U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH
NATIONAL CANCER INSTITUTE
171st NATIONAL CANCER ADVISORY BOARD

Summary of Meeting
30 June 2026

Conference Room TE 406, East Wing, Shady Grove Campus
National Cancer Institute
National Institutes of Health
Bethesda, Maryland

NATIONAL CANCER ADVISORY BOARD
BETHESDA, MARYLAND
Summary of Meeting
30 June 2026

The National Cancer Advisory Board (NCAB) convened for its 171st regular meeting on 30 June 2026. The meeting was open to the public on Tuesday, 30 June 2026, from 8:30 a.m. to 12:15 p.m. and closed to the public from 1:30 p.m. to 3:00 p.m. The NCAB Chair, Dr. John D. Carpten, Director, Comprehensive Cancer Center, Director and Chief Science Officer, Beckman Research Institute of City of Hope, presided during both the open and closed sessions.

NCAB Members

Dr. John D. Carpten (Chair)
Ms. Margaret Anne Anderson
Dr. Nilofer S. Azad (absent)
Dr. Richard J. Boxer
Dr. Callisia N. Clarke
Ms. Ysabel Duron
Dr. Karen M. Emmons
Ms. Tamika Felder
Dr. Christopher R. Friese
Ms. Julie Papanek Grant
Dr. Amy B. Heimberger
Dr. Ana Navas-Acien
Dr. Edjah K. Nduom
Dr. Kimberly Stegmaier
Dr. Fred K. Tabung
Dr. Ashani T. Weeraratna (absent)
Dr. Karen M. Winkfield

Alternate *Ex Officio* NCAB Members

Dr. John Gordon, CPSC
Dr. Michelle L. Heacock, NIEHS
Dr. Michael Kelley, VA (absent)
Dr. Matthew J. Memoli, NIH (absent)
Dr. Rebekah Zinn, FDA
Dr. Craig D. Shriver, DoD (absent)
Dr. Kerry Souza, NIOSH (absent)
Dr. Boris Wawrik, DOE (absent)

Members, Scientific Program Leaders, National Cancer Institute, NIH

Dr. Geraldina Dominguez, Director, AIDS Malignancy Program, Office of HIV and AIDS Malignancy
Dr. James H. Doroshow, Director, Division of Cancer Treatment and Diagnosis
Dr. Gary Ellison, Deputy Director, Division of Cancer Control and Population Sciences
Dr. Michael Espey, Deputy Associate Director, Cancer Imaging Program, Division of Cancer Treatment and Diagnosis
Dr. Nicole Senft Everson, Program Director, Health Communication and Informatics Research Branch, Behavioral Research Program, Division of Cancer Control and Population Sciences
Dr. Suzanne Forry, Program Director, Developmental Therapeutics Program, Division of Cancer Treatment and Diagnosis
Dr. Satish Gopal, Director, Center for Global Health
Dr. Paige Green, Chief, Basic Biobehavioral and Psychological Sciences Branch, Behavioral Research Program, Division of Cancer Control and Population Sciences
Dr. Piotr Grodzinski, Chief, Nanodelivery Systems and Devices Branch, Cancer Imaging Program, Division of Cancer Treatment and Diagnosis
Dr. Brandy Heckman-Stoddard, Chief Program Officer, Breast and Gynecologic Cancer, Division of Cancer Prevention
Dr. Kirsten A. Herrick, Program Director, Risk Factor Assessment Branch, Epidemiology and Genomics Research Program, Division of Cancer Control and Population Sciences
Ms. M.K. Holohan, Director, Office of Government and Congressional Relations
Dr. Shannon Hughes, Deputy Director, Division of Cancer Biology
Dr. Fatou Jallow, Program Director, Center for Global Health
Dr. Warren A. Kibbe, Deputy Director for Data Science and Strategy
Dr. Sarah Kobrin, Chief, Health Systems and Interventions Research Branch, Healthcare Delivery Research Program, Division of Cancer Control and Population Sciences
Dr. Peter Kraft, Director, Trans-Divisional Research Program, Division of Cancer Epidemiology and Genetics
Dr. Andrew Kurtz, Program Director, Center for Strategic Scientific Initiatives
Dr. Tram Kim Lam, Chief, Environmental Epidemiology Branch, Epidemiology and Genomics Research Program, Division of Cancer Control and Population Sciences
Dr. Anthony Letai, Director
Ms. Amber Lowery, Deputy Director for Management and Executive Officer
Dr. Douglas R. Lowy, Principal Deputy Director
Dr. Hala R. Makhlouf, Acting Chief, Pathology Investigation & Resources Branch, Division of Cancer Treatment and Diagnosis
Dr. Krzysztof Ptak, Director, Office of Cancer Centers
Dr. Anu Puri, Program Director, Cancer Training Branch, Center for Cancer Training
Mr. Weston Ricks, Director, Office of Budget and Finance
Dr. Nita Seibel, Head, Pediatric Solid Tumors, Clinical Investigations Branch, Division of Cancer Treatment and Diagnosis
Dr. George Sigounas, Chief Science Advisor
Dr. Dinah S. Singer, Acting Director, Division of Extramural Activities, and Deputy Director for Scientific Strategy and Development
Dr. Shamala Srinivas, Associate Director, Scientific Review and Policy, Division of Extramural Activities
Dr. Peter Ujhazy, Deputy Associate Director, Translational Research Program, Division of Cancer Treatment and Diagnosis
Dr. Asad Umar, Chief Program Officer, Gastrointestinal and Other Cancers, Division of Cancer Prevention
Dr. Tiffany Wallace, Program Director, Center to Reduce Cancer Health Disparities

Dr. Joanna Watson, Chief, Tumor Metastasis Branch, Division of Cancer Biology
Ms. Amy Williams, Director, Office of Advocacy Relations
Ms. Crystal Wolfrey, Director, Office of Grants Administration and Chief Grants Management Officer

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TUESDAY, 30 JUNE 2026

I. CALL TO ORDER AND OPENING REMARKS—DR. JOHN D. CARPTEN

Dr. John D. Carpten called to order the 171st meeting of the National Cancer Advisory Board (NCAB). He welcomed members of the Board, *ex officio* members, liaison representatives, staff, and guests. Members of the public were welcomed and invited to submit any comments regarding items discussed during the meeting to Dr. Shamala Srinivas, Associate Director, Scientific Review and Policy, Division of Extramural Activities (DEA), National Cancer Institute (NCI), in writing and within 10 days. Dr. Carpten reviewed the confidentiality and conflict-of-interest practices required of Board members in their deliberations.

Motion. A motion to accept the minutes of the 17 March 2026 Meeting of the NCAB was approved unanimously.

II. FUTURE BOARD MEETING DATES—DR. JOHN D. CARPTEN

Dr. Carpten called Board members' attention to the future meeting dates listed on the agenda.

III. NCI DIRECTOR'S REPORT—DR. ANTHONY LETAI

Dr. Anthony Letai, Director, NCI, welcomed NCAB members and attendees to the 171st meeting. He reported on NCI leadership updates, budget and funding, research priorities and advances, and recent and upcoming events.

NCI Leadership Updates. Dr. Letai began by expressing appreciation for Dr. Sanya A. Springfield, Acting Deputy Director, Strategic Enhancement, Director, Center to Reduce Cancer Health Disparities (CRCHD), who retired from NCI after more than 30 years of service. He highlighted Dr. Springfield's focus on reducing the cancer burden for patients. Dr. Nelson Aguila will serve as Acting Director of CRCHD. He also recognized Dr. Dinah S. Singer, Acting Director, Division of Extramural Activities (DEA), and Deputy Director for Scientific Strategy and Development, who retires on 30 June 2026 after more than 50 years of service at NCI. Dr. Letai shared that Dr. Singer was a valuable advisor who was committed to training and mentorship initiatives. Dr. Singer has played a key role in both the intramural program and extramural community. Dr. Shamala Srinivas will serve as Acting Director for DEA, and Dr. Satish Gopal will serve as Acting Deputy Director for Scientific Strategy and Development. Dr. Letai noted that Dr. Jay J. Schnitzer is the President of Leidos Biomedical Research, Inc. (an NCI contractor) and is now the Director of the Frederick National Laboratory for Cancer Research.

NCI Budget and Funding Updates. Dr. Letai presented an update on the NCI budget. The total appropriation for NCI in fiscal year 2026 (FY26) is $7.3 billion (B). Dr. Letai noted that the FY26 budget demonstrates a $128 million (M) increase compared with FY25, and he emphasized bipartisan support for NCI's research endeavors. For FY27, the President's budget proposes $7.3 B for NCI. The House bill proposes $7.46 B for FY27, which would be an increase of $110 M compared with the FY26 budget. The Senate bill is not yet available. Dr. Letai presented a bar graph demonstrating the differences among proposed budgets (i.e., President's budget, House, Senate, enacted) for FY18–FY27. He highlighted that NCI's budget has not kept pace with inflation—rising costs have impacted the number of resources and the amount of high-quality research that can be conducted.

Dr. Letai noted that NCI communications are more active and that NCI is using social media to more effectively connect with the public and scientific community. He highlighted a blog post from May 29, 2026, titled, "An Update on Grantmaking at NCI," which outlines the status of grants and approval

processes. Dr. Letai acknowledged concerns regarding the rate of grant payouts. He presented data showing cumulative grant selections and grant awards from December 2025 to June 2026. He explained that administrative processes delay the payout of grants by approximately 45 to 60 days and that all extramural funding should be awarded by mid-September.

NCI Research Priorities and Advances. Dr. Letai emphasized NCI's commitment to supporting critical cooperative networks, including the National Clinical Trials Network (NCTN), Experimental Therapeutics Clinical Trials Network (ETCTN), and NCI Community Oncology Research Program (NCORP). He commented that notices of funding opportunities (NOFOs) for these cooperative programs have been published, so NCI should be able to provide continuous funding for these important programs.

Global biomedical innovation is accelerating more rapidly than the United States, resulting in a negative impact on the United States' competitiveness in clinical trials. Dr. Letai noted that many early-phase oncology clinical trials are being conducted in foreign countries, including Australia and China. He has been meeting with different stakeholders (e.g., U.S. Food and Drug Administration, Cancer Centers) to identify methods for accelerating and optimizing clinical trial workflows within the United States. The U.S. Department of Health and Human Services (HHS) launched Operation TrialBlazer on June 22, 2026, to ensure the United States remains a global leader in biomedical innovation and that patients have access to cutting-edge therapies. For example, data requirements for first-in-human clinical trials will be streamlined. NCI is developing artificial intelligence (AI) tools within the clinical trials ecosystem (e.g., protocol development, informed consent documents, patient screening) to increase efficiency. AI will serve as a useful tool for organizing and sharing cancer patient data. NCI will coordinate and serve as an organizing node to address issues in redundancy in clinical trials. Dr. Letai highlighted that Cancer Centers are developing individualized solutions and that a unified solution is ideal to maintain interoperability.

Cancer therapeutic vaccines are one of NCI's research priorities, and this research initiative is led by the Foundation for the NIH (or FNIH) as a public–private partnership. Three clinical trials are being designed, and multiple vaccine platforms will be tested to allow for comparisons. An expert panel has been established, and its implementation report will be available in July. Dr. Letai highlighted advances in cancer research and treatment strategies. Daraxonrasib, a RAS inhibitor, increases survival for advanced-stage pancreatic cancer patients that have previously received other therapies without success. Dr. Letai commented that this breakthrough serves as a reminder of the importance of NCI-funded basic research through such mechanisms as the NCI RAS Initiative. The U.S. Food and Drug Administration (FDA) has approved an at-home self-collection test kit for human papillomavirus (HPV) screening. The Self-collection for HPV testing to Improve Cervical Cancer Prevention (or SHIP) trial played a vital role in collecting data for FDA approval, and this test kit provides a simplified screening method to help eradicate cervical cancer, which is caused by HPV. NCI research has demonstrated that one HPV vaccine dose has the same efficacy as two doses of the HPV vaccine. Dr. Letai highlighted that this modification to the HPV vaccine regimen would make prophylactic care easier.

NIH recently announced a request for information (RFI), under notice number NOT-OD-26-087, focused on measuring and rewarding scientific impact. NIH is seeking input to identify aspects of research that should be measured, recognized, and incentivized. NIH is encouraging responses for (1) rigor and reproducibility; (2) data, software, and model sharing; (3) training and mentorship; (4) collaboration; (5) entrepreneurship and translation; (6) foundational scientific exploration; and (7) public impact. Dr. Letai commented that metrics are not available to accurately measure impact. NCI would like to be able to prospectively review grants to determine whether the research will have high impact; new metrics are needed for impact to be successfully measured. RFI responses can be submitted until August 19, 2026.

Recent and Upcoming Events. Dr. Letai attended the American Association for Cancer Research Annual Meeting and the American Society of Clinical Oncology Annual Meeting. He also is visiting NCI-Designated Cancer Centers, including the University of Michigan Rogel Cancer Center and University of Utah Huntsman Cancer Institute. Additional events that Dr. Letai has participated in recently include the One Voice Against Cancer congressional briefing and the HHS Roundtable for the launch of Operation TrialBlazer. He highlighted that senators displayed bipartisan support for the NCI at a recent Senate hearing. On July 1–2, 2026, NCI is hosting Precision in Practice: A Functional Medicine Workshop. The workshop will use a hybrid format; attendees can attend in person at the NCI Shady Grove campus or virtually. The Childhood Cancer Data Initiative (CCDI) Symposium will be held September 17–18, 2026, at the NCI Shady Grove campus. A virtual option is available for the CCDI Symposium, as well.

Questions and Answers

Dr. Carpten requested that Dr. Letai elaborate on the factors that have influenced the pace of grant payouts. Dr. Letai explained that the government shutdown lasted almost 2 months, which set NCI behind. Other factors include learning to navigate the new grant evaluation processes and the new NIH review process. He continued that the new NIH review process causes a 10–14-day delay. Dr. Letai highlighted that there are numerous administrative steps that occur between his review of the research grant and the grant payouts. He commented that the delay in grant payouts is being scrutinized because of overall interruptions in funding for researchers. Dr. Letai commended the Office of Grants Administration for completing grant payouts under these challenging circumstances.

Dr. Richard J. Boxer, Clinical Professor, David Geffen School of Medicine, University of California, Los Angeles, questioned the disconnect between the accurate representation of NCI funding shown in Dr. Letai's presentation and what information is being provided to the public. Dr. Letai commented that the government shutdown and reorganization of NIH institute, center, and office (ICO) communication departments exacerbated this issue of prominent voices spreading inaccurate information. He continued that journals prioritize principles of journalism, which focus on stories that grab the reader's attention. NCI is focused on completing grant payouts and will correct this inaccurate information at prominent venues.

Ms. Ysabel Duron, Founder and Executive Director, The Latino Cancer Institute, commented that the proposed changes to federal grants by the Office of Management and Budget (OMB) poses a significant concern for research. She continued that OMB changes, including bypassing peer reviews and terminating federal grants without reason, would have devastating repercussions for researchers and patients. Ms. Duron highlighted that researchers have faced difficulties associated with modifying language in grants to align with changing priorities and that many of her colleagues have undergone funding cuts or been denied follow-up funding. She continued that these proposed changes by OMB will hinder vulnerable populations who do not have easy access to cancer screenings. Ms. Duron requested clarification regarding how NCI plans to advocate for and protect robust and rigorous cancer research. Dr. Letai stated that NCI does not have an advocacy role and encouraged individuals to submit comments to the RFI.

Dr. Karen M. Winkfield, Executive Director, Meharry-Vanderbilt Alliance, Ingram Professor of Cancer Research, Professor of Radiation Oncology, Vanderbilt University School of Medicine, appreciated Dr. Letai's acknowledgment of the challenging research landscape and the increase in NCI communication efforts. She noted that the increase in communication will help rebuild trust. Dr. Winkfield continued that institutional pushback against integrating AI-driven solutions with electronic health records (EHRs) has been observed. She questioned whether NCI will have a specific, universal solution available soon. Dr. Letai commented that HHS is increasing internal communication

efforts to reduce redundancy and increase interoperability. Dr. Douglas R. Lowy, Principal Deputy Director, NCI, noted that NCI is coordinating conversations to understand how institutions are approaching the same problem. He highlighted that large language models are not the solution for every problem; machine learning and computational models provide value, as well. Dr. Lowy explained that the Office of the National Coordinator for Health IT is focused on making EHR data easily accessible to cancer researchers and patients, and AI is an opportunity for this effort.

Dr. Karen M. Emmons, Professor, Department of Social and Behavioral Science, Harvard T.H. Chan School of Public Health, requested additional clarification about how the proposed OMB changes would weaken the peer-review process. Dr. Letai responded that the changes are currently hypothetical, and the significance depends on the extent of modifications that would be implemented. He noted that NCI will continue to identify high-impact cancer research and that the strong bipartisan support should help advance NCI's research efforts.

Dr. Kimberly Stegmaier, Chair, Department of Oncology, Dana-Farber Cancer Institute, Associate Chief, Division of Hematology/Oncology, Boston Children's Hospital, David G. Nathan Professor of Pediatrics, Harvard Medical School, Institute Member, Broad Institute of Harvard and MIT, explained that community members have questions about training grants, particularly the NCI Mentored Clinical Scientist Research Career Development Award. Dr. Letai responded that NCI is continuing the K08 training program. The multiyear funding rule limited the number of grants awarded. He continued that NCI has observed an increase in the number of early-stage investigators who have applied for these training grants, which decreases the success rate, although the number of grants awarded remains steady.

Dr. Boxer expressed appreciation for, and applauded, Dr. Singer's incredible service at NCI.

IV. SCIENTIFIC PRESENTATION—DISSECTING AND TARGETING CANCER PLASTICITY—DR. KARUNA GANESH

Dr. Karuna Ganesh, Associate Member, Molecular Pharmacology Program, Sloan Kettering Institute, Associate Attending Physician, Gastrointestinal Oncology, Department of Medicine, Director of Metastasis Research, Center for Colorectal Cancer, Associate Program Director, Hematology/Oncology Fellowship Program, Memorial Sloan Kettering Cancer Center, presented on the metastatic plasticity of colorectal cancer (CRC). Dr. Ganesh emphasized that effective therapeutic strategies for the metastatic stage of cancers remain a critical need. Cancer cells leave the primary tumor site early during tumor progression, but physical, biochemical, redox, and immunological stressors prevent these cells from surviving. Over time, cancer cells develop progressive resistance to these stressors until they are able to successfully spread and multiply in a secondary site. Dr. Ganesh highlighted that understanding this progressive resistance is important for identifying shared tumor vulnerabilities across a heterogeneous population of patients. Adjuvant and neoadjuvant therapies are successful for treating micrometastases, but not aggressive macrometastases, and the dynamic changes that underly outgrowth from micrometastases to macrometastases need to be elucidated to cure cancer patients with stage IV metastatic disease. Dr. Ganesh emphasized the necessity for models that mimic metastatic disease settings, which is not accurately modeled in mice, and that metastatic patient biopsies are not routinely accessible.

CRC is the third–most common cancer and the second leading cause of cancer-related deaths globally. An increasing incidence of CRC is being observed in people under 50 years old. Surgical metastasectomies provide a vital opportunity for spatial and temporal profiling of disease progression with the isolation of primary tumor, metastasis, and normal adjacent tissue samples from the same patient. Acquisition of these samples also provides an opportunity to study CRC in representative models, including patient-derived organoids (PDOs), PDO orthotopic xenotransplantation mouse models, and syngeneic mouse models. PDO data demonstrate that primary tumor cells express leucine-rich repeat-containing G protein-coupled receptor 5 (LGR5). Metastasizing tumor cells express L1 cell adhesion

molecule and no longer express LGR5. Dr. Ganesh highlighted a collaborative study in which organoids were transplanted into the mouse rectum. Results demonstrated the same response to therapy for patients and the xenotransplanted patient-derived organoids. These data validate the xenotransplant mouse model as a clinically valuable tool to predict patient-specific responses to drugs to drive decision-making processes in the clinic. Single-cell transcriptomics and multiplex immunofluorescence identified progressive plasticity from a canonical intestinal state of the primary CRC tumor to a non-canonical state in the CRC metastasized liver tumor. Patient-matched tumor samples demonstrated that metastatic progression shifts cell fates to a non-canonical state, and these non-canonical cell subsets (e.g., neuoro-endocrine, squamous) are not observed in the primary tumor. Dr. Ganesh highlighted that shared expression patterns were observed across patients, and these non-canonical cell states correlated with worse clinical outcomes. Analysis of the data elucidated that the cancer cells transition to the non-canonical metastatic state through a conserved fetal progenitor intermediate state that is conserved across patients. Because the CRC cells display conserved sequential cell state transitions during tumor progression, patients can be tracked longitudinally, and the efficacy of treatments across cell states can be monitored.

Organoids and orthotopic xenotransplantation mouse models (i.e., intercaecal and intrahepatic xenografts) were used to determine whether CRC cell transdifferentiation occurred because of genetic or microenvironmental factors. Organoids derived from primary and metastatic CRC cells demonstrated distinct differentiation potential *ex vivo*. Xenograft transplantation of metastatic CRC organoids highlighted that metastatic cells retain the ability to respond and adapt to distinct tissue microenvironments *in vivo*. Dr. Ganesh noted that metastatic CRC cells have increased cell autonomous plasticity, which is an increased ability to switch between cell states, and that CRC cells undergo distinct cell state trajectories based on microenvironmental cues. Chemotherapy increases fetal cell state transitions and injury repair signals. She summarized that progressive plasticity during CRC metastasis encompasses (1) an expanded range of canonical and non-canonical cell states, (2) conserved sequential transitions of CRC cells during tumor progression, (3) epithelial injury promoting transition into non-canonical cell states, (4) greater cell autonomous plasticity in CRC metastatic tumor cells, and (5) *Prospero homeobox 1 transcription factor* (or *PROX1*) hindering cell plasticity in primary CRC tumor cells.

Reprogramming Epithelial WIRing to Eradicate CANcer (REWIRE-CAN) is an international, collaborative team, funded by the Cancer Grand Challenges, focused on therapeutically targeting cell plasticity by pursuing regulators of cell state transitions. Dr. Ganesh highlighted that the fetal cell state provides a unique opportunity to identify and selectively target cancer cell–specific markers that are not expressed in adult tissues. Because unique genes of fetal cells are intracellular, immunopeptidomics was selected as an assay to conduct. Organoids were used to select and grow the CRC fetal cell subset. Patient samples are compared with cells from the organoid to ensure the organoid model recapitulates the *in vivo* CRC fetal cells. Dr. Ganesh briefly discussed an immunopeptidome analysis pipeline project that focused on identifying major histocompatibility complex–peptide complexes that were unique to CRC tumors. She continued that the project successfully identified highly conserved peptides, particularly the protein naked cuticle homolog 1 (NKD1), that was expressed in most CRC patients. *In vitro* studies showed that T-cell receptor (TCR) T cells that recognized NKD1 were able to destroy CRC cell lines. An *in vivo* study that xenotransplanted CRC patient–derived organoids into a mouse model demonstrated that NKD1–TCR T-cell therapy successfully controlled liver metastasis compared with a control (e.g., melanoma antigen).

Understanding how a broad range of factors within the tissue and host (e.g., microbiome, immune cells, socioeconomic elements) affect the coevolution of the tumor and microenvironment is important for cancer therapy. A tissue section from liver metastasis highlights the heterogeneity of cells and regions within the tumor, including fibrosis, necrotic areas, and an invasive margin. Spatial transcriptomics identified an injury repair state that drives metastasis and cytotoxic T-cell crosstalk with transitioning

cells. Dr. Ganesh emphasized that there are several unmet needs for understanding tumor microenvironment interactions, including longitudinal samples, clinically representative model systems, and dynamic biomarkers in patients undergoing cancer therapy. She highlighted efforts that are focused on addressing these unmet needs, including a functional biospecimen platform, co-cultures of immune cells and organoid models, and bioengineered gut chips.

In summary, cell plasticity is a pervasive hallmark for advanced cancer, and clinical datasets and clinically relevant models of advanced metastatic cancer are needed to understand the underlying mechanisms of cell plasticity. Cancer cell plasticity involves highly conserved cell state transitions that can be mechanistically defined and targeted using drug design workflows. Cancer genomics and cell states should be considered when designing models, developing drugs, and identifying multimodal biomarkers for clinical trials. In addition, an emerging clinical priority is to target micrometastatic disease.

Questions and Answers

Dr. Letai noted that the *ex vivo* metastasis and primary tumor cultures provide an opportunity for broad drug screening to be used as mechanistic probes and to identify new therapeutic combinations. Dr. Ganesh commented that a concern is the translatability of *in vitro* therapy responses. She continued that therapeutic responses could change depending on the microenvironment. In response to a follow-up question from Dr. Letai, Dr. Ganesh explained that the correlation data for *ex vivo* cultures and clinical outcomes applies to a cohort of patients rather than a specific patient. Dr. Letai commented that it would be important to demonstrate that the different epigenetic states reflect unique chemical vulnerabilities for therapeutic strategies.

Dr. Carpten requested clarification about the epigenetics-focused research. Dr. Ganesh explained that her research team and collaborators are actively studying epigenetic modifications, including methylation and chromatin accessibility. She emphasized that a focus is on understanding the underlying drivers versus the associated changes. In response to a question from Dr. Carpten, Dr. Ganesh confirmed that the fetal-like cell states are modulating the tumor microenvironment to create a more immunosuppressive niche. In response to a follow-up question from Dr. Carpten, Dr. Ganesh confirmed that Assay for Transposase-Accessible Chromatin using Sequencing (or ATAC-Seq) data were collected, as well.

V. OPTIMIZING COMPETITIVENESS, EFFICIENCY, AND REACH OF CANCER CLINICAL TRIALS IN THE UNITED STATES—DRS. JAMES H. DOROSHOW AND SATISH GOPAL

Drs. Gopal and James H. Doroshow, Director, Division of Cancer Treatment and Diagnosis (DCTD), NCI, discussed ongoing efforts to improve the efficiency, competitiveness, and reach of cancer clinical trials in the United States. Dr. Gopal explained that the number of oncology trials started per year has increased globally and that the trials are supported more often by pre-commercial emerging biopharmaceutical sponsors. He also highlighted China's growing role in sponsoring oncology trials. Oncology trials increasingly are focused on new treatment modalities, which necessitates specific considerations. Survey data reflect the real-world operational burdens associated with these shifts, including lengthy trial activation timelines, increasing costs, and declining patient accrual despite expanding clinical trial infrastructures.

Cancer Centers are a key national asset and an engine of early-phase oncology trials in the United States. Trials reflect a complex interplay among various factors, including budget and coverage analysis, contracting, local review and regulatory review, protocol amendments, and sponsor handoffs. Dr. Gopal described Australia as an example of a coordinated national clinical trials ecosystem that has successfully

implemented streamlined regulatory review and ethics, cost incentives, reputation for high quality, and careful strategic positioning. Dr. Gopal emphasized that operational inefficiencies threaten the nation's leadership, innovation, and progress in cancer research. He described ongoing collaborations among NCI, Cancer Centers, FDA, and other partners to strengthen the U.S. clinical trials enterprise.

Dr. Doroshow reviewed the scope of NCI-supported clinical trial activities, including the Pediatric Early Phase Clinical Trials Network, ETCTN, NCTN, NCORP, and several specialty resources. He reported that these programs collectively support hundreds of active trials across the clinical spectrum and enroll approximately 15,000 to 17,000 participants annually. He highlighted data on patient accrual to treatment trials, noting that investigator-initiated trials remain below pre-pandemic levels.

To address these challenges, NCI has defined a strategic vision to create more flexible, faster, simpler, less expensive, and high-impact clinical trials. These efforts include streamlining processes for trial design and execution, decreasing regulatory hurdles and broadening trial access, focusing on essential endpoints, and increasing the efficiency of data collection. Key areas include reducing trial complexity and cost, decentralizing trials, promoting accrual and access, implementing new data collection approaches, reducing operational burden, addressing statistical issues, and fostering workforce outreach and training. Dr. Doroshow highlighted examples of successful outcomes resulting from these efforts. He also noted that NCI provides central support services in the areas of information security, study administration and logistics, clinical data capture and reporting, regulatory monitoring and reporting, data quality and control, and correlative study data.

NCI's Virtual Clinical Trials Office (VCTO) pilot program provides centralized support for study screening, consenting, data management, study visits, regulatory activities, and other trial operations to support accrual to NCI trials. Since its launch, the program has expanded to more than 37 sites and has helped identify and enroll patients. Looking ahead, Dr. Doroshow emphasized the importance of further reducing data requirements for Investigational New Drug (IND)–regulated studies; standardizing auditing practices across networks; improving study activation timelines; and leveraging AI technologies to support protocol development, consent form preparation, and automated extraction and validation of data.

Questions and Answers

Ms. Duron highlighted the need for data on social determinants of health and noted that AI is useful for comprehensive data analyses. Dr. Doroshow underscored the importance of collecting data that are relevant to trial endpoints, while minimizing the collection of data with less meaningful utility. Ms. Duron spoke on the importance of recognizing situations where such data are needed from the start. Dr. Doroshow noted ongoing efforts by NCI to standardize patient-reported outcome measures for use in NCTN trials.

Dr. Carpten asked about the greatest opportunities for improvement. Dr. Doroshow identified faster study activation as a critical priority, noting that delays in opening trials discourage industry sponsors from conducting studies in the United States. Dr. Emmons encouraged a continued focus on pragmatism alongside other efforts to improve patient accrual. Dr. Doroshow explained several factors that underlie these numbers, including ease of participation for patients.

Ms. Julie Papanek Grant, General Partner, Canaan, discussed financial and operational incentives affecting trial participation, noting that priorities in this space must be aligned appropriately. She wondered about opportunities for collaboration with industry partners. Dr. Letai described plans to incorporate relevant clinical trial performance metrics into Cancer Center program reviews. Dr. Carpten emphasized the opportunity to enhance efficiency of Clinical Trials Offices. Dr. Gopal highlighted ongoing HHS-wide discussions about improving the national clinical trials ecosystem.

Dr. Edjah K. Nduom, Daniel Louis Barro Endowed Chair, Professor, Department of Neurosurgery, Emory University School of Medicine, Brain Tumor Disease Leader, Winship Cancer Institute, asked about IND-regulated trial efficiency. Dr. Doroshow explained that the FDA recently released guidance on data for early-phase trial reporting requirements. Further efforts in this area will be needed.

Dr. Winkfield spoke on the challenges of incentive-based systems, particularly in the context of speed and innovation. She also asked about strategies to promote workforce development and scalability through the VCTO program. Dr. Doroshow highlighted recent successes in onboarding new institutions quickly and efficiently. He also agreed on the need for training programs to develop workforces and scale up virtual clinical trials offices. Dr. Letai remarked that community centers often achieve quick activation and could serve as a model for academic centers.

Dr. Michelle L. Heacock, Chief, Hazardous Substances Research Branch, Extramural Research and Training Division, National Institute of Environmental Health Sciences, discussed the potential value of using clinical trial data for additional research questions, including environmental exposure studies. Dr. Doroshow acknowledged the scientific importance of such questions but noted that current clinical trial datasets generally do not collect the information necessary to address them.

VI. ONGOING AND NEW BUSINESS—DR. JOHN D. CARPTEN

NCAB *ad hoc* Working Group on Extramural Research Concepts and Programs Report

Dr. Cornelia M. Ulrich, Chief Scientific Officer and Executive Director, Comprehensive Cancer Center, University of Utah Huntsman Cancer Institute, provided a report on four NCI-initiated concepts that were recommended for funding reissuance. On 8 April 2026, members of the NCAB *ad hoc* Working Group on Extramural Research Concepts and Programs met to review these NCI-initiated concepts. Dr. Ulrich highlighted that the Working Group evaluates new and reissued concepts for future funding announcements. Working Group members ensure that the concepts have scientific merit, are timely, and advance NCI's current research efforts.

The first of the four concepts is the reissuance of the Surveillance, Epidemiology, and End Results (SEER) Program. She emphasized the importance of the SEER program, noting that it is the primary source for cancer statistics in the United States, and it serves globally as a standard for quality across cancer registries. The SEER program collects diagnoses, treatments, and outcomes of cancer, and it provides national estimates for cancer incidence, prevalence, mortality, survival, and lifetime risk. Working Group members recommended establishing an external advisory committee, expanding data collection of underrepresented populations, and modernizing the program. The reissuance concept is requesting funding for 10 years, with a $600 M budget ceiling; $52 M is being requested for the first year. The Working Group recommended approving the reissuance concept.

The second concept is a reissuance of the Innovative Molecular Analysis Technologies (IMAT) Program. Dr. Ulrich noted that this program catalyzes the multidisciplinary development of innovative technologies to overcome cancer biology complexities and create new strategies to defeat cancer. Program funding supports high-risk, high-reward technology development, including instrumentation, devices, assays, analytic tools, platforms, methods, and techniques. The program receives approximately 200 to 300 applications annually. The reissuance concept is requesting funding to support R33 and R61 projects from FY28 through FY30 with an annual budget request of $12 M. Working Group members emphasized IMAT's impact compared with R01 and R21 funding mechanisms. The Working Group recommended approving the reissuance concept.

The third concept is a reissuance of the Radiation Oncology–Biology Integration Network (ROBIN). ROBIN aims to conduct real-time biological characterization during radiation therapy to elucidate mechanistic treatment–response dynamics and identify actionable changes to advise prospective biomarker development, drug–radiation combinations, and adaptive therapeutic approaches. The reissuance concept is requesting funding for 5 years, with a total budget of $36 M. Working Group members recommended establishing a mid-cycle external program evaluation and defined performance metrics. Working Group members also emphasized standardized sample and data standard operating procedures to ensure comparability and reproducibility. The Working Group recommended approving the reissuance concept.

The fourth concept is a reissuance of the Clinical Trials Evaluation Program Enterprise System (CTEP ESYS). CTEP ESYS is an NCI-wide platform that supports the oversight, conduct, coordination, and evaluation of NCI-sponsored clinical trials. The integrated platform can handle complex protocols, novel trial designs, expanded safety requirements, and increasing amounts of data. The reissuance concept is requesting funding for a 10-year Research and Development contract, with a $223.7 M budget ceiling. Working Group members recommended enhanced interoperability and seamless data sharing across the platform. Working Group members also were excited about the use of AI, machine learning, and advanced analytical tools for protocol review, patient accrual monitoring, and safety surveillance. The Working Group recommended approving the reissuance concept.

Questions and Answers

Dr. Ana Navas-Acien, Professor of Environmental Health Sciences, Department of Environmental Health Sciences, Mailman School of Public Health, Columbia University, appreciated the Working Group's recommendations for the SEER program. She emphasized the importance of incorporating underrepresented populations and expanding SEER data collection efforts across the nation. Dr. Ulrich responded that the review group highlighted continued monitoring of rural sites. She noted that the map displayed during the presentation shows core registries and research support registries. Registry expansion is being considered. The SEER program is working on modernizing the program, including the incorporation of AI technology.

Dr. Carpten requested clarification about who manages CTEP ESYS. Dr. Doroshow responded that CTEP is an internal program within NCI's Division of Cancer Treatment and Diagnosis. In response to a follow-up question from Dr. Carpten, Dr. Doroshow confirmed the reissuance is for internal program funding. Dr. Carpten queried about the effective operation of the program. Dr. Doroshow noted that CTEP ESYS is vital to track more than 72,000 forms.

Motion. A motion to *en bloc* concur on the reissuance of the four concepts from the *ad hoc* Working Group on Extramural Research Concepts and Programs was approved unanimously.

NCAB *ad hoc* Subcommittee on Global Cancer Research Report

Dr. Fred K. Tabung, Associate Professor, Division of Medical Oncology, Department of Internal Medicine, The Ohio State University Comprehensive Cancer Center, James College of Medicine, The Ohio State University Wexner Medical Center, reported on the meeting of the NCAB *ad hoc* Subcommittee on Global Cancer Research, which received an update on the activities of the NCI Center for Global Health (CGH) and discussed strategic opportunities to strengthen NCI's global cancer research portfolio. During the Subcommittee meeting, Dr. Gopal reviewed the history and mission of NCI's global cancer research enterprise, noting that international collaborations have led to important advances in cancer prevention, diagnosis, and treatment. These efforts demonstrate how discoveries generated through international collaborations can benefit patients both globally and in the United States.

Dr. Gopal also reviewed the current CGH portfolio, which includes investments in technology development, implementation science, cancer control research, training, and international partnerships. He noted that approximately 5 percent of NCI's extramural research portfolio involves collaborations with low- and middle-income countries and highlighted ongoing efforts to strengthen research capacity through long-term institutional partnerships and training programs. He further discussed recent NIH policy changes affecting foreign collaborations, including the transition to a new linked award structure and requirements that investigators clearly justify the scientific need for conducting research internationally and demonstrate relevance to the health of Americans. CGH's priorities include sustaining high-impact research and training programs, evaluating the impact of investments, and strengthening partnerships that amplify the impact of NCI's investments.

Subcommittee members discussed strategies for communicating the value of global cancer research to the American public by emphasizing the reciprocal benefits of international scientific collaboration. Members encouraged continued monitoring of trends in international applications and awards as investigators adapt to evolving NIH policies and highlighted the importance of sustained institutional partnerships and research capacity building in low- and middle-income countries. Discussion also focused on expanding approaches for evaluating the impact of global cancer research investments beyond traditional grant metrics to include scientific discoveries, implementation of evidence into practice, policy influence, workforce development, institutional capacity, and improvements in cancer outcomes. Members expressed support for continued engagement by the Subcommittee and identified future topics, including international funding trends, research-impact assessment, capacity-building strategies, and communication of global research benefits to stakeholders.

Questions and Answers

In response to a question from Dr. Carpten, Dr. Gopal stated that he is unaware of policy changes that are specific to foreign contracts. Dr. Stegmaier underscored the importance of preserving international research collaborations, particularly for rare cancers and pediatric cancers, where international partnerships are often necessary to conduct clinical trials and generate sufficient data and biospecimens for research. Dr. Tabung responded that investments in international research collaborations, particularly for rare cancers, was discussed at the Subcommittee meeting. Dr. Letai noted the importance of highlighting relevant points on this topic in grant applications.

Motion. A motion to accept the report of the 29 June 2026 NCAB *ad hoc* Subcommittee on Global Cancer Research was approved unanimously.

NCAB *ad hoc* Subcommittee on Population Science, Epidemiology, and Disparities Report

Dr. Winkfield reported on the meeting of the NCAB *ad hoc* Subcommittee on Population Science, Epidemiology, and Disparities (PSED). The Subcommittee reviewed its charge to advise the NCAB and the NCI Director on strategic opportunities to strengthen NCI's contributions to PSED research. A major focus of the meeting was progress toward establishing a Working Group on Multi-level and Systems Approaches in Cancer Control, which was previously approved by the NCAB and is now being formed.

Dr. Emmons, who will co-chair the Working Group, provided an overview of multilevel and systems approaches to cancer control research. She discussed how complex cancer-related disparities are influenced by interacting factors at the individual, interpersonal, community, organizational, and policy levels and highlighted the importance of addressing these interconnected influences through coordinated interventions. She also outlined the Working Group's planned efforts to assess how NCI has previously supported multilevel and systems-based research, to identify gaps in the existing portfolio, and to evaluate challenges and outcomes associated with these approaches.

Dr. Gary Ellison, Acting Director of the Division of Cancer Control and Population Sciences (DCCPS), NCI, and Executive Secretary of the Subcommittee, reviewed progress in establishing the Working Group. The first Working Group meeting is planned for August 2026, and the work will be performed in phases, beginning with an assessment of NCI-funded projects and followed by a deeper evaluation of multisystem and multilevel interventions. Members emphasized that valuable work in this area may not be fully captured through traditional portfolio analyses and discussed the need for additional approaches to identify relevant activities. Discussions also highlighted the critical role of community engagement in this space.

Questions and Answers

In response to a question from Dr. Nduom, Dr. Winkfield affirmed that the group's discussions focused on the importance of engaging multidisciplinary partners in addressing population-level challenges. She underscored the importance of further exploration on workforce-related topics.

Dr. Tabung asked whether AI technologies could be used to facilitate further work in this area. Dr. Emmons noted that this topic has not yet been discussed in depth by the group. Dr. April Oh, Senior Advisor for Scientific Outreach and Engagement, DCCPS, NCI, noted that NCI is exploring the use of AI for rapid portfolio reviews but that results are still preliminary.

Motion. A motion to accept the report of the 29 June 2026 NCAB *ad hoc* Subcommittee on Population Science, Epidemiology, and Disparities was approved unanimously.

Future Agenda Items. Members suggested an update on peer-review processes, OMB regulations, and how NCI plans to address and adapt to changing OMB guidance. Members recommended a review of available training grants and administrative supplements and an update on how funding changes have impacted training initiatives. A discussion about new approach methodologies (NAMs) and how NCI is incorporating NAMs into priority research areas was requested. A discussion about reactivating the NCAB Subcommittee on Cancer Centers was recommended. NCAB members were asked to forward any additional suggestions for future agenda items to Dr. Srinivas.

VII. ADJOURNMENT OF OPEN SESSION—DR. JOHN D. CARPTEN

Dr. Carpten adjourned the open session. Only Board members and designated NCI staff remained for the closed session.

VIII. CLOSED SESSION—DR. JOHN D. CARPTEN

"This portion of the meeting was closed to the public in accordance with the provisions set forth in Sections 552b(c)(4), 552b(c)(6), Title 5 U.S. code, and 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. appendix 2)."

There was a review of grants and a discussion of personnel and proprietary issues. Members absented themselves from the meeting during discussions for which there was potential conflict of interest, real or apparent.

The Board was informed that a comprehensive listing of all grant applications to be included in the **en bloc** vote was in the Special Actions package. Those grant applications, as well as those announced during the closed session, could be considered for funding by the institute.

The NCAB **en bloc** motion to concur with IRG recommendations was unanimously approved. During the closed session, a total of ___ NCI applications were reviewed requesting direct cost support of $___ and applications requesting direct cost support of $___.

IX. ADJOURNMENT—DR. JOHN D. CARPTEN

Dr. Carpten thanked all the Board members, as well as the visitors and observers, for attending. There being no further business, the 171st meeting of the NCAB was adjourned at 3:00 p.m. on Tuesday, 30 June 2026.

09/04/2026
Date

John D. Carpten, Ph.D., Chair, NCAB

9/4/2026
Date

Shamala Srinivas
Shamala K. Srinivas, Ph.D., Executive Secretary