The National Academies of SCIENCES ENGINEERING MEDICINE

NATIONAL CANCER POLICY FORUM

Opportunities and Challenges for Using Digital Health Applications in Oncology

**Lawrence Shulman, MD, MACP, FASCO
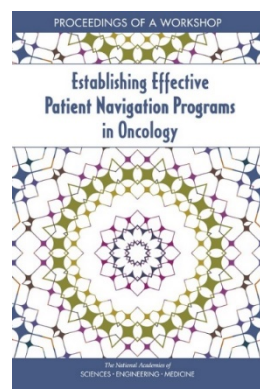Chair, Workshop Planning Committee
Fred Schneider, PhD
Chair, Forum on Cyber Resilience**

THE NATIONAL CANCER POLICY FORUM

This 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.
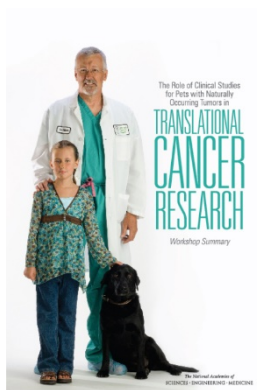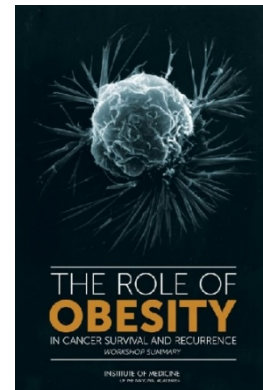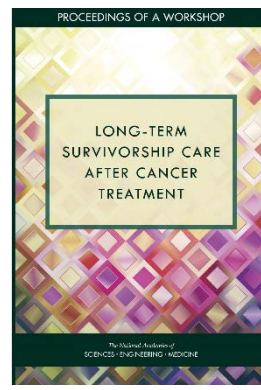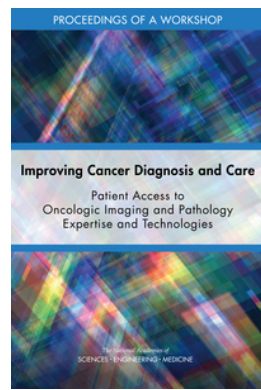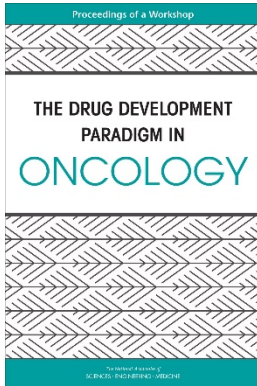
SPONSORS OF THE NATIONAL CANCER POLICY FORUM

Centers for Disease Control and Prevention
National Institutes of Health/National Cancer Institute
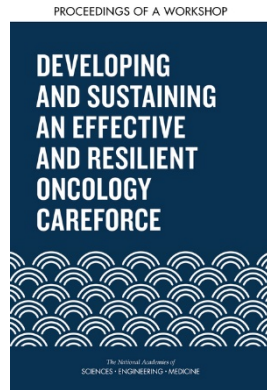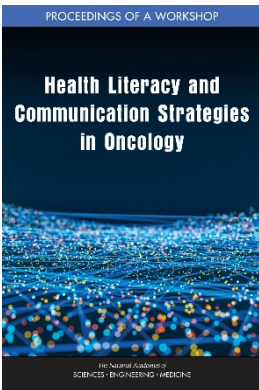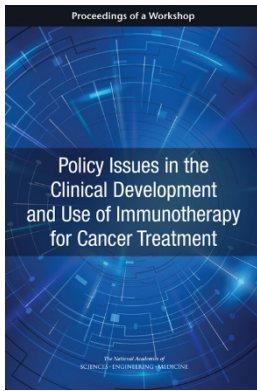American Association for Cancer Research
American Cancer Society
American College of Radiology
American Society of Clinical Oncology
Association of American Cancer Institutes
Association of Community Cancer Centers
Bristol-Myers Squibb
Cancer Support Community
CEO Roundtable on Cancer
Flatiron Health
Merck
National Comprehensive Cancer Network
National Patient Advocate Foundation
Novartis Oncology
Oncology Nursing Society
Pfizer Inc.
Society for Immunotherapy of Cancer

NATIONAL
CANCER POLICY
FORUM

THE FORUM ON CYBER RESILIENCE

- An **independent**, **trusted** venue in which experts from industry, academia, and government can work **collaboratively** to explore emerging **critical challenges** related to the **security, trustworthiness, and resilience** of the nation's computing, communications systems, and critical infrastructures.

- Blending expertise in technology, policy, national security, and the law, this Forum convenes **senior** representatives and serves as a **readily available** source of **insight** and **expertise**.

- **Committed** to **anticipating** and thinking about **future** trends.

- Forum activities **inform** stakeholders through convenings, dialogues, and published papers & workshop summaries, and through **engagements** with NASEM **consensus study committees**.

CYBER FORUM SPONSORS AND PARTNERS

Government Sponsors enable and support the Forum's work and activities

- NSF
- NIST
- NSA and SCORE (representing agencies in the IC)
- Corporate Funding?

Sponsors committed to cover the landscape

- Civilian cybersecurity, national security & defense, research

Partners within the National Academies Complex

- NAS, NAE, NAM, as part of NASEM
- CSTB: Nearly 35-year portfolio in all aspects of IT, societal implications, computing, telecom, and tech policy
- ICSB, NCPF, other disciplinary and functional units within the Academies complex—each with their own network of senior experts

Regular Touchpoints

- CRA, relevant Hill committees, DC think tanks, non-sponsor Agencies, . . .

PURPOSE AND ACTIVITIES

Expert Discussions about Cyber Challenges Ahead

- Consulting and Feedback to Government Initiatives
  - Forum membership
  - Forum sub-groups
  - Forum-identified ad hoc expert groups
- Identify Problems on the Horizon for the U.S.
- Initiate Discussions about Solutions

Share Insights with Government & Public

Support Cyber-Relevant Aspects of National Academies Studies and Activities

- Refinement of scope
- Staffing and memberships

Generate forward-thinking, strategic ideas and explorations
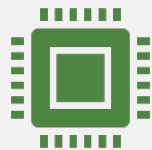
Flexibility on Multiple Axes

Near-term & long-term challenges

Ransomware – daily threat

Insider threat & supply chain

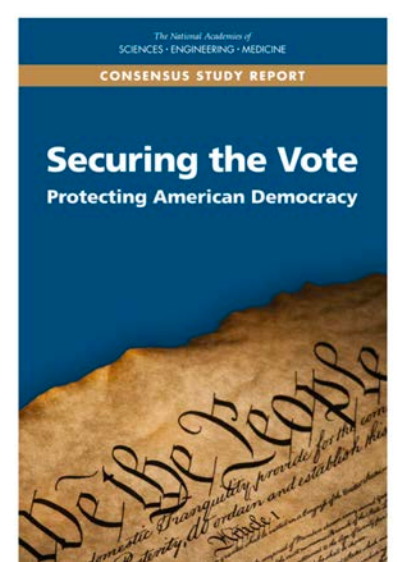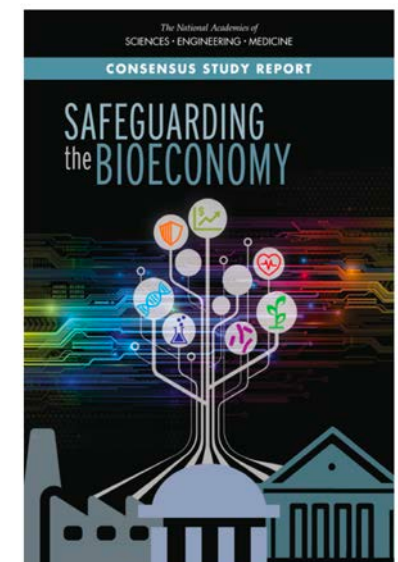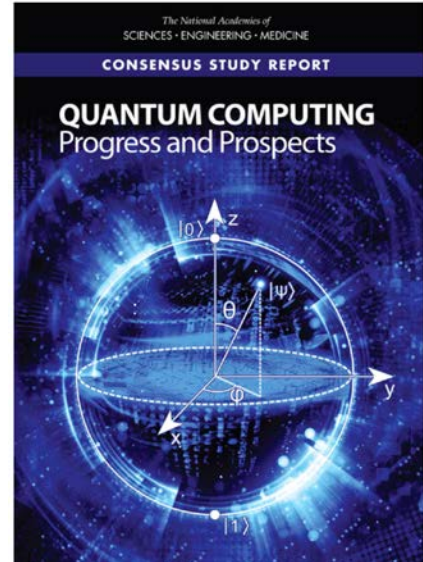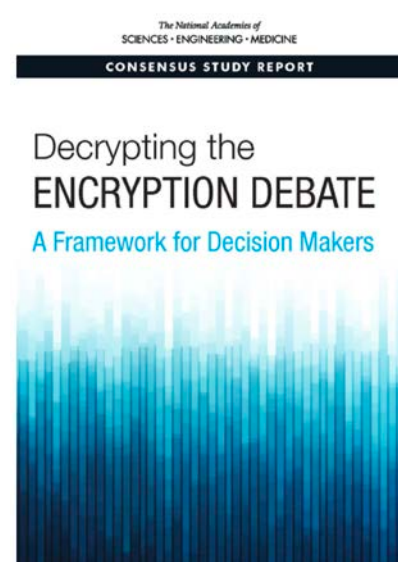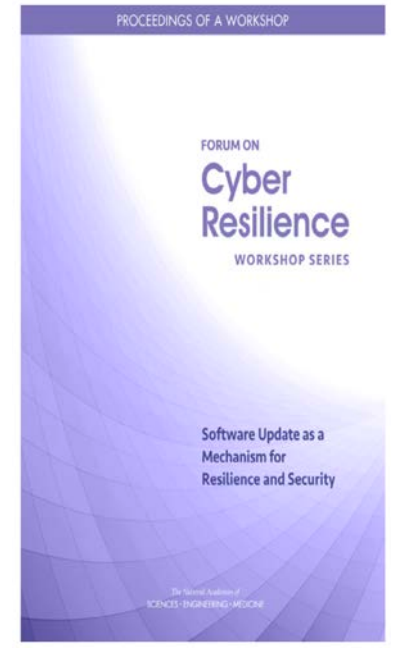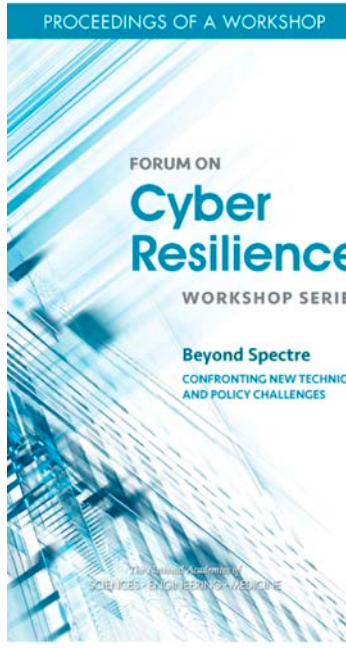**Research & Practice**

Taxonomies of harm from data breach

Operational cybersecurity at scale

Social/policy & Technology

Disinformation and weaponization of information platforms

Spectre – hardware to cloud (but also significant policy issues)

CYBER FORUM PUBLICATIONS

Proceedings of a Workshop
FORUM ON Cyber Resilience WORKSHOP SERIES
Cryptographic Agility and Interoperability
The National Academies of SCIENCES · ENGINEERING · MEDICINE

PROCEEDINGS OF A WORKSHOP
FORUM ON Cyber Resilience WORKSHOP SERIES
Recoverability as a First-Class Security Objective
The National Academies of SCIENCES · ENGINEERING · MEDICINE

PROCEEDINGS OF A WORKSHOP
FORUM ON Cyber Resilience WORKSHOP SERIES
Beyond Spectre
CONFRONTING NEW TECHNIC AND POLICY CHALLENGES
The National Academies of SCIENCES · ENGINEERING · MEDICINE

Proceedings of a Workshop
FORUM ON Cyber Resilience WORKSHOP SERIES
Data Breach Aftermath and Recovery for Individuals and Institutions
The National Academies of SCIENCES · ENGINEERING · MEDICINE

PROCEEDINGS OF A WORKSHOP
FORUM ON Cyber Resilience WORKSHOP SERIES
Software Update as a Mechanism for Resilience and Security
The National Academies of SCIENCES · ENGINEERING · MEDICINE

Associated Publications

The National Academies of SCIENCES · ENGINEERING · MEDICINE
CONSENSUS STUDY REPORT
Decrypting the ENCRYPTION DEBATE
A Framework for Decision Makers

The National Academies of SCIENCES · ENGINEERING · MEDICINE
CONSENSUS STUDY REPORT
QUANTUM COMPUTING Progress and Prospects

The National Academies of SCIENCES · ENGINEERING · MEDICINE
CONSENSUS STUDY REPORT
SAFEGUARDING the BIOECONOMY

The National Academies of SCIENCES · ENGINEERING · MEDICINE
CONSENSUS STUDY REPORT
Securing the Vote
Protecting American Democracy

CYBER FORUM AND NCPF: TODAY'S WORKSHOP

- Support NCPF as part of Cyber Forum's role to assist and provide expertise across NASEM with all things cyber

- Scan for indications of challenges that merit closer study

- Examples of technology/policy/domain interaction challenges

- Are there ways in which digital health challenges in oncology are distinct from general medical and health care challenges?

WORKSHOP GOALS

- Provide an overview of digital health in oncology

- Highlight exemplars of novel digital health applications, including an emphasis on patient-facing technologies

- Discuss regulatory, ethical, security, governance, and payment considerations

- Identify opportunities to improve data availability and use in EHRs and large databases

- Participant reactions and recommendations for the path forward, especially given the context of the COVID-19 pandemic

WORKSHOP AGENDA: JULY 13, 2020

SESSION 1
Overview of Digital Health Applications in Oncology

SESSION 2
Lightning Round Presentations: Exemplars of Novel Digital Health Applications

SESSION 3A
FDA Vision and Priorities for Regulating Digital Health Applications
Q&A with Amy Abernethy and Lawrence Shulman

SESSION 3B
Ethical, Security, Governance, and Payment Considerations

SESSION 4
Patient-Facing Digital Technologies

WORKSHOP AGENDA: JULY 14, 2020

SESSION 5

Opportunities to Improve Data Availability and Usage in EHRs and Large Databases

SESSION 6

Panel Discussion: Participant Reactions and Recommendations for the Path Forward

*We encourage you to ask questions of the speakers via the chatbox below the webcast.
Please include your name and affiliation with your questions.*

We will share questions with the moderators as time permits.

We also encourage you to tweet about the workshop using the hashtag:

#NatlCancerForum

WORKSHOP PLANNING COMMITTEE

CHAIR: LAWRENCE SHULMAN

KAREN BASEN-ENGQUIST   BRADLEY MALIN

CATHY BRADLEY   DEVEN MCGRAW

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LYNETTE MILLETT
SHARYL NASS

OPPORTUNITY TO SHAPE THE RESEARCH AGENDA FOR TELEHEALTH IN ONCOLOGY

Request for Information: Seeking Stakeholder Input on Scientific Gaps and Research Needs Related to Delivery of Cancer-related Care via Telehealth

The National Cancer Institute (NCI) is seeking information on scientific gaps and research needs related to the delivery of cancer-related care via telehealth.

This request for information (RFI) is part of a planning effort designed to identify promising opportunities and set priorities for research in this area.

Responses are due by July 30, 2020 and can be emailed to NCITelehealth_RFI@nih.gov.

https://grants.nih.gov/grants/guide/notice-files/NOT-CA-20-080.html