Cancer Epidemiology Cohorts: Building the next generation of research cohorts

Tram Kim Lam
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Epidemiology and Genomics Research Program • Division of Cancer Control and Population Sciences
PURPOSE of PROPOSED CONCEPT

• Seeks to support initiating and building the next generation of population-based cancer epidemiology cohorts that address critical scientific and resource gaps:
  • Emerging/unique exposures in relation to cancer risk and outcomes
  • Understudied populations (e.g., minority populations including racial/ethnic groups, rural, and persistent poverty areas)
WHY NEW COHORTS ARE NEEDED

• Changing demographic and environmental landscape
  • Evolving cancer-related burden
  • Implications on cancer control and prevention

• Next generation cancer epidemiology cohorts
  • Meet critically needed resource gaps
  • Enable investigations of new scientific questions
  • Foster scientific innovation and adaptation of new technologies
A CHANGING ENVIRONMENTAL LANDSCAPE

Study: Marijuana Use Among College-Age Adults Hit Historic High In 2020, Alcohol Use Declines
A MORE DIVERSE UNITED STATES

Changing demographic landscape of the US:
- Becoming more diverse
  - More multiracial
  - Fast growing Asian and Hispanic populations

Figure 5.
Percentage Distribution of Race and Hispanic Origin by Age Group:
2010 and 2020

Source: U.S. Census Bureau, 2010 Census Redistricting Data (Public Law 94-171) Summary File; 2020 Census Redistricting Data (Public Law 94-171) Summary File.
UNIQUE EXPOSURES/FACTORS: ETIOLOGY AND SURVIVORSHIP

Will the cancer come back?
Will I be able to go back to work?
Will I be able to take care of my family?
Will I be able to pay my medical bills?

ASSIMILATION

“you should be like me.”
fit in
belong
be your self among others
“our differences make us better.”
balance cultures

ACCULTURATION

loss of customs, culture & self-identify
become like the majority

SOCIO-ECONOMIC DATA

A novel blood-based assay detected cancer in 95% of asymptomatic individuals who were later diagnosed with cancer.

LACK OF SLEEP AND CANCER
Unraveling the Current Research

How Culture & Society Influence Your Diet
METHODOLOGICAL APPROACH: RATIONALE

• Methodological work to assess achievement of identified scientific and resource gaps
• Critical for success, sustainability, and prudent investment
• Permits investigators to ask critical feasibility questions:
  • Approaches to engage, recruit, and retain
  • Optimal and novel methods for data collection and assessment
    • Diverse exposures and biospecimens
    • Linkage to existing databases to obtain other information/data (SES-factors, neighborhood factors, geographic/environmental, healthcare delivery)
  • Short-term research questions
• Feasibility studies solidify the foundation for forward looking research
FOA: BUILDING THE NEXT GENERATION CANCER EPI COHORTS

- Must address key scientific and resource gaps
  - Review existing cohorts
  - Justify sample size, study population, and data collection
- Key features: Methodological work and community engagement
- Applicants responsive may include, though not limited to:
  - Testing of recruitment and retention strategies, relevant for hard-to-reach populations
  - Testing novel methods/approaches for data collection and/or assessment
  - Assessing intermediate markers of carcinogenesis, behavioral outcomes, or healthcare utilization

Established cohorts are not appropriate for this FOA
MECHANISM AND BUDGET

• PAR: U01

• Two receipt dates per year for three years

• Applicants could propose up to 5 years of funding

• Budget: No specific cap
  • Review process to assess scope and appropriateness of budgets
    • Awaiting Receipt of Application for above ≥$500k direct costs per year
    • Required pre-submission meeting for budgets above ≥$700k direct costs per year

• A program announcement with review (PAR) by a special emphasis panel
PORTFOLIO ANALYSIS

• 31 cancer epidemiology cohorts in the current DCCPS portfolio
  • 1.1 million participants
  • More women (74%) than men
  • Racial/ethnic distribution: 66% Whites, 16% Blacks, 7% Asians, and 6% Hispanics
    • Multi-ethnic Cohort (contributes >75% of Hispanics and Asian Americans in current portfolio)

• Aging of many long-standing etiology cohorts (median age)
  • Multi-ethnic Cohort (81 yo)
  • Nurses’ Health Study (83 yo)
  • Health Professional Follow-up Study (80 yo)
FORWARD THINKING RESEARCH

Extramural funding mechanisms focused on cohorts

Next generation Cohorts PAR
- Innovate
- Address resource and scientific gaps

Cohort Research Studies PAR
- Leverage resource
- Address scientific gaps

Complement other NIH/NCI-led cohorts

- Intramural
  - All of Us
  - Connect
• Clarify how NCI would evaluate progress
  • *FOA language will clarify expectations to assess progress*
  • Ability to recruit and completion of enrollment within 5 years
  • Completion of proposed specific aims

• Would the concept accommodate incorporation of innovative approaches?
  • *Leverage innovative approaches for assessment, engagement, recruitment, follow-up, data sharing, etc.*
  • *Test and validate methods for exposure and outcome assessment*
    • Linkages to databases
      • Virtual Pooled Registry Cancer Linkage System
  • *Assess short-term effects*