



Cancer Moonshot Immuno-Oncology Translational Network

**Annual Meeting of the Innovative Molecular Analysis Technologies Program
December 8, 2017**

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Presenter Disclosure Information

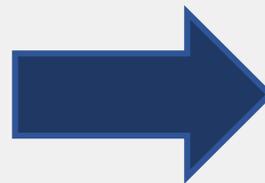
No Relationships to Disclose

CANCER MOONSHOT

In his 2016 State of the Union Address, President Obama called on Vice President Biden to lead a new **“Cancer Moonshot”** program to dramatically accelerate efforts to prevent, diagnose, and treat cancer - to achieve 10 years of progress in 5 years.



Federal Task Force





Blue Ribbon Panel Recommendations

- A. Establish a network for **direct patient involvement**
- B. Create a translational science network devoted to **immunotherapy**
- C. Develop ways to overcome **resistance to therapy**
- D. Build a national cancer **data ecosystem**
- E. Intensify research on the major drivers of **childhood cancer**
- F. Minimize cancer treatment's debilitating **side effects**
- G. Expand use of proven **prevention and early detection** strategies
- H. Mine past patient data to predict future **patient outcomes**
- I. Develop a 3D **cancer atlas**
- J. Develop new cancer **technologies**

Blue Ribbon Panel - Recommendation B

The implementation plan for Recommendation B outlines an integrated network, **Immuno-Oncology Translational Network (IOTN)**, focused on expanding our understanding of basic mechanisms regulating the interactions between the immune system and cancers of all types and at different stages of progression to enable the development of:

- novel immunotherapies, and
- preventive vaccines.

To increase the number of patients that benefit from immunotherapy.

Cancer Immunotherapy – Funding Opportunities

Cancer MoonshotSM Funding Opportunities Resources

- Immuno-Oncology Translational Network (IOTN)
- Pediatric Immunotherapy Discovery and Development Network (PI-DDN)
- Mechanisms of Cancer Drug Resistance and Sensitivity Network Coordinating Center
- Collaborative Research Network for Fusion Oncoproteins in Childhood Cancers
- Common Terminology Criteria for Adverse Events (CTCAE) and Patient Reported Outcomes-CTCAE (PRO-CTCAE)
- Improving Management of Symptoms Across Cancer Treatments (IMPACT)
- Approaches to Identify and Care for Individuals with Inherited Cancer Syndromes
- Accelerating Colorectal Cancer Screening and Follow-Up Through Implementation Science (ACCSIS)
- Human Tumor Atlas Network (HTAN)

<https://www.cancer.gov/research/key-initiatives/moonshot-cancer-initiative/funding/upcoming>

Cancer Immunotherapy – IOTN Funding Opportunities

RFA-CA-17-045: Cancer Immunotherapy Research Projects (U01)

Nancy Boudreau, Ph.D.

Division of Cancer Biology, NCI

Minkyung Song, Ph.D.

Division of Cancer Treatment and Diagnosis, NCI

RFA-CA-17-046: Cancer Immunoprevention Research Projects (U01)

Robert Shoemaker, Ph.D.

Division of Cancer Prevention, NCI

RFA-CA-17-047: Data Management and Resource-Sharing Center (DMRC) (U24)

Kevin Howcroft, Ph.D.

Division of Cancer Biology, NCI

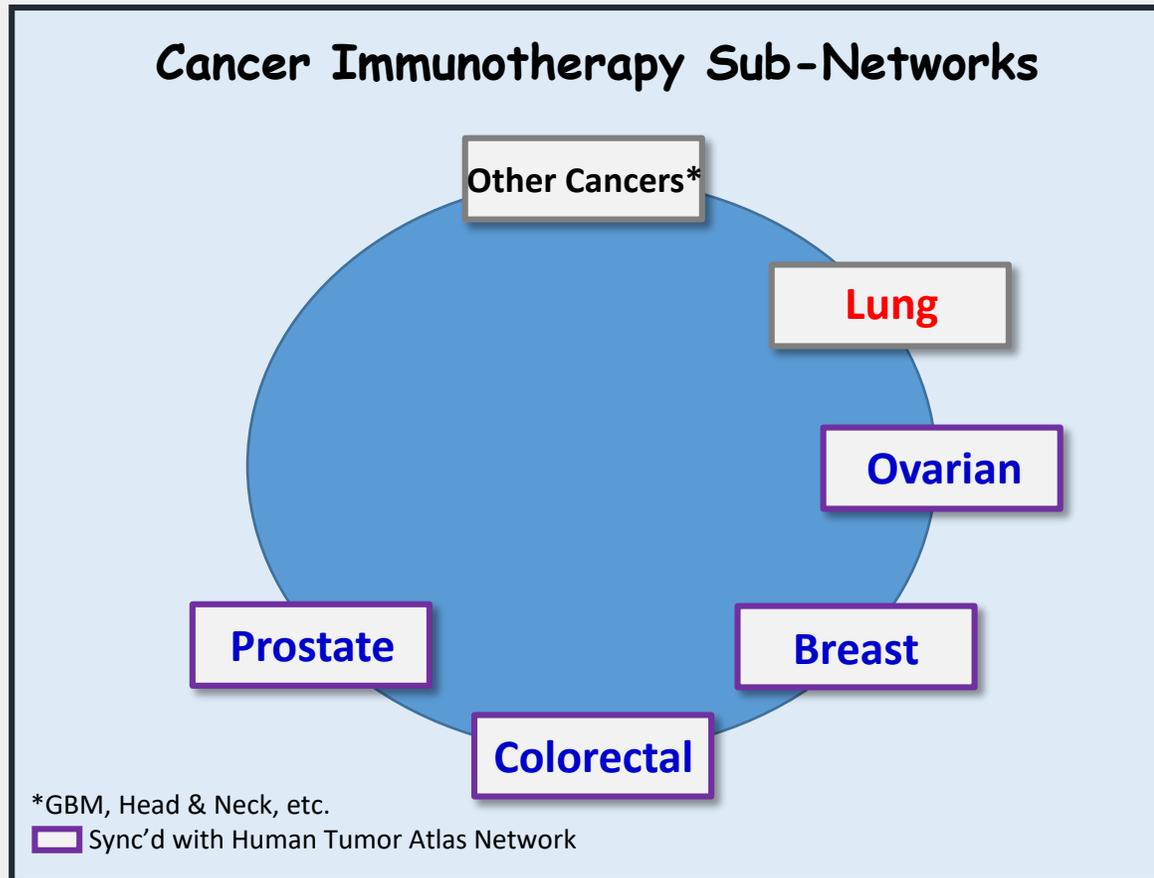
RFA-CA-17-048: Cellular Immunotherapy Data Resource (CIDR) (U24)

Bill Merritt, Ph.D.

Division of Cancer Treatment and Diagnosis, NCI

<https://www.cancer.gov/research/key-initiatives/moonshot-cancer-initiative/funding#current>

Cancer Immunotherapy Research Projects (U01)



Goal: Establish a consortium of collaborating research teams to develop improved tumor-specific immunotherapy approaches.

Objectives:

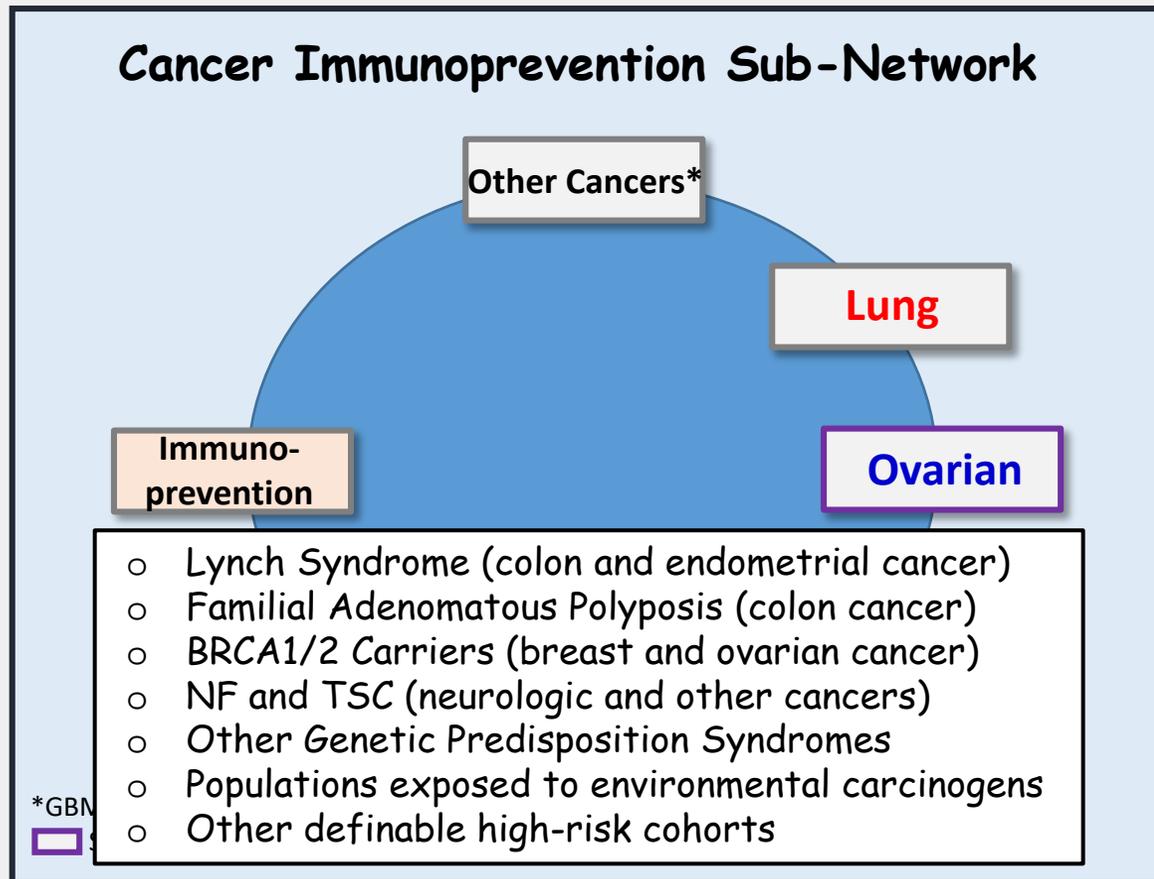
- Define immune interactions in TMEs including intrinsic and extrinsic resistance pathways.
- Identify novel immune checkpoints, tumor-specific T cell receptors and their cognate tumor targets (neoantigens).
- Optimize immunotherapies and combination therapies across organ sites; reduce off-target or immune-related adverse events.

Cancer Immunotherapy Research Projects (U01)

Budget, Mechanism, and Eligibility

- Application budgets are limited to \$500,000 Direct Costs/per year.
- The NCI intends to fund 8-9 awards.
- A project period of 5 years must be requested.
- Applications will utilize a U01 Research Project - Cooperative Agreement.

Cancer Immunoprevention Research Projects (U01)



Goal: Identify actionable targets arising in pre-cancerous lesions; develop and validate early intervention vaccines based on these targets.

Objectives:

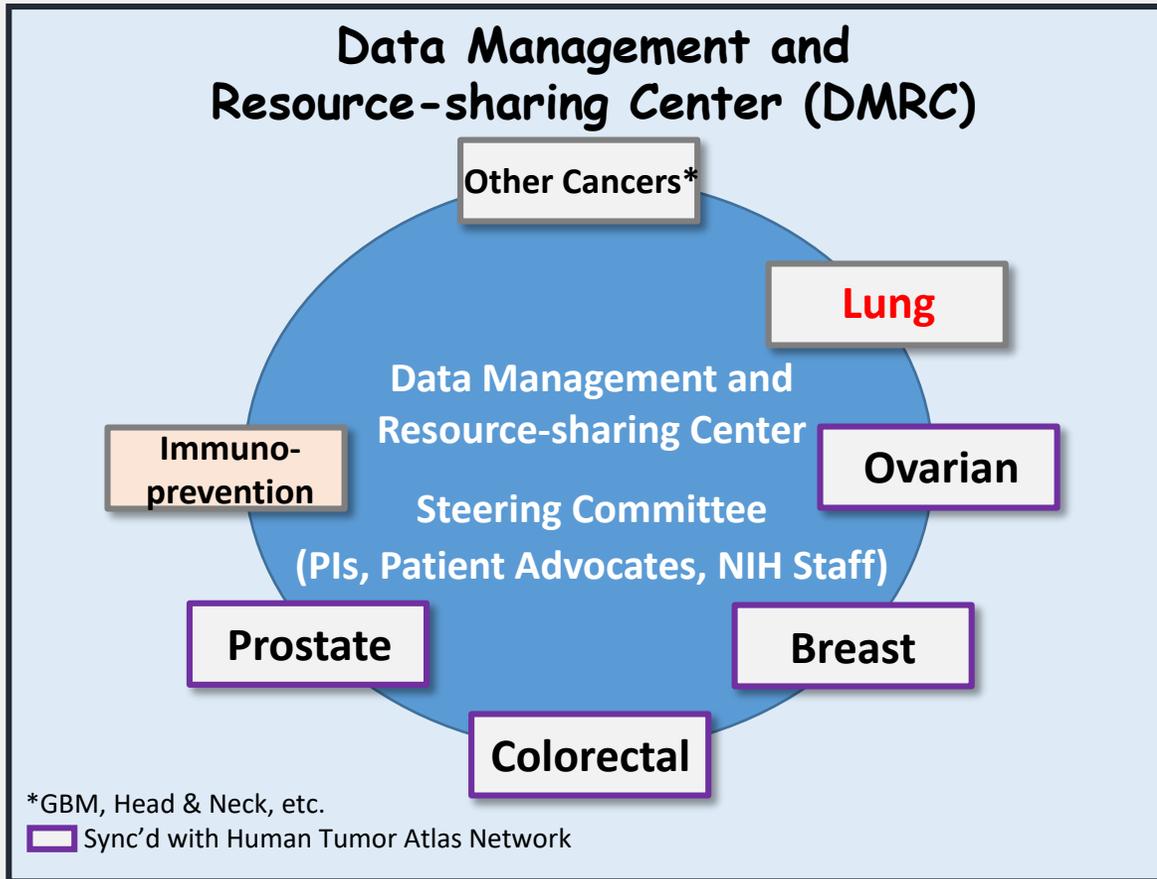
- Focus on cancers that occur in specific organ sites in high-risk cohorts.
- Identify immune targets as a function of time during carcinogenesis.
- Validate the identified targets for immunoprevention.
- Devise cancer preventive interventions, using preclinical models, that demonstrate efficacy.

Cancer Immunoprevention Research Projects (U01)

Budget, Mechanism, and Eligibility

- Application budgets are limited to \$500,000 Direct Costs/per year.
- The NCI intends to fund 3-4 awards.
- A project period of 5 years must be requested.
- Applications will utilize a U01 Research Project - Cooperative Agreement.

Data Management and Resource-Sharing Center (U24)



Goal:

The DMRC will provide overall support for the IOTN, promote collaboration across IOTN components, and enhance the integration of IOTN research activities with other Cancer Moonshot programs.

Objectives:

DMRC applicants must address three activities:

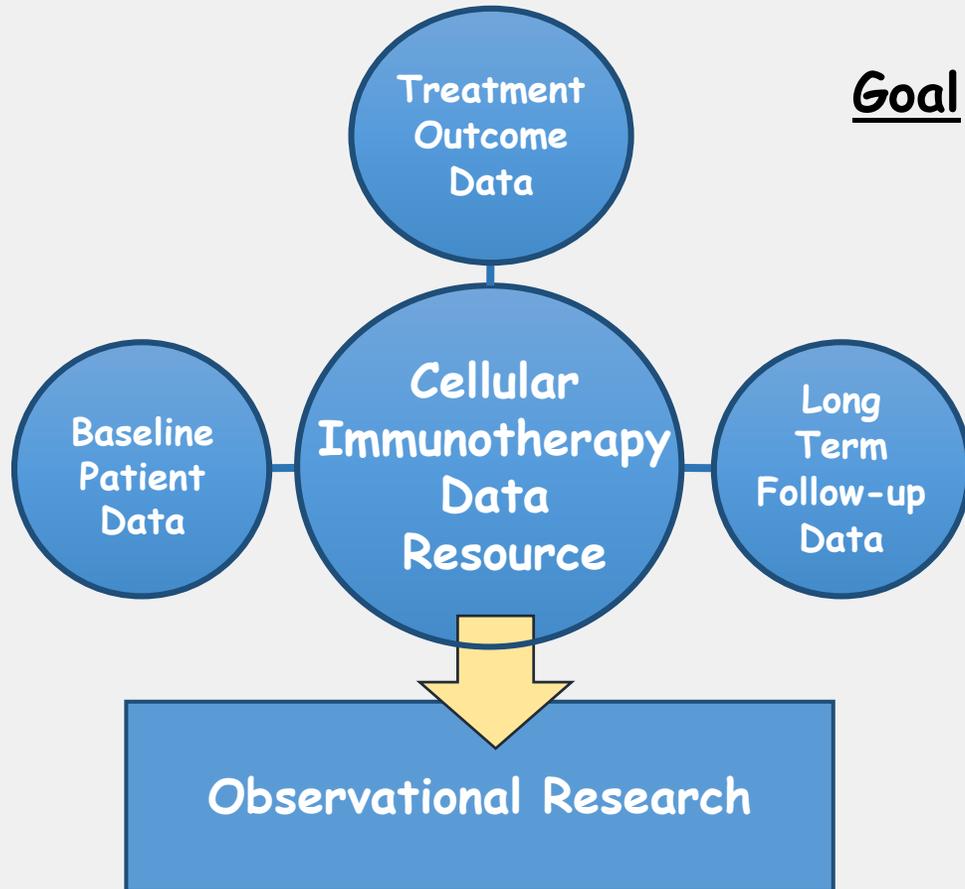
- Network Administration and Coordination
- Resource-sharing and Scientific Outreach; website and virtual biorepository activities.
- Data Integration and Sharing for centralized bioinformatic and computational support

Data Management and Resource-Sharing Center (U24)

Budget, Mechanism, and Eligibility

- Application budgets are limited to \$750,000 Direct Costs/per year.
- The NCI intends to fund one award.
- A project period of 5 years must be requested.
- Applications will utilize a U24 Research Project - Cooperative Agreement.

Cellular Immunotherapy Data Resource (U24)



Goal: Accelerate optimization of cell-based immunotherapies; High impact for cancers with low mutation burden.

Objectives:

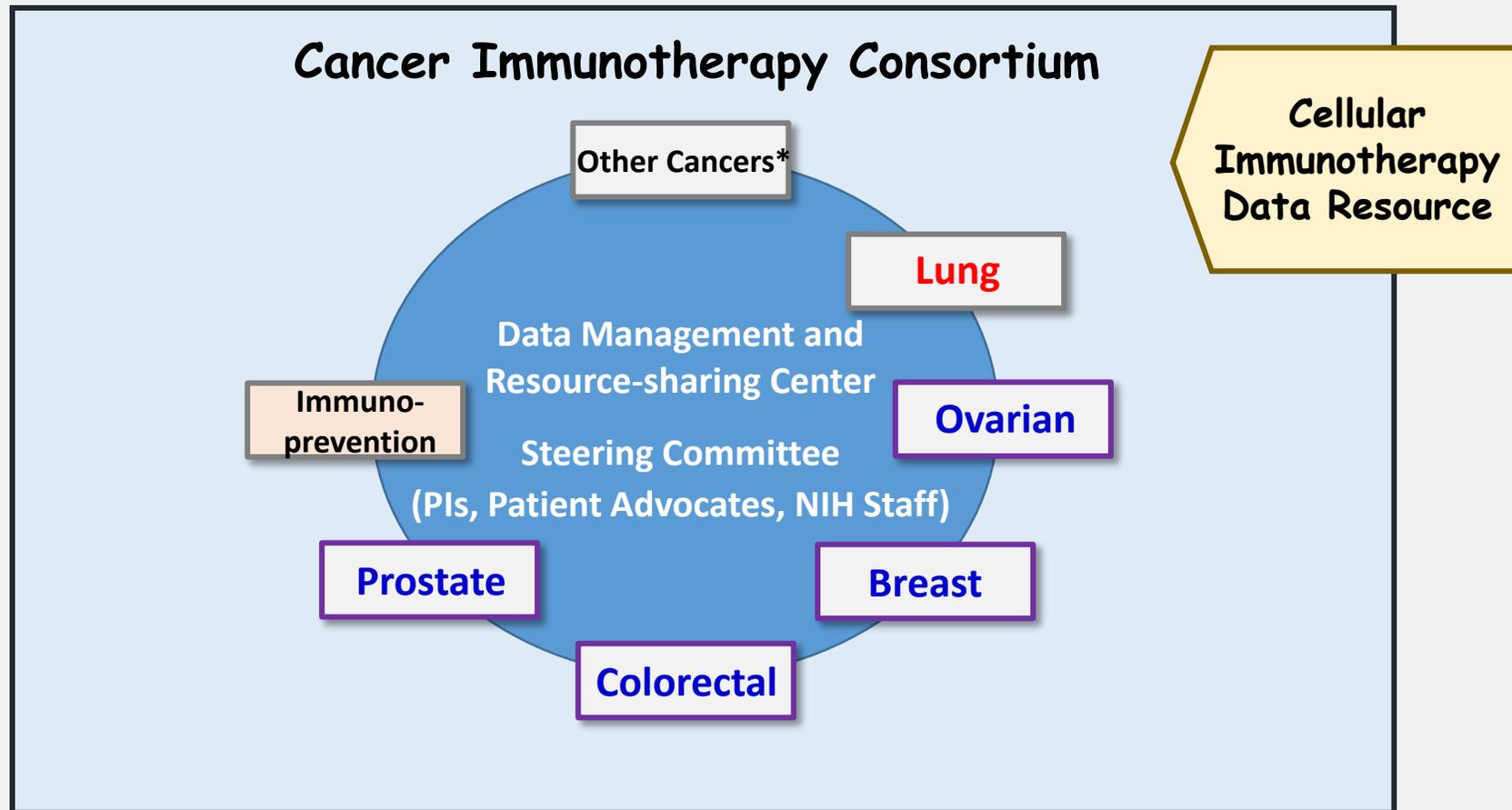
- Establish a Data Registry to collect baseline patient data, treatment outcomes, and long term follow-up and ensure data quality
- Facilitate analysis of the observational data for the design of pre-clinical research in the Cancer Immunotherapy Consortium (CIC) or to inform design of future trials
- Support all cellular immunotherapy trials (NCI-sponsored, investigator-initiated, or pharmaceutical company-sponsored) or treatment with an FDA-approved agent

Cellular Immunotherapy Data Resource (U24)

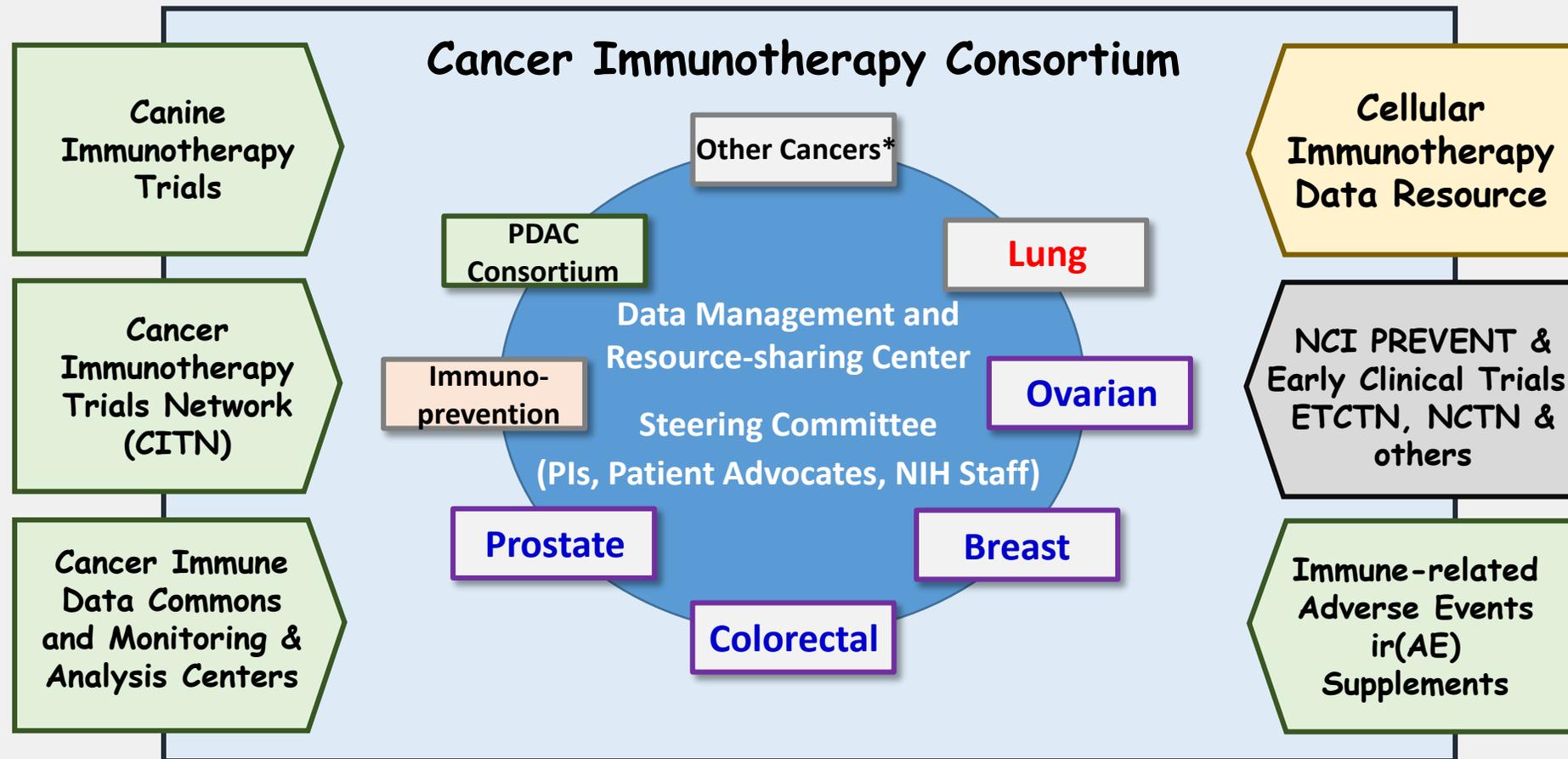
Budget, Mechanism, and Eligibility

- Application budgets are limited to \$1,200,000 Direct Costs/per year.
- The NCI intends to fund one award.
- A project period of 5 years must be requested.
- Applications will utilize a U24 Research Project - Cooperative Agreement.

Immuno-Oncology Translational Network (IOTN)



Immuno-Oncology Translational Network (IOTN)



Common Elements - Key Dates

- Letter of Intent Due Date December 16, 2017
- Application Due Date January 16, 2018
- Scientific Merit Review April/March 2018
- Advisory Council Review August 2018
- Earliest Start Date September 2018

IOTN Pre-application Webinar
November 14th, 2017
NOT-CA-18-005

Immuno-Oncology Translational Network (IOTN)

Questions?

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