomic gradients, exposures to childhood traumas or adversity, and accumulated experiences of discrimination. Yet, little is known about if and how these social environmental conditions influence morbidity, mortality, and QOL among AYAs. The purpose of the research proposed here is to identify and define functional genomic pathways through which current and past psychosocial and social environmental risk and resilience factors influence gene regulation and subsequent health outcomes in AYAs, thus contributing to a greater understanding of health disparities in post-treatment survivorship.

Methodology: In collaboration with the Eastern Cooperative Oncology Group-American College of Radiology Imaging Network (ECOG-ACRIN) and the NCI Community Oncology Research Program (NCORP), we have initiated a 5-year longitudinal prospective cohort study of 2000 Hodgkin and non-Hodgkin lymphoma survivors recruited within one year following completion of treatment. Using a “social genomics” framework, which hypothesizes a biological basis for psychological and social influences on outcomes, we aim to identify neural and molecular pathways (i.e., CTNA gene regulation by the sympathetic nervous system) through which psychological and social factors mechanistically influence disease development and progression. Using Patient Reported Outcomes measures and blood assays, we will evaluate (1) the extent to which biological, psychological, and social indicators are associated with and potentially predict mortality, morbidity, and QOL in AYA cancer survivors within two years following completion of therapy; and (2) variations by race/ethnicity, sexual orientation, and gender identity.

Results: Results will inform the conceptualization and development of targeted medical and supportive care interventions that reduce risks for morbidity and mortality and improve QUALITY of life for AYAs.



National Cancer Policy Forum

The National Cancer Policy Forum serves as a trusted venue in which experts can identify emerging high-priority policy issues in cancer research and cancer care and work collaboratively to examine those issues through convening activities focused on opportunities for action. The forum provides a continual focus within the National Academies on cancer, addressing issues in science, clinical medicine, public health, and public policy that are relevant to the goal of reducing the cancer burden through prevention and by improving the care and outcomes for those diagnosed with cancer. Forum activities inform the cancer community and the public about critical policy issues through workshops and published reports. The forum has members with a broad range of expertise in cancer, including patient advocates, clinicians, and basic, translational, and clinical scientists. Forum members represent patients, federal agencies, academia, professional organizations, nonprofits, and industry.

The forum has addressed a wide array of topics, including

- enhancing collaborations to accelerate research and development;
- improving the quality and value of care for patients who have been diagnosed with or are at risk for cancer;
- developing tools and technologies to enhance cancer research and care; and
- examining factors that influence cancer incidence, mortality, and disparities.



Upcoming and Recent Workshops

Opportunities and Challenges for the Development and Adoption of Multicancer Detection Tests

October 28-29, 2024

Cancer screening is considered a key cancer control strategy because patients who are diagnosed with earlier stages of disease often have better treatment options and improved health outcomes. However, effective screening tests are lacking for most cancers. The development of minimally invasive approaches to screen for multiple tumor types at once could address this unmet need, but the clinical utility of multicancer detection (MCD) testing has yet to be established.

[Learn more and register here](#)

Enabling 21st Century Applications for Cancer Surveillance Through Enhanced Registries and Beyond

July 29–30, 2024

Population-based cancer surveillance has a pivotal role in assessing the nation's progress in cancer control. Cancer surveillance helps inform research and care interventions aimed at reducing the burden of cancer on patients and communities, including the ability to identify health disparities in cancer outcomes. Surveillance data are crucial for identifying emerging trends in health outcomes and opportunities to improve the quality of cancer care. However, challenges with the current approach to cancer surveillance in the United States include delays and gaps in data collection, as well as inadequate infrastructure and workforce to keep pace with the informatics and treatment-related advances in cancer. The National Cancer Policy Forum will convene a public workshop to examine opportunities to enhance and modernize cancer surveillance in order to improve cancer research, care, and outcomes for all patients.

[Learn more and register here](#)

Toward a Framework to Improve Diversity and Inclusion in Clinical Trials

Collaborative workshop convened by:

Forum on Drug Discovery, Development, and Translation
National Cancer Policy Forum

May 20, 2024

This workshop aims to explore opportunities to improve racial and ethnic diversity in clinical trials with a focus on system-level change and collective efforts across organizations and sectors that no one entity can effectively take on alone.

[Learn more and register here](#)

Biological Effectors of Social Determinants of Health in Cancer: Identification and Mitigation

March 20–21, 2024

Biological effectors of social determinants of health (SDOH) interact and impact cancer risk, treatment outcomes, and health equity. Workshop presentations and discussions will consider opportunities to advance health equity in cancer by identifying promising avenues for future research, as well as policies and interventions aimed at mitigating the negative impacts of the SDOH in cancer.

[Learn more and register here](#)

Optimizing Public–Private Partnerships for Clinical Cancer Research

Collaborative workshop convened by:

National Cancer Policy Forum
Forum on Drug Discovery, Development, and Translation

October 17–18, 2023

Public–private partnerships (PPPs) have the potential to more effectively leverage public funding and resources, increase the breadth and depth of research, and affect a more rapid translation from basic discoveries to public health applications. Industry, government, nonprofit, and academic organizations could each make important and unique contributions to this endeavor. This workshop examined opportunities to enhance and foster PPPs for clinical cancer research and considered lessons learned from examples of public–private collaborations in oncology or other fields that have helped to advance clinical research and improve patient outcomes.

[Workshop videos and presentations](#)

Assessing and Advancing Progress in the Delivery of High-Quality Cancer Care

Collaborative workshop co-hosted by:

National Cancer Policy Forum
American Society of Clinical Oncology

October 5–6, 2023

2023 marked the 10-year anniversary of the Institute of Medicine report *Delivering High-Quality Cancer Care: Charting a New Course for a System in Crisis* and the ability of the cancer care delivery system to provide high-quality cancer care to all patients remains elusive. This workshop provided an opportunity for the cancer care community to discuss persistent barriers to achieving excellent and equitable cancer care for all and additional actions that could be taken to implement the 2013 recommendations. Workshop presentations and discussions also identified aspects of cancer care that have changed over the past decade and where new strategies are needed to improve the quality of care.

[Workshop videos and presentations](#)

Recent Workshops

Developing a Multidisciplinary and Multispecialty Workforce for Patients with Cancer, from Diagnosis to Survivorship

Collaborative workshop convened by:

National Cancer Policy Forum

Global Forum on Innovation in Health Professional Education

July 17–18, 2023

Patients living with and beyond cancer often require care from a wide range of clinicians as they navigate cancer diagnosis, treatment, and survivorship care. A multispecialty and multidisciplinary workforce is critical to ensuring that all patients with cancer receive high-quality care. This workshop examined opportunities to improve equitable access to multispecialty, multidisciplinary care for patients living with and beyond cancer.

[Workshop videos and presentations](#)

The Impact of the Dobbs Decision on Cancer Care Webinar Series

The National Cancer Policy Forum hosted a webinar series to discuss the downstream effects of the U.S. Supreme Court ruling *Dobbs v. Jackson Women's Health Organization* on access to reproductive health care in the context of cancer care.

- **How Abortion Restrictions Affect Patients and Care Delivery, July 11, 2023**
- **Health System and Workforce Effects, July 25, 2023**
- **Ethical, Legal, and Social Implications, August 31, 2023**

[Webinar series website](#)

The Potential Contribution of Cancer Genomics Information to Community Investigations of Unusual Patterns of Cancer

Collaborative workshop convened by:

National Cancer Policy Forum

Roundtable on Genomics and Precision Health

April 13, 2023

This workshop examined the opportunities to apply genomic and epigenomic biomarkers of environmental exposures associated with unusual patterns of cancer, particularly in pediatric populations. The workshop was sponsored by the Division of Environmental Health Science and Practice in the National Center for Environmental Health at the Centers for Disease Control and Prevention (CDC) and was convened to provide background information to assist the CDC in revising its [Guidelines for Examining Unusual Patterns of Cancer and Environmental Concerns](#).

[Workshop videos and presentations](#)

[Proceedings](#)

Incorporating Integrated Diagnostics into Precision Oncology Care

Collaborative workshop convened by:

National Cancer Policy Forum

Computer Science and Telecommunications Board

Board on Human-Systems Integration

March 6–7, 2023

Innovations in the diagnostic specialties have the potential to reshape cancer diagnosis and enable precision therapy. Spurred by advances in informatics, there are opportunities to combine information from imaging, pathology, and molecular testing. Multidisciplinary collaboration among pathologists, radiologists, and oncologists supplemented by machine learning-based tools could facilitate a more precise understanding of a patient's diagnosis and what treatment strategies may be most effective to improve outcomes. Integrated diagnostics may also improve patient access to subspecialty expertise, particularly in community-based settings of cancer care. This workshop convened members of the cancer community to better define the purpose, goals, and components of integrated diagnostics.

[Workshop videos and presentations](#)

Addressing Treatment Resistance in the Development of Cancer Immune Modulator Therapeutics

Collaborative workshop convened by:

National Cancer Policy Forum

Forum on Drug Discovery, Development, and Translation

November 14–15, 2022

Many patients who initially respond to immunotherapy treatment may develop resistance to treatment over time. The reasons for the development of resistance are not fully understood, and resistance continues to pose a major threat to further advances in the field of immunotherapy for cancer treatment. This workshop gave participants in cancer research and cancer care an opportunity to examine the current challenges related to resistance to immunotherapies and to discuss potential policy options that could help overcome these challenges.

[Workshop videos and presentations](#)

[Proceedings](#)

Advancing Progress in Cancer Prevention and Risk Reduction

June 27–28, 2022

This workshop considered the current state of knowledge on risk factors for cancer and best practices for cancer prevention and risk reduction. Workshop sessions focused on strategies to implement population-based and clinic-based prevention, with exemplar programs in both settings. Participants also examined opportunities to spur progress in cancer prevention and risk reduction.

[Workshop videos and presentations](#)

[Proceedings](#)

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Association of American
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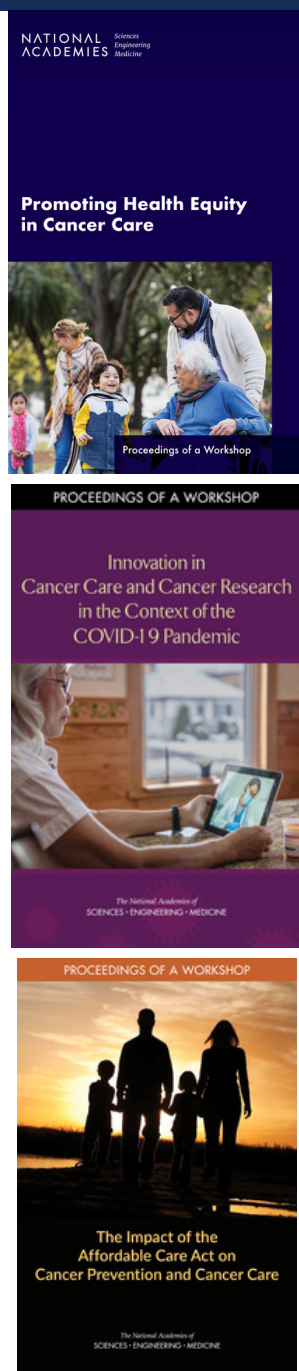
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*Board on Health Care Services
Health and Medicine Division*



NATIONAL CANCER POLICY FORUM

WORKSHOP PROCEEDINGS AND RELATED PUBLICATIONS



WORKSHOP PROCEEDINGS

2024

Optimizing Public-Private Partnerships for Clinical Cancer Research (In Progress)
Assessing and Advancing Progress in the Delivery of High-Quality Cancer Care (In Progress)
Developing a Multidisciplinary and Multispecialty Workforce for Patients with Cancer, from Diagnosis to Survivorship (In Progress)
Incorporating Integrated Diagnostics into Precision Oncology Care (In Progress)
Addressing Treatment Resistance in the Development of Cancer Immune Modulator Therapeutics: Proceedings of a Workshop

2023

The Potential Contribution of Cancer Genomics Information to Community Investigations of Unusual Patterns of Cancer: Proceedings of a Workshop
Advancing Progress in Cancer Prevention and Risk Reduction: Proceedings of a Workshop
Realizing the Potential of Genomics across the Continuum of Precision Health Care: Proceedings of a Workshop

2022

Family Caregiving for People with Cancer and Other Serious Illnesses: A Workshop
Innovation in Electronic Health Records for Cancer Care, Research, and Surveillance: A Workshop
Promoting Health Equity in Cancer Care: Proceedings of a Workshop
The Role of Companion Animals as Sentinels for Predicting Environmental Exposure Effects on Aging and Cancer Susceptibility in Humans: Proceedings of a Workshop
Innovation in Cancer Care and Cancer Research in the Context of the COVID-19 Pandemic: Proceedings of a Workshop
Impact of the Affordable Care Act on Cancer Prevention and Cancer Care: Proceedings of a Workshop

2021

Addressing the Adverse Consequences of Cancer Treatment: Proceedings of a Workshop
Opportunities and Challenges for Using Digital Health Applications in Oncology: Proceedings of a Workshop
Improving the Evidence Base for Treatment Decision Making for Older Adults with Cancer: Proceedings of a Workshop— in Brief
Advancing Progress in the Development and Implementation of Effective, High-Quality Cancer Screening: Proceedings of a Workshop
Drug Research and Development for Adults Across the Older Age Span: Proceedings of a Workshop

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WORKSHOP PROCEEDINGS

2020

Reflections on Sharing Clinical Trial Data: Challenges and a Way Forward: Proceedings of a Workshop
 Applying Big Data to Address the Social Determinants of Health in Oncology: Proceedings of a Workshop
 Health Literacy and Communication Strategies in Oncology: Proceedings of a Workshop
 Enhancing Scientific Reproducibility in Biomedical Research Through Transparent Reporting: Proceedings of a Workshop

2019

Developing and Sustaining an Effective and Resilient Oncology Careforce: Proceedings of a Workshop
 Advancing Progress in the Development of Combination Cancer Therapies with Immune Checkpoint Inhibitors: Proceedings of a Workshop
 Improving Cancer Diagnosis and Care: Clinical Application of Computational Methods in Precision Oncology: Proceedings of a Workshop

2018

Improving Cancer Diagnosis and Care: Patient Access to Oncologic Imaging and Pathology Expertise and Technologies: Proceedings of a Workshop
 Establishing Effective Patient Navigation Programs in Oncology: Proceedings of a Workshop
 Long-Term Survivorship Care After Cancer Treatment: Proceedings of a Workshop

2017

The Drug Development Paradigm in Oncology: Proceedings of a Workshop
 Cancer Care in Low-Resource Areas: Cancer Treatment, Palliative Care, and Survivorship Care: Proceedings of a Workshop
 Implementation of Lung Cancer Screening: Proceedings of a Workshop
 Incorporating Weight Management and Physical Activity Throughout the Cancer Care Continuum: Proceedings of a Workshop

2016

Policy Issues in the Clinical Development and Use of Immunotherapy for Cancer Treatment: Proceedings of a Workshop
 Cancer Care in Low-Resource Areas: Cancer Prevention and Early Detection: Workshop Summary
 Appropriate Use of Advanced Technologies for Radiation Therapy and Surgery in Oncology: Workshop Summary

2015

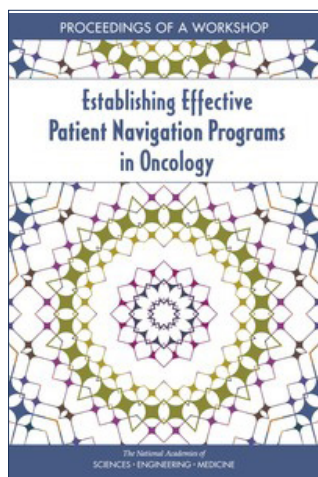
Comprehensive Cancer Care for Children and Their Families: Summary of a Joint Workshop by the Institute of Medicine and the American Cancer Society
 Policy Issues in the Development and Adoption of Biomarkers for Molecularly Targeted Cancer Therapies: Workshop Summary
 Assessing and Improving the Interpretation of Breast Images: Workshop Summary
 Role of Clinical Studies for Pets with Naturally Occurring Tumors in Translational Cancer Research: Workshop Summary

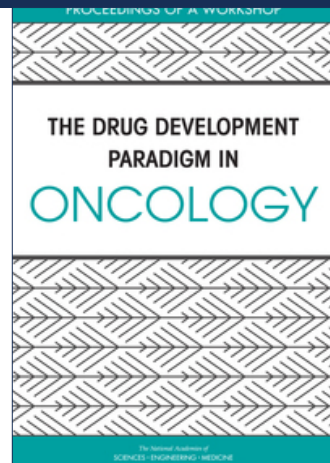
2014

Ensuring Patient Access to Affordable Cancer Drugs: Workshop Summary
 Contemporary Issues for Protecting Patients in Cancer Research: Workshop Summary

2013

Identifying and Addressing the Needs of Adolescents and Young Adults with Cancer: Workshop Summary
 Implementing a National Cancer Clinical Trials System for the 21st Century: Second Workshop Summary
 Sharing Clinical Research Data: Workshop Summary
 Delivering Affordable Cancer Care in the 21st Century: Workshop Summary
 Reducing Tobacco-Related Cancer Incidence and Mortality: Workshop Summary





WORKSHOP PROCEEDINGS

2012

The Role of Obesity in Cancer Survival and Recurrence: Workshop Summary
Informatics Needs and Challenges in Cancer Research: Workshop Summary
Facilitating Collaborations to Develop Combination Investigational Cancer Therapies: Workshop Summary

2011

Implementing a National Cancer Clinical Trials System for the 21st Century: Workshop Summary
Patient-Centered Cancer Treatment Planning: Improving the Quality of Oncology Care: Workshop Summary
The National Cancer Policy Summit: Opportunities and Challenges in Cancer Research and Care
Nanotechnology and Oncology: Workshop Summary

2010

Direct-to-Consumer Genetic Testing (with the National Research Council): Summary of a Workshop
Extending the Spectrum of Precompetitive Collaboration in Oncology Research: Workshop Summary
A Foundation for Evidence-Driven Practice: A Rapid Learning System for Cancer Care: Workshop Summary
Policy Issues in the Development of Personalized Medicine in Oncology: Workshop Summary

2009

Assessing and Improving Value in Cancer Care: Workshop Summary
Ensuring Quality Cancer Care Through the Oncology Workforce: Sustaining Care in the 21st Century: Workshop Summary
Multi-Center Phase III Clinical Trials and the NCI Cooperative Group Program: Workshop Summary

2008

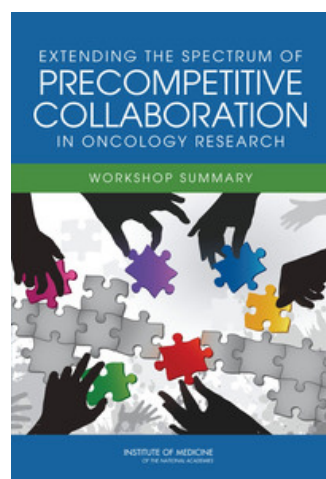
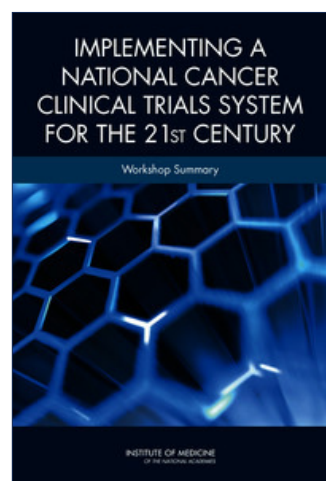
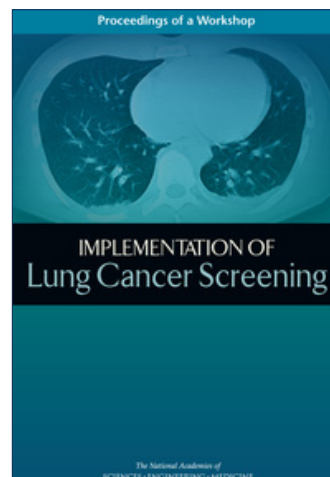
Implementing Colorectal Cancer Screening: Workshop Summary
Improving the Quality of Cancer Clinical Trials: Workshop Summary

2007

Cancer-Related Genetic Testing and Counseling: Workshop Proceedings
Cancer in Elderly People: Workshop Proceedings
Implementing Cancer Survivorship Care Planning: Workshop Summary

2006

Effect of the HIPAA Privacy Rule on Health Research: Proceedings of a Workshop
Developing Biomarker-Based Tools for Cancer Screening, Diagnosis, and Treatment: Workshop Summary



RELATED WORK

CONSENSUS STUDY REPORTS BUILDING ON NCPF WORK

Childhood Cancer and Functional Impacts Across the Care Continuum (2021)

Report: nap.edu/catalog/25944

Diagnosing and Treating Adult Cancers and Associated Impairments (2021)

Report: nap.edu/catalog/25956

Guiding Cancer Control:
A Path to Transformation (2019)

Report: nap.edu/catalog/25438

Making Medicines Affordable:
A National Imperative (2017)

Report: nap.edu/catalog/24946

Biomarker Tests for Molecularly Targeted Therapies:
Key to Unlocking Precision Medicine (2016)

Report: nap.edu/catalog/21860

Ovarian Cancers: Evolving Paradigms in Research and Care (2016)

Report: nap.edu/catalog/21841

Delivering High-Quality Cancer Care: Charting a New Course for a System in Crisis (2013)

Report: nap.edu/catalog/18359

Evolution of Translational Omics: Lessons Learned and the Path Forward (2012)

Report: nap.edu/catalog/13297

A National Cancer Clinical Trials System for the 21st Century: Reinvigorating the NCI Cooperative Group Program (2010)

Report: nap.edu/catalog/12879

Evaluation of Biomarkers and Surrogate Endpoints in Chronic Disease (2010)

Report: nap.edu/catalog/12869

Beyond the HIPAA Privacy Rule: Enhancing Privacy, Improving Health Through Research (2009)

Report: nap.edu/catalog/12458

Cancer Biomarkers: The Promises and Challenges of Improving Detection and Treatment (2007)

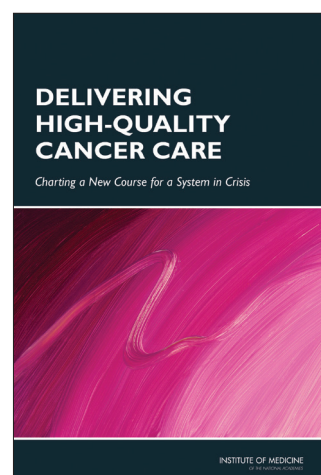
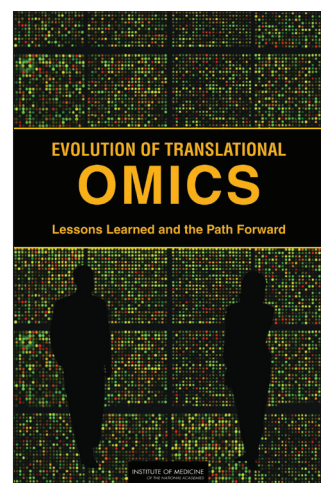
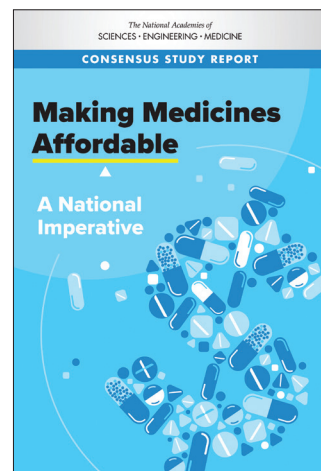
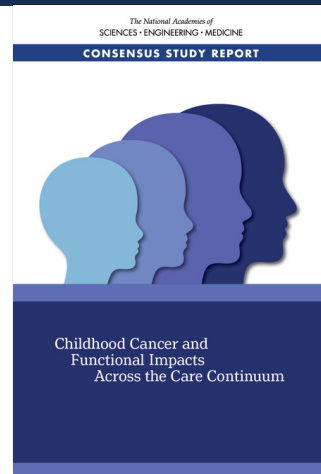
Report: nap.edu/read/11892

INDIVIDUALLY AUTHORED PUBLICATIONS BUILDING ON NCPF WORK

Independent, individually authored articles arising from NCPF workshops—and consensus studies building on NCPF work—include:

2022

- Bono, K. and N. L. Keating. 2022. Addressing social determinants of health: Now is the time. *Journal of the National Cancer Institute*. <https://academic.oup.com/jnci/advance-article/doi/10.1093/jnci/djac137/6705076?searchresult=1>.
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- Hyer, R. N. 2022. Insights for oncology trials garnered from the rapid development of an mRNA COVID-19 vaccine. *Cancer Journal* 28(2):146-150. https://journals.lww.com/journalppo/Fulltext/2022/03000/Insights_for_Oncology_Trials_Garnered_From_the.12.aspx.
- Karzai, F., and W. L. Dahut. 2022. Lessons from the impact of the COVID-19 pandemic at the national cancer institute: Cancer research and care. *Cancer Journal* 28(2):118-120. https://journals.lww.com/journalppo/Abstract/2022/03000/Lessons_From_the_Impact_of_the_COVID_19_Pandemic.7.aspx.
- Nekhlyudov, L., L. A. Fleisher, and P. B. Jacobsen. 2022. Telemedicine across the cancer care continuum: Evidence and opportunities for clinical care, research, and policy. *Cancer Journal* 28(2):121-124. https://journals.lww.com/journalppo/Abstract/2022/03000/Telemedicine_Across_the_Cancer_Care_Continuum.8.aspx.
- Nekhlyudov L., G. B. Campbell, K. H. Schmitz, G. A. Brooks, A. J. Kumar, P. A. Ganz, and D. Von Ah. 2022. Cancer-related impairments and functional limitations among long-term cancer survivors: Gaps and opportunities for clinical practice. *Cancer* 128(2): 222-229. <https://pubmed.ncbi.nlm.nih.gov/34529268/>.



2022, continued

- Oyer, R. A., L. Pierce, C. Lathan, and B. Sagar. 2022. Maintaining and advancing quality cancer care during a global pandemic. *Cancer Journal* 28(2):134-137. https://journals.lww.com/journalppo/Abstract/2022/03000/Maintaining_and_Advancing_Quality_Cancer_Care.10.aspx.
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- Schilsky, R. L. 2022. Beyond the COVID-19 pandemic: Sustaining and improving equitable cancer care and research. *Cancer Journal* 28(2):105-106. https://journals.lww.com/journalppo/Citation/2022/03000/Beyond_the_COVID_19_Pandemic__Sustaining_and.4.aspx.
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2021

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- Schilsky, R. L., S. Nass, M. M. Le Beau, and E. J. Benz, Jr. 2020. Progress in cancer research, prevention, and care. *New England Journal of Medicine* 383(10):897-990. <https://www.nejm.org/doi/full/10.1056/NEJMp2007839..>
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2019

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Toward a Framework to Improve Diversity and Inclusion in Clinical Trials **A Workshop**

May 20, 2024 ▪ National Academy of Sciences Building, Washington, DC

In the United States, racial and ethnic minorities comprise 39% of the population yet only 2% to 16% of clinical trial participants¹. There is a pressing need for increasing diversity and inclusion in clinical trial participation not only to earn and build trust, but also to promote fairness and generate biomedical knowledge². Increasing clinical trial representativeness may also improve the generalizability of research findings, yield targeted therapeutic strategies, and discover new biologic insights². And yet, over the past three decades, there has been little progress towards increasing clinical trial participation of racial and ethnic minority populations. Underrepresentation in clinical trials perpetuates long-lasting health disparities with severe consequences for underserved populations and the nation as a whole.

A planning committee of the National Academies of Sciences, Engineering, and Medicine will organize a public workshop to explore opportunities to improve racial and ethnic diversity in clinical trials with a focus on system-level change and collective efforts across organizations and sectors that no one entity can effectively take on alone. This workshop builds upon previous meetings hosted by the Clinical Trials Transformation Initiative in June 2023, the Multi-Regional Clinical Trials Center of Brigham and Women's Hospital and Harvard in September 2023, and FasterCures, Milken Institute in November 2023.

The public workshop will feature invited presentations and discussions to:

- Explore strategies for equitable participation, including innovative trial designs and partnerships to support community investment, engagement, and workforce development.
- Highlight ways that stakeholders can contribute to sustainable and scalable public awareness campaigns.
- Discuss business plans and funding mechanisms to allocate financial resources to improve clinical trial diversity.
- Consider ways to enable established and developing sites to increase capacity to conduct more equitable and representative clinical trials.
- Examine components of national, interoperable, and accountable systems for collecting and sharing condition-specific demographic data.

The planning committee will organize the workshop, develop the agenda, select and invite speakers and discussants, and moderate or identify moderators for the discussions. A proceedings of the presentations and discussions at the workshop will be prepared by a designated rapporteur in accordance with institutional guidelines.

¹ Hopper, Leigh. USC Health Researchers Rise to the Challenge of Improving Diversity in Clinical Trials. October 2022. University of Southern California. <https://today.usc.edu/usc-health-researchers-rise-to-the-challenge-of-improving-diversity-in-clinical-trials/>.

² Schwartz et. Al. Why Diverse Clinical Trial Participation Matters. April 2023. The New England Journal of Medicine. <https://www.nejm.org/doi/full/10.1056/NEJMp2215609>

The National Academies of Sciences, Engineering, and Medicine are private, nonprofit institutions that provide expert advice on some of the most pressing challenges facing the nation and the world. Our work helps shape sound policies, inform public opinion, and advance the pursuit of science, engineering, and medicine. For more information about this workshop, contact Carolyn Shore (cshore@nas.edu).

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National Cancer Policy Forum*

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Michelle Tarver
FDA Center for Devices and Radiological Health

Robert A. Winn
VCU Massey Comprehensive Care Center

[Workshop Website](#)

Enabling 21st Century Applications for Cancer Surveillance through Enhanced Registries and Beyond: A Workshop

July 29-30, 2024

Keck Center Room 100
500 Fifth Street, NW
Washington, DC 20001

Workshop Background

Population-based cancer surveillance has a pivotal role in assessing the nation's progress in cancer control. Cancer surveillance helps inform research and care interventions aimed at reducing the burden of cancer on patients and communities, including the ability to identify health disparities in cancer outcomes. Surveillance data are crucial for identifying emerging trends in health outcomes and opportunities to improve the quality of cancer care. However, challenges with the current approach to cancer surveillance in the United States include delays and gaps in data collection, as well as inadequate infrastructure and workforce to keep pace with the informatics and treatment-related advances in cancer. The National Cancer Policy Forum will convene a public workshop to examine opportunities to enhance and modernize cancer surveillance in order to improve cancer research, care, and outcomes for all patients.

Provisional Planning Committee

Lisa Richardson, Centers for Disease Control and Prevention (Co-Chair)

Robin Yabroff, American Cancer Society (Co-Chair)

Cathy Bradley, Colorado School of Public Health

Scarlett Lin Gomez, University of California, San Francisco

Nadia Howlader, National Cancer Institute

Larissa Nekhlyudov, Brigham and Women's Hospital/Dana-Farber Cancer Institute, Harvard Medical School

Bryan Palis, American College of Surgeons

Etta Pisano, American College of Radiology

Susan Schneider, Duke University

Lawrence Shulman, University of Pennsylvania

Robert Winn, Virginia Commonwealth University

[Workshop Website](#)

Opportunities and Challenges for the Development and Adoption of Multicancer Detection Tests: A Workshop

October 28-29, 2024

Keck Center Room 100
500 Fifth Street, NW
Washington, DC 20001

Workshop Background

Cancer screening is considered a key cancer control strategy because patients who are diagnosed with earlier stages of disease often have better treatment options and improved health outcomes. However, effective screening tests are lacking for most cancers. The development of minimally invasive approaches to screen for multiple tumor types at once could address this unmet need, but the clinical utility of multicancer detection (MCD) testing has yet to be established. This workshop will examine the state of the science for the clinical use of MCD testing and feature presentations and panel discussions on topics such as:

- Examples of current and emerging MCD tests.
- Challenges and opportunities to validate MCDs and determine their clinical utility for detecting cancer and reducing cancer-specific mortality.
- Strategies for cancer care downstream of MCD testing, such as follow-up diagnostic testing and treatment decision-making.
- Limitations of MCDs, including the burden on patients and health care systems from false-positive test results, overdiagnosis, and overtreatment.
- Research and policy gaps for assessing MCDs and their impact on cancer care and outcomes and health equity.

Planning Committee Pending

[Workshop Website](#)