



Cancer Epidemiology Cohorts: Building the next generation of research cohorts

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Concept Proposal, BSA

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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

Abraham Haim · Boris A. Portnov

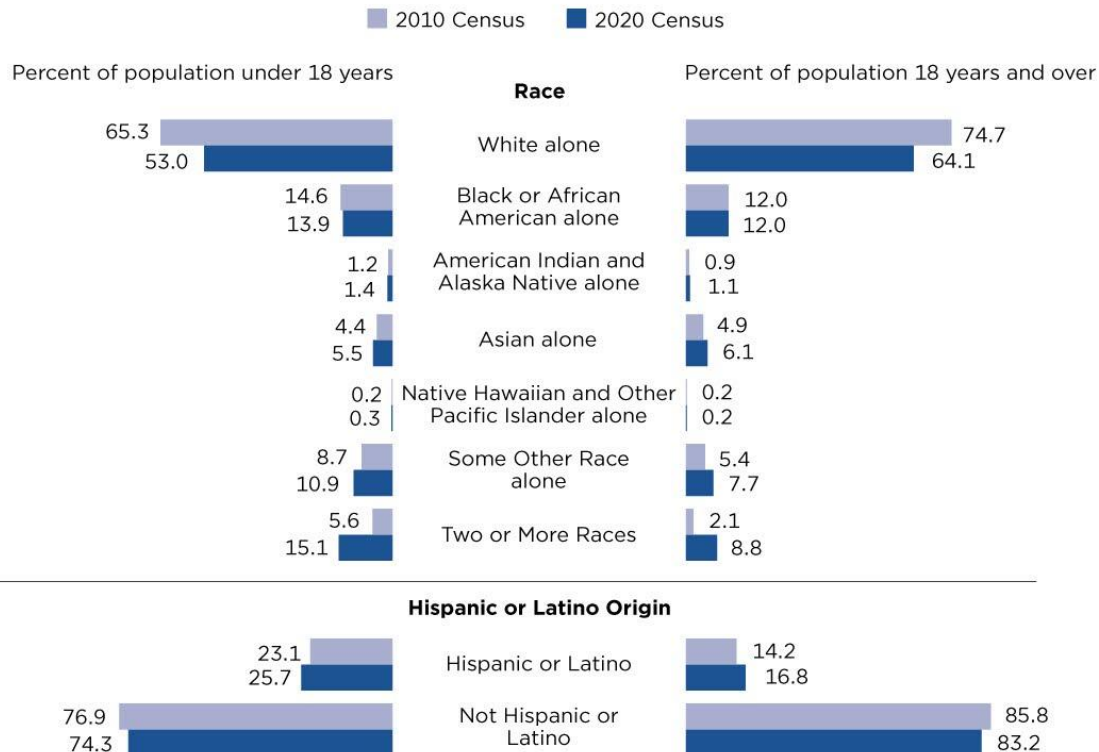
Light Pollution as a New Risk Factor for Human Breast and Prostate Cancers

Springer



A MORE DIVERSE UNITED STATES

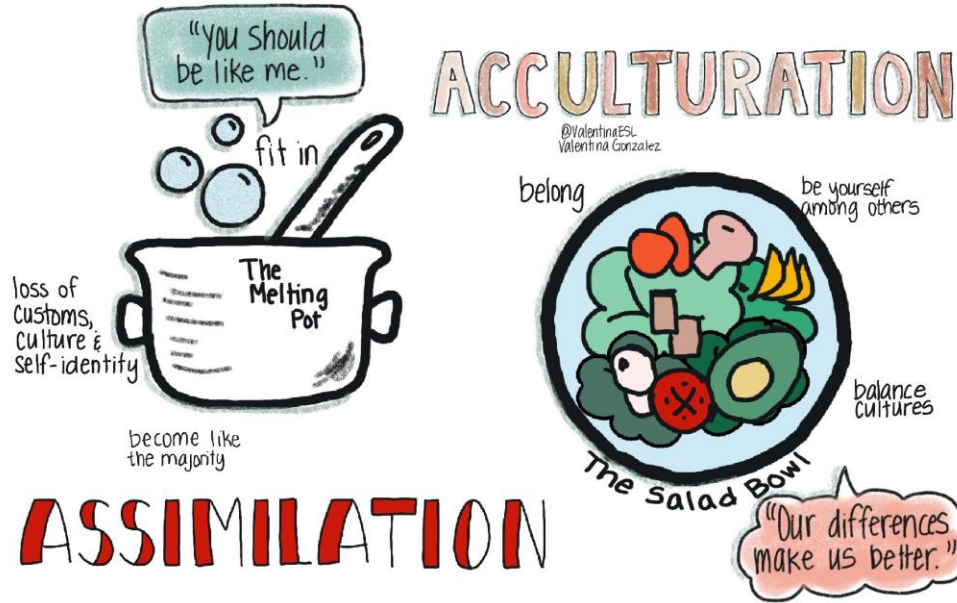
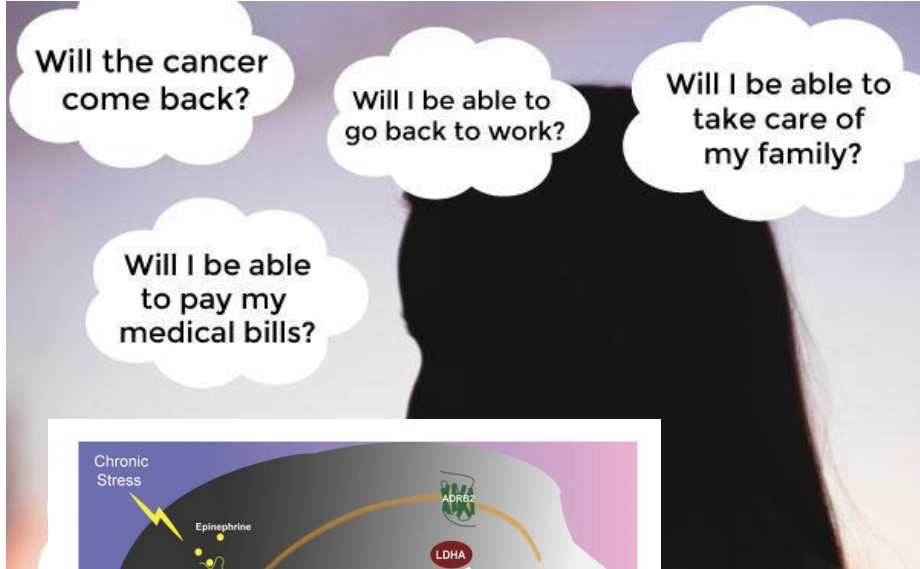
Figure 5.
**Percentage Distribution of Race and Hispanic Origin by Age Group:
 2010 and 2020**



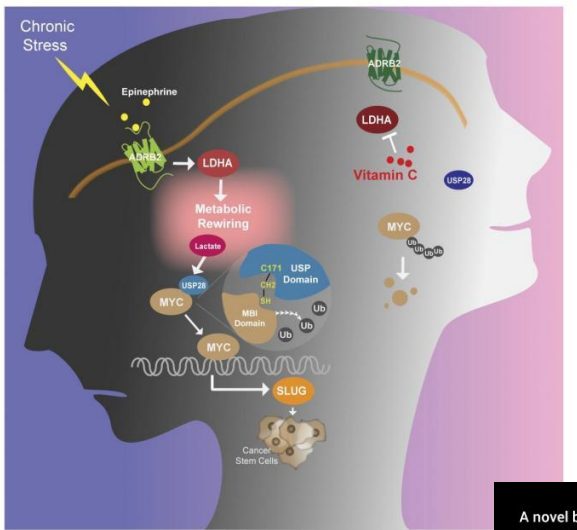
- Changing demographic landscape of the US:
 - Becoming more diverse
 - More multiracial
 - Fast growing Asian and Hispanic populations

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



SOCIO-ECONOMIC DATA

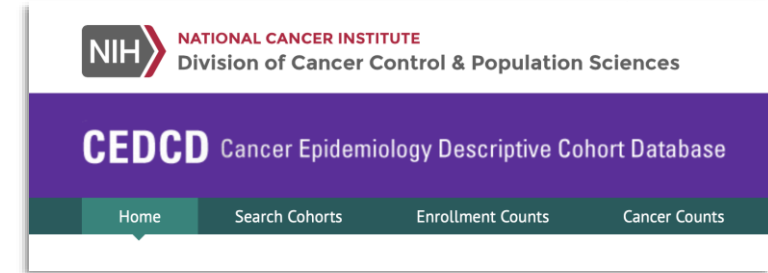


METHODOLOGICAL APPROACH: RATIONALE

- 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 \geq \$500k direct costs per year
 - Required pre-submission meeting for budgets above \geq \$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



REVIEWERS' COMMENTS and CLARIFICATIONS

[Drs. Thompson (chair), Hatsukami and Knudsen]

- 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*

The image features a horizontal row of stylized human silhouettes in various colors, including purple, green, blue, pink, white, light purple, red, yellow, and dark blue. The silhouettes are layered and semi-transparent, creating a sense of depth and diversity. The word "DISCUSSION" is centered in the middle of the image in a bold, black, sans-serif font.

DISCUSSION