CANCER MOONSHOT℠

Improving Management of symPtoms Across Cancer Treatments (IMPACT)

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Scope of the Problem

Cancer-related symptom burden is substantial

Poorly controlled symptoms contribute to:

- Nonadherence, treatment delays and discontinuation

- Emergency room visits and unscheduled hospitalizations

- Impaired physical and social functioning

- Lower rates of return to work and impaired ability to work

Major Barriers to Effective Symptom Control

Symptoms are not systematically assessed and reported

- Patient-reported outcomes (PROs) not used in many practice settings
- Even when collected, PRO data may not facilitate symptom control

Symptoms are not adequately managed

- Limited awareness of existing clinical practice guidelines
- Difficulty accessing resources for symptom management

Lack of systematic efforts to translate research into practice

- RCTs show benefits of integrated symptom assessment and reporting
- Implementation science approach yet to be applied

Blue Ribbon Panel Recommendation

Strategic research investment, based on implementation science, to accelerate clinical adoption of integrated systems to:

- Gather and monitor patient-reported symptoms
- Provide decision support and care using evidence-based symptom management guidelines

Goals of the RFA

Create a research network to:

- Develop scalable, transferable, and sustainable models for monitoring and addressing symptoms in routine practice

- Rigorously examine impact on symptom control, functioning, treatment delivery, and healthcare utilization

- Using network-wide data, evaluate effects across:

  Symptoms

  Cancer continuum

  Minority and medically underserved populations

- Produce findings and materials for wider implementation
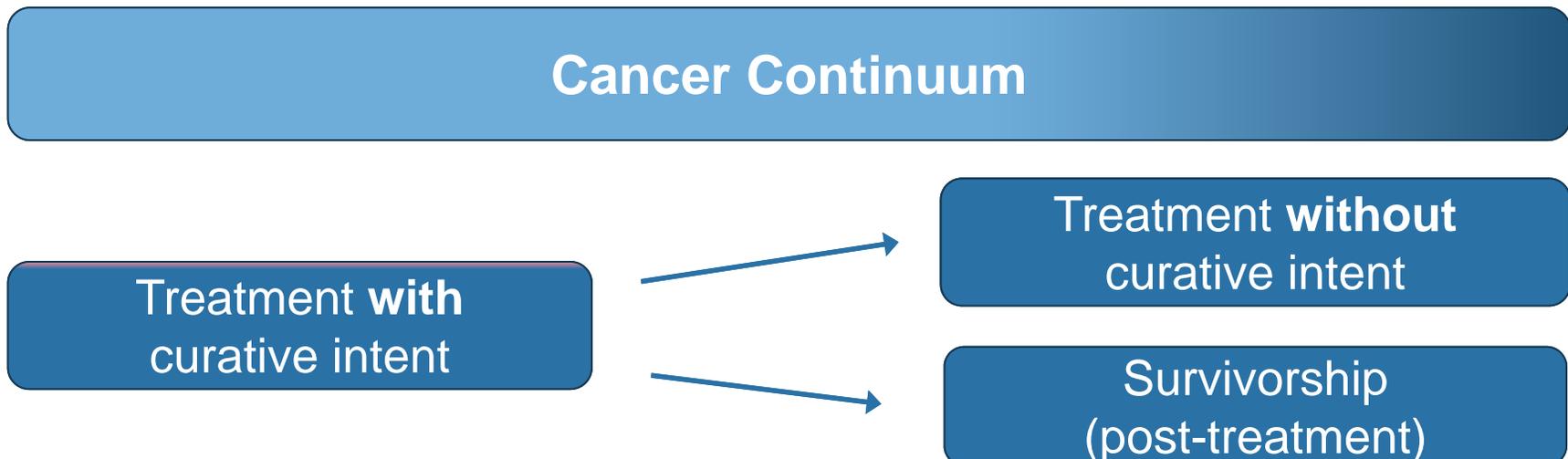
Overview of the Research Network
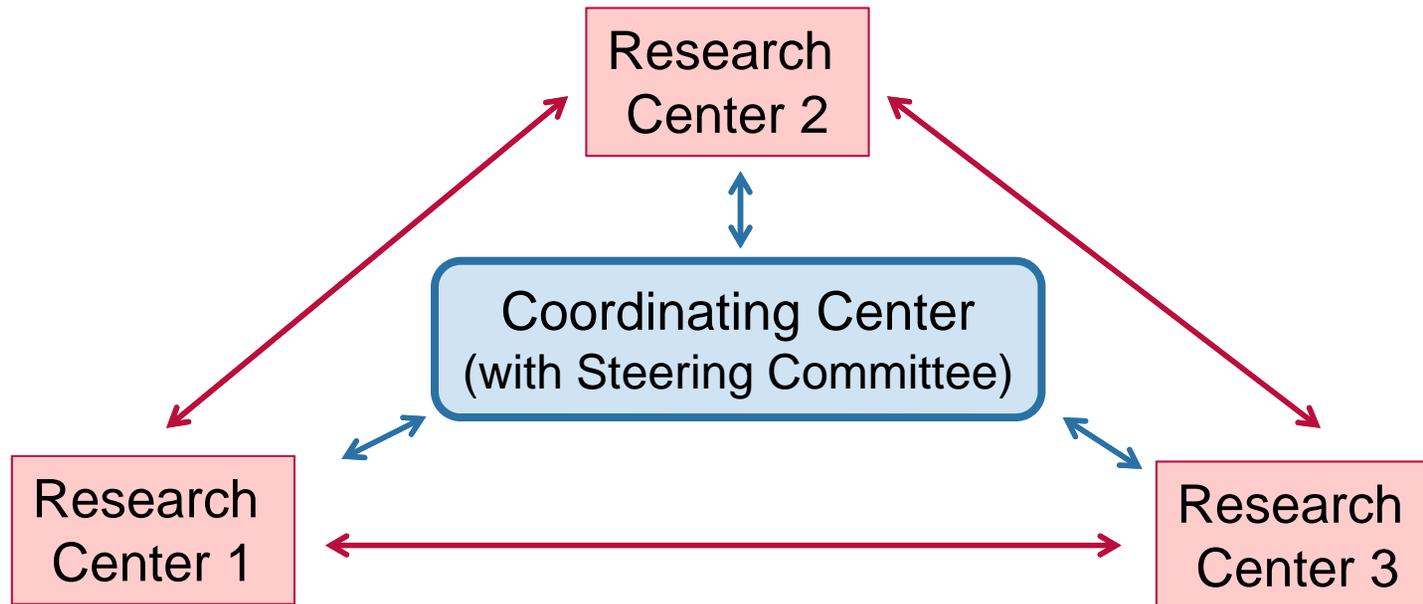
- Multiple research centers expands breadth of models tested
- Coordination center necessary for data integration and synchronizing activities across research centers
- NCI to help navigate complexity of effort and facilitate coordination

Research Centers

Develop and Evaluate Integrated Symptom Management System

- Refine electronic system for symptom monitoring and decision support
- Deploy in networks using implementation science principles
- Demonstrate in under-resourced settings, diverse patient populations
- Address symptoms at different points on cancer continuum
- Measure adoption and contributors to success
- Evaluate impact with randomized designs

Cancer Continuum

Treatment **with** curative intent

Treatment **without** curative intent

Survivorship (post-treatment)

Coordinating Center

 Adds Value to Individual Research Center Activities

Early Stages of Project

- Promote information sharing about successes and challenges
- Facilitate data integration and monitoring of key metrics

Later Stages of Project

- Perform pooled analyses examining cross-cutting issues
- Create public datasets for use by outside investigators

NIH Portfolio Analysis (2011-2016)

Existing NIH Grants

2 Symptom Management Research Centers

- P30NR016587: Symptom self-management in Latinos (no cancer focus)

- P20NR016599: Symptom self-management center designed to advance scientific capacity for nursing community (no cancer focus)

7 R01s on Symptom Management Intervention Research

- All focused on demonstrating efficacy of specific intervention strategies

- None focused on scalability, sustainability, or transferability to clinical practice

Proposed Budget

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Res Center 1	$1.12*M*	$1.12*M*	$1.12*M*	$1.12*M*	$1.12*M*	$5.6*M*
Res Center 2	$1.12*M*	$1.12*M*	$1.12*M*	$1.12*M*	$1.12*M*	$5.6*M*
Res Center 3	$1.12*M*	$1.12*M*	$1.12*M*	$1.12*M*	$1.12*M*	$5.6*M*
Coord Center	$375*K*	$375*K*	$375*K*	$375*K*	$375*K*	$1.875*M*
Direct Costs	$3.735*M*	$3.735*M*	$3.735*M*	$3.735*M*	$3.735*M*	$18.675*M*
F&A Costs	$2.265*M*	$2.265*M*	$2.265*M*	$2.265*M*	$2.265*M*	$11.325*M*
Total Costs	$6.0*M*	$6.0*M*	$6.0*M*	$6.0*M*	$6.0*M*	$30.0*M*

Evaluation Criteria for Success of the RFA

Short-Term: Formation of coordinated research network

- Standardization and harmonization of key methodology
- Integration of data on processes and outcomes of care

Intermediate: Timely completion of major milestones

- Implementation of integrated systems across practices
- Achievement of targets for data collection

Long-Term: Dissemination of high-impact findings

- Publications showing effects of implementation across diverse settings
- Creation and distribution of "how to" methods and materials
- Compelling "real world" evidence to inform national policies and standards

Clarifications in Response to BSA Subcommittee Feedback

Functions of Coordinating Center

- Go beyond usual functions to serve as data integration hub
- Perform real-time data monitoring and integration through regular feeds from source applications

Standardization Within and Across Research Centers

- Within centers: require well-integrated EHR in all practices, evidence of robust clinical informatics infrastructure, use of same integrated system
- Across centers: steering committee charged with identifying opportunities to increase standardization in outcome measurement

Addressing health disparities

- Review criteria to evaluate extent each research center application demonstrates potential to address disparities

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