Financial Disclosure

- Stockholder Carevive

Learning Objectives

- Describe purpose of Cancer Moonshot
- List Blue Ribbon Panel Recommendations
- Discuss funding and implementation efforts
- Identify implications for CoC programs
White House Cancer Moonshot Task Force Memo 1.28.16

- **Accelerate progress in cancer** including its prevention, early detection, treatment, and cure
  - 10 years progress in 5 years
- Improve patient access and care
- Support greater access to new research, data, and computational capabilities
- Encourage development of cancer treatments
- Identify and address any unnecessary regulatory barriers and consider ways to expedite administrative reforms
- Ensure optimal investment of federal resources
- Identify opportunities to develop public-private partnerships

Timeline

- White House Memo 1/28/16
- Blue Ribbon Panel final report 9/7/16
- Task Force final report 10/17/16
- 21st Century Cures Bill approved 12/7/16
- Signed into law by President Obama 12/13/16
- NCI Funding Announcements began 12/16/16

White House Cancer Moonshot Task Force

Chaired by VP Biden
Executive Director Greg Simon

This task force consists of the heads of the 18 executive branch departments, agencies, and offices listed below:

- Department of Commerce
- Department of Defense
- Department of Energy
- Department of Health and Human Services
- Department of Veterans Affairs
- Office of Management and Budget
- Office of Science and Technology Policy
- Domestic Policy Council
- National Economic Council
- Food and Drug Administration
- National Cancer Institute
- National Institutes of Health
- National Science Foundation
- Others as the President may designate
Cancer Moonshot Task Force Recommendations 10/17/16

Strategic Goals:
1 – Catalyze New Scientific Breakthroughs
2 – Unleash the Power of Data
3 – Accelerate Bringing New Therapies to Patients
4 – Strengthen Prevention and Diagnosis
5 – Improve Patient Access and Care

Purpose, Structure, & Process for Obtaining Input

To identify major scientific opportunities that are poised to be accelerated by additional emphasis and funding

Summary of the Recommendations

A. Network for direct patient engagement
   • Enlist patients in federated network that includes patient tumor profiling data and “pre-registers” patients for clinical trials
B. Cancer immunotherapy network
   • Organize networks to discover and evaluate novel immune-based approaches for pediatric and adult cancers, and eventually develop vaccines
C. Therapeutic target identification to overcome drug resistance
   • Launch interdisciplinary studies to delineate mechanisms that lead cancer cells to become resistant to previously effective treatments
D. Creation of a national cancer data ecosystem
   • Create an ecosystem to collect, share, and interconnect datasets
### E. Fusion oncoproteins in pediatric cancer
- Improve understanding of the abnormal fusion proteins that result from chromosomal translocations and drive many pediatric cancers

### F. Symptom management research
- Support research to accelerate development of guidelines for management of patient-reported symptoms to improve quality of life and adherence to treatment regimens

### G. Precision prevention and early detection
- Implementation of evidence-based approaches. Conduct implementation science research to encourage broader adoption of HPV vaccination, colorectal cancer screening, and tobacco cessation

### Summary of the Recommendations

- National network of patient biological and clinical data
- Prevention
- Health disparities research
- Development of biomarkers, technology, and preclinical models
- Data sharing, analytics, and predictive computational modeling
- Collaboration, public-private partnerships

### Cross-Cutting Themes
HR 6: An Act To Accelerate The Discovery, Development, And Delivery Of 21st Century Cures, And For Other Purposes (21st Century Cures Act)

- 21st Century Cures Bill (including Beau Biden Cancer Moonshot) approved by House (392:26) and Senate (94:5) voted 12/7/16
- 996 pages/44 page summary
- It authorized $4.8 billion in funding for Cancer Moonshot, BRAIN Initiative and Precision Medicine Initiative, $1 billion for opioid crisis, $500 million to FDA

### Funding for NIH Innovative Research Initiatives under the Cures Act*

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* BRAIN denotes Brain Research through Advancing Innovative Neurotechnologies, and PMI, Precision Medicine Initiative.
SPL = NCI Scientific Program Leadership Committee
A = Direct patient engagement network
B = Cancer Immunotherapy Translational network (pediatric and adult teams)
C = Therapeutic target identification to overcome drug resistance
D = National Cancer Data Ecosystem for Sharing and Analysis
E = Fusion oncoproteins for childhood cancers
F = Symptom management research
G = Prevention/Early Detection: Gi High Risk Cancers, Gii Cancer prevention/Screening
H = Development of new enabling cancer technologies
I = Retrospective analysis of biospecimens from patients treated with standard of care
J = Generation of Human Tumor Atlases
Recent Funding Opportunities

- **Review of Common Terminology Criteria for Adverse Event reporting system**: aims to identify gaps in analyzing adverse event data and assess tolerability of anti-cancer agents using clinician and patient-reported outcomes (4-6 teams/$16.25 mil over 5 years).

- **Collaborative research network for fusion oncoproteins in childhood cancers**: proposed to support multi-disciplinary collaborative teams taking a comprehensive approach to understanding the biology of fusion oncoproteins and developing therapeutics (3 centers to be funded at $2-$2.5 mil/year total costs for 5 years).

- **Immono-Oncology Translational Network**: which consists of the Cancer Immunotherapy Consortium and Cellular Immunotherapy Data Registry and Biorepository, aims to accelerate translation of novel discoveries through collaboration ($11 mil in 2018 and $56 FY18-FY22).

Recent Funding Opportunities

- **Human Tumor Atlas Network**: is research collaboration dedicated to creating pilot-scale, high-priority human tumor 3D atlases that facilitate basic and clinical scientific discovery regarding important transitions during tumorigenesis ($3mil FY 2018 and 2019 and $20,875 mil FY 2020-2022).

- **Approaches to identify and care for individuals with inherited cancer syndromes**: is an initiative designed to develop and test strategies to increase case ascertainment of hereditary cancer through different approaches up to 4 applications ($4 mil/year for 5 years).

- **Pediatric Immunotherapy Discovery and Development Network**: is a collaborative research effort to identify new antigenic epitopes uniquely and abundantly expressed in pediatric cancers, develop novel immunotherapy agents and discover mechanisms of resistance ($20 mil total costs over 5 years; other funding for other projects at total costs of $4 mil/year x5).

Recent Funding Opportunities

- **Mechanisms of Cancer Drug Resistance and Sensitivity Network U24 Coordinating Center**: is designed to support multi-disciplinary research teams to elucidate the complex mechanistic underpinnings of drug resistance and to inform future clinical trials ($2.5 mil total costs over 5 years).

- **Improving Management of symptoms Across Cancer Treatments (IMPACT)**: is an initiative to create a research network that would develop scalable, transferable, and sustainable models for monitoring and addressing symptoms in routine practice ($6 mil/year x 5 years).

- **Accelerating Colorectal Cancer Screening and follow-up through Implementation science (ACCSIS)**: is a research project designed to test implementation strategies that substantially improve colorectal cancer screening and follow-up rates in populations where baseline rates remain low ($12 mil for research grants and $3 mil for coordinating center over 5 years).
Resources

- [www.cancer.gov/brc](http://www.cancer.gov/brc)
- [https://www.cancer.gov/research/key-initiatives/moonshot-cancer-initiative/funding](https://www.cancer.gov/research/key-initiatives/moonshot-cancer-initiative/funding)
- Sign up for email updates [https://www.cancer.gov/research/key-initiatives/moonshot-cancer-initiative](https://www.cancer.gov/research/key-initiatives/moonshot-cancer-initiative)
- Follow on twitter [https://www.cancer.gov/research/key-initiatives/moonshot-cancer-initiative#.W10-jg-QUtI.twitter](https://www.cancer.gov/research/key-initiatives/moonshot-cancer-initiative#.W10-jg-QUtI.twitter)
- Participate in funding initiatives, webinars, educational programs

Moonshot Implications for CoC Programs

Strategic Goals:
1. Catalyze New Scientific Breakthroughs
2. Unleash the Power of Data → EHR, QI
3. Accelerate Bringing New Therapies to Patients → clinical trials access and participation
4. Strengthen Prevention and Diagnosis → Outreach efforts, especially in high risk patients and families
5. Improve Patient Access and Care → all CoC efforts

Public + Private partnerships

Biden Foundation

Every day, every minute matters to patients and we must bring that sense of urgency to our cancer research and care systems.

Joe and Jill Biden

[https://biden.org/](https://biden.org/)