Implementation of the Cancer Moonshot Blue Ribbon Panel Recommendations

https://cancer.gov/BRP
Overall Goals of the Cancer Moonshot

• Accelerate progress in cancer, including prevention & screening
  • From cutting edge research to wider uptake of standard of care
• Encourage greater cooperation and collaboration
  • Within and between academia, government, and private sector
• Enhance data sharing

(Presidential Memo 2016)
Blue Ribbon Panel Goals

• Identify major scientific opportunities that are poised to be accelerated by additional emphasis and funding

• *Develop recommendations of opportunities that would be pursued through the Cancer Moonshot*
  
  • *Final recommendations at www.cancer.gov/brp*
Blue Ribbon Panel Recommendations

A. Network for direct patient engagement
B. Cancer immunotherapy translational science network
C. Therapeutic target identification to overcome drug resistance
D. Creation of a national cancer data ecosystem
E. Fusion oncoproteins in pediatric cancer
F. Symptom management research
G. Precision prevention and early detection
H. Retrospective analysis of biospecimens from patients treated with standard of care
I. Creation of human tumor atlas
J. Development of new enabling technologies

Cross Cutting Themes: Health disparities, prevention, technology development, data sharing, partnerships

www.cancer.gov/brp
Cancer Funding in 21st Century Cures Act

• The cancer research portion is named the Beau Biden Cancer Moonshot Initiative

• $1.8 billion over 7 years
  • $300 million for FY17

• “To support cancer research, such as the development of cancer vaccines, the development of more sensitive diagnostic tests for cancer, immunotherapy and the development of combination therapies, research that has the potential to transform the scientific field that has inherently higher risk, and that seeks to address major challenges associated with cancer.”
Funding for Beau Biden Cancer Moonshot

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Dollar in Millions</th>
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<tbody>
<tr>
<td>2017</td>
<td>$300</td>
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<tr>
<td>2018</td>
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<td>2019</td>
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<td>2020</td>
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<td>2021</td>
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<td>2022</td>
<td>$194</td>
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<td>2023</td>
<td>$216</td>
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NCI’s Approach for Accelerating Research Utilizing 21st Cures Funding

• Initiate a large amount of new research in FY 2017 through FY 2019.
  • Some grant awards will use *multi-year funding* authority, to cover outyear costs
  • Additional efforts to accelerate research will be undertaken through:
    • contracts with the cancer community managed through the Frederick National Laboratory for Cancer Research (FNLCR)
    • core resources at FNLCR (estimated to be <$10M)

• Enable new grant awards from the 21st Century Cures funds to be made in every year except for FY 2020 and FY 2021.
  • The inability to make new awards in those two years results from the sharp decrease in Moonshot funds that starts in FY 2020
FY17 Implementation of Blue Ribbon Panel Recommendations: Laying the Groundwork

- Fusion Oncoproteins in pediatric cancer
  - Gene Fusions in Pediatric Sarcomas (APRC)
- New Enabling Technologies
  - APTRC supplement program
  - Advancing new enabling technologies in cancer research
  - PDX development centers
- Cancer Immunotherapy
  - Biomarker development labs (CIMAC) for adult and pediatric;
  - Canine immunotherapy
  - Expand CIMAC to include pediatrics
  - Autoimmune sequelae – with NIAID
- Therapeutic Target Identification to Overcome Drug Resistance
- Prevention and Early Detection
  - HPV trial
  - Tobacco cessation supplements to Cancer Centers
- Symptom Management Research
  - Oral anticancer agents
Beyond FY17: FY18 and FY19

Implementation of Blue Ribbon Panel Recommendations
Process for Implementation of BRP Recommendations

SPL

Implementation Steering Committee

Implementation Coordinating Committee

Implementation Partnership Committee

Cancer Moonshot Implementation Teams Aligned with BRP Recommendations
Charge to Cancer Moonshot Implementation Teams

- Discuss approaches and develop initiatives for FY18 and FY19 that will achieve the goals of the Recommendation
  - Identify gaps and opportunities in current landscape of existing initiatives
  - Seek input from others, including the cancer research community, advocates, and associations
  - Work with the Partnership Committee to consider creating and/or leveraging partnerships (academia, industry, pharma, ...)
- Provide oversight and coordination of the Team’s funded initiatives (e.g., managing awards, organizing meetings, providing supplements)
Outreach by Implementation Teams

- Requests for Information (RFI)
- AACR meeting
- Discussions with Working Group Co-chairs or members
- Workshops
Process for Implementation of BRP Recommendations

- SPL
- Implementation Steering Committee
- Implementation Coordinating Committee
- Implementation Partnership Committee

Cancer Moonshot Implementation Teams (CMIT) Aligned with BRP Recommendations
Moonshot Implementation Timeline

Steering Committee

Coordinating Committee

Cancer Moonshot Implementation Teams (CMIT)

A. Network for Patient Engagement
B. Cancer Immunotherapy Translational Science Network
C. Therapeutics Target ID to Overcome Resistance
D. Cancer Data Ecosystem
E. Fusion Oncoproteins Childhood Cancers
F. Symptom Management Research
G. Prevention and Early Detection
  Gii. Prevention and Screening
H. Development of New Cancer Technologies
J. Generation of Human Tumor Atlases
## Concepts Under Development for FY18/FY19

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Concept</th>
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<tbody>
<tr>
<td>A Network for Direct Patient Engagement</td>
<td>Network for Direct Patient Engagement&lt;br&gt;Rare Tumor Patient Engagement Network</td>
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<tr>
<td>B Immunotherapy Networks</td>
<td>Pediatric Immunotherapy Translational Science Network (PI-TSN)&lt;br&gt;Immunotherapy Translational Science Network&lt;br&gt;- Cancer Immunoprevention Consortium&lt;br&gt;- Precision Immunogenomics Resource&lt;br&gt;- Adult Immunotherapy Network Hub</td>
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<tr>
<td>C Target ID to Overcome Drug Resistance</td>
<td>Cancer Therapy Resistance Networks</td>
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<td>D National Cancer Data Ecosystem</td>
<td>Encrypted patient identifiers</td>
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<tr>
<td>E Fusion Oncoproteins</td>
<td>Data Aggregator&lt;br&gt;Collaborative Research Network for Fusion Oncoproteins in Childhood Cancers</td>
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<td>F Symptom Management</td>
<td>Improving Management of symptoms Across Cancer Treatments (IMPACT)&lt;br&gt;Implementation and Analysis of Patient Reported Outcome Version of the Common Terminology Criteria for Adverse Event Reportings (PRO-CTAE) in Cancer Clinical Trials&lt;br&gt;Assessing Tolerability of Anti-Cancer Treatment</td>
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<td>G High Risk Cancers</td>
<td>Inherited Cancer Syndromes&lt;br&gt;Approaches to Identify and Care for Individuals with Inherited Cancer Syndromes&lt;br&gt;Traceback: A proposed framework to increase identification and genetic counseling of BRCA1/2 mutation carriers through family-based outreach&lt;br&gt;Prevention and Screening&lt;br&gt;Scaling up Colorectal Cancer Screening &amp; Follow-up to Enhance Service Systems</td>
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<td>H Retrospective Analysis of Biospecimens</td>
<td>FY17</td>
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<tr>
<td>I Generation of Human Tumor Atlas</td>
<td>Human Tumor Atlas Network&lt;br&gt;Translational 3D Platform for Understanding the Tumor Ecosystem</td>
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<td>J Development of New Technologies</td>
<td>FY17</td>
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Projects to be Accomplished Through FNL

Contracts
• Human tumor atlas pilot
• Molecular markers of response/resistance
• Cancer data ecosystem pilots
• HPV trial

Core Resources at Frederick
• Support for pediatric fusion oncoprotein research (e.g. cryoEM, protein purification)
• Tumor and tissues characterization repository
• PDX development
• Data ecosystem projects