

NCI Director's Update

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The President's Precision Medicine Initiative in Oncology

- A presidential initiative to improve cancer treatment through cancer genomics
- A foundational clinical trial (MATCH; Jim Doroshow)
- Preclinical models to advance predictive oncology: the right drugs for the right patient at the right time
- A large annotated database of cancer patients: for researchers, health care providers, and patients (GDC; Warren Kibbe)

Precision Medicine Initiative for Oncology: Projects for 2016 (1)

Improve pre-clinical models for evaluating targeted therapeutics and immunotherapy (input from NCI workshop)

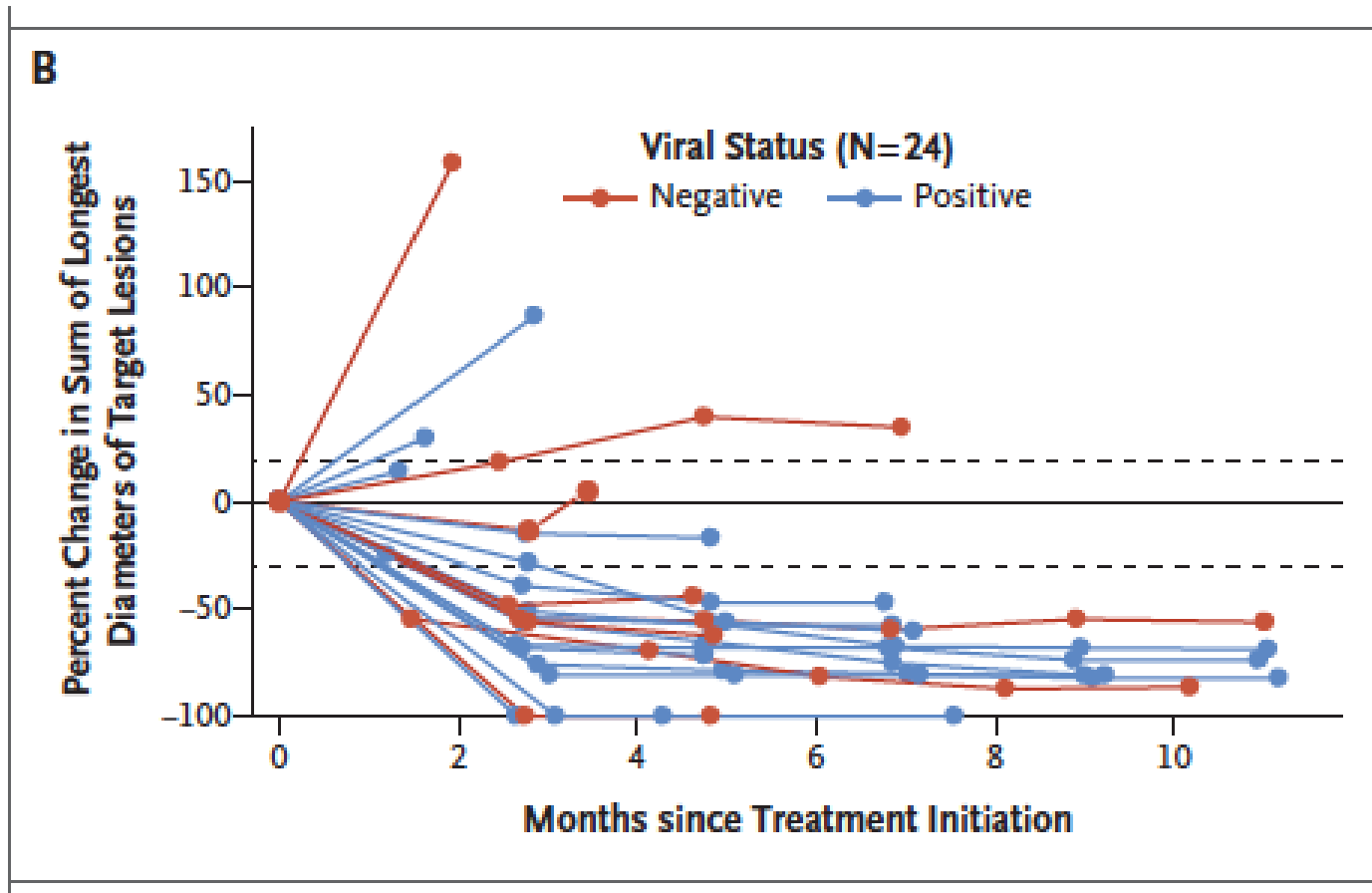
- ✓ "Administrative supplements (for CCSGs) to support research in canine immunotherapy via collaboration of NCI-designated Cancer Centers and Veterinary Medical Colleges"—issued April 12, 2016
- ✓ "Administrative supplements (for CCSGs, SPOREs, NCTN, and UM1 grantees) to support collaborative research efforts to enhance preclinical drug development and preclinical clinical trials utilizing patient derived xenograft (PDX) models"—issued May 2, 2016

Precision Medicine Initiative for Oncology: Projects for 2016 (2)

Expand support for development of immunotherapy trials (input from 2 NCI workshops):

- ✓ “Administrative supplements (for CCSG, P50, and U01/U10 grantees) to support biomarker development and correlative studies associated with clinical trials of immunotherapy”—issued April 15, 2016
- ✓ “Administrative supplements (for CCSG, P50, or P01 grantees) to support studies of how the microenvironment of pancreatic ductal adenocarcinoma affects immunotherapy”—issued April 26, 2016
- ✓ “Administrative supplements for P30 CCSGs to support improvement and optimization of T-cell therapies and cGMP manufacturing processes for production of autologous T-cell therapy products targeting solid tumor”—issued May 9, 2016

A PD1 immune checkpoint inhibitor Pembrolizumab is useful in advanced Merkel-cell carcinoma



Precision Medicine Initiative for Oncology: Projects for 2016 (3)

Employ clinical materials from drug resistant patients for molecular analysis, leading to rational studies of targeted combinations

- ✓ "Administrative supplements to CCSGs, SPORES, U10 Cooperative Agreements, and UM1 funded sites in the ETCTN to study mechanisms of cancer sensitivity and resistance to therapy utilizing samples and information from human clinical trials—issued May 31, 2016
- ✓ Create a repository of molecularly analyzed samples of resistant disease (pre- and post-treatment pairs) and expand the use of tumor profiling methods such as circulating tumor cells (CTCs) and fragments of tumor DNA in blood to understand and monitor disease progression—Stay Tuned

President Obama State of the Union Address January 12, 2016



- The goal of the Cancer Moonshot is to make a decade's worth of progress in five years in the prevention, diagnosis, and treatment of cancer
- "I'm putting Joe in charge of Mission Control"

President Obama

An Opportunity for Focused Research to Accelerate Progress

- Take advantage of current advances in the understanding of cancer and recent technological innovation
- Apply the knowledge and innovation to focus on specific projects that can have a substantial impact on understanding and/or improvement for patients
- NB: NCI will continue to support a great deal of other meritorious research



The NEW ENGLAND JOURNAL of MEDICINE
Perspective

Aiming High — Changing the Trajectory for Cancer

Douglas R. Lowy, M.D., and Francis S. Collins, M.D., Ph.D.

- “Vice President Biden ... wants to take steps to ensure that all Americans — even those who have limited resources or live far from major cancer centers — have access to leading-edge cancer treatment, prevention, and screening approaches.”

April 4, 2016 (epub ahead of print)



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