Professional Advancement Virtual Engagement Series

PAVES

Seminar 16

Research and Career Advancement in Cancer Disparities

Tiffany Wallace, PhD
Center to Reduce Cancer Health Disparities (CRCHD)
National Cancer Institute
June 1, 2022

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1. *Speaker Introductions*
2. *Overview*
3. *Invited Presentations*
   - *Dr. Lorna H. McNeill*
   - *Dr. Wayne Lawrence*
4. *Panel Discussion*
5. *Breakout Sessions*

Speakers

Lorna H. McNeill, PhD, MPH
Professor and Chair
Department of Health Disparities Research
Division of Cancer Prevention and Population Sciences
University of Texas MD Anderson Cancer Center

Wayne Lawrence, DrPH,MPH
Cancer Prevention Fellow
Metabolic Epidemiology Branch
Division of Cancer Epidemiology and Genetics (DCEG)
National Cancer Institute (NCI)

NCI Health Disparities Priorities and Programs

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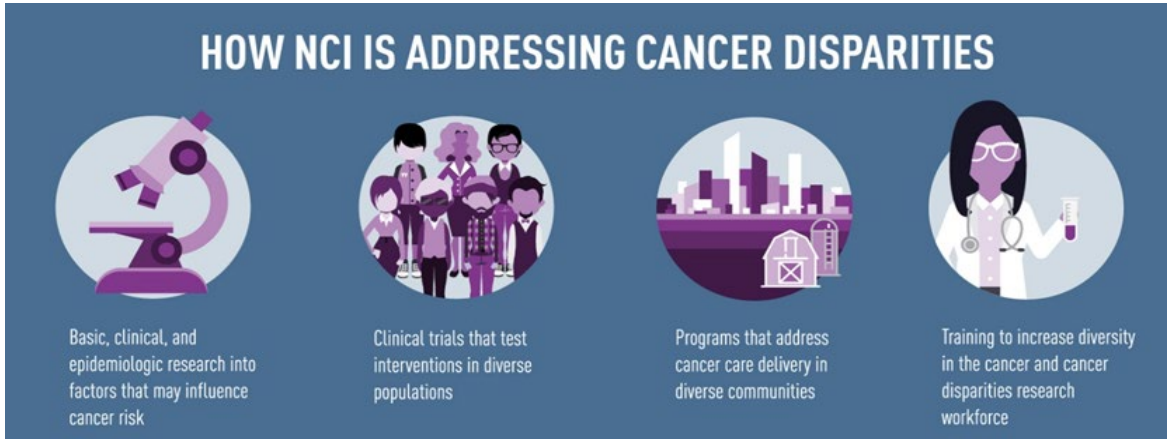
NCI Center to Reduce Cancer Health Disparities (CRCHD)

NIH Clinical Center

NCI at Shady Grove Campus

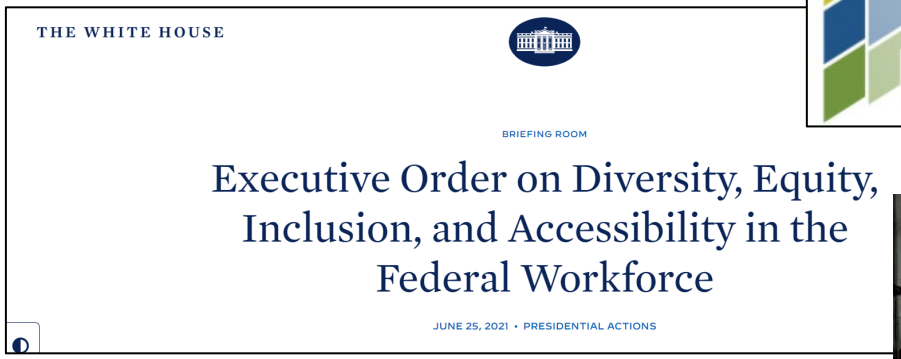
CRCHD Mission

- **Advance cancer disparities research** across the entire cancer continuum.
- **Advise** on strategic planning and policies related to cancer disparities research and diversity training.
- Lead NCI's efforts in **increasing workforce diversity.**



Equity, diversity, and inclusion are core values at NCI

- NIH and NCI are united in efforts to end structural racism and racial inequities in biomedical research
- **NIH UNITE initiative** aims to establish an equitable and civil culture within the biomedical research enterprise and reduce barriers to racial equity in the biomedical research workforce
- **NCI Equity and Inclusion Program** strives to increase workforce diversity, build a more inclusive and equitable NCI community, address cancer disparities, and advance health equity.



Equity Council and Five Working Group Co-Chairs

EQUITY COUNCIL				
Council Chair Doug Lowy **Co-Chair** Paulette Gray	Mark Alexander Andrea Apolo Alexis Bakos Nelvis Castro	Montse Garcia-Closas Anne Lubenow Ji Luo	Mack Roach *(ad hoc)* Donna Siegle Dinah Singer Sanya Springfield	

Working Group 1	Working Group 2	Working Group 3	Working Group 4	Working Group 5
Enhancing Research to Address Cancer Health Disparities	*Ensuring Diversity of Thought and Background in the Cancer Research Workforce*	*Promoting an Equitable and Inclusive Community*	*Systematic Tracking and Evaluation of Equity Activities*	*Communications and Outreach for Equity Activities*
Co-Chairs: *Jim Doroshow* *Worta McCaskill-Stevens* *Tiffany Wallace*	**Co-Chairs:** *LeeAnn Bailey* *Susan McCarthy* *Glenn Merlino*	**Co-Chairs:** *Shannon Bell* *Paige Green* *Satish Gopal*	**Co-Chairs:** *Michelle Berny-Lang* *Christine Burgess*	**Co-Chairs:** *Peter Garrett* *Angela Jones* *Anita Linde*

Cancer Disparities

NCI Definition:
"Adverse differences between certain population groups in cancer measures, such as: incidence, prevalence, morbidity, mortality, survivorship and quality of life, burden of cancer or related health conditions, screening rates, and stage at diagnosis"

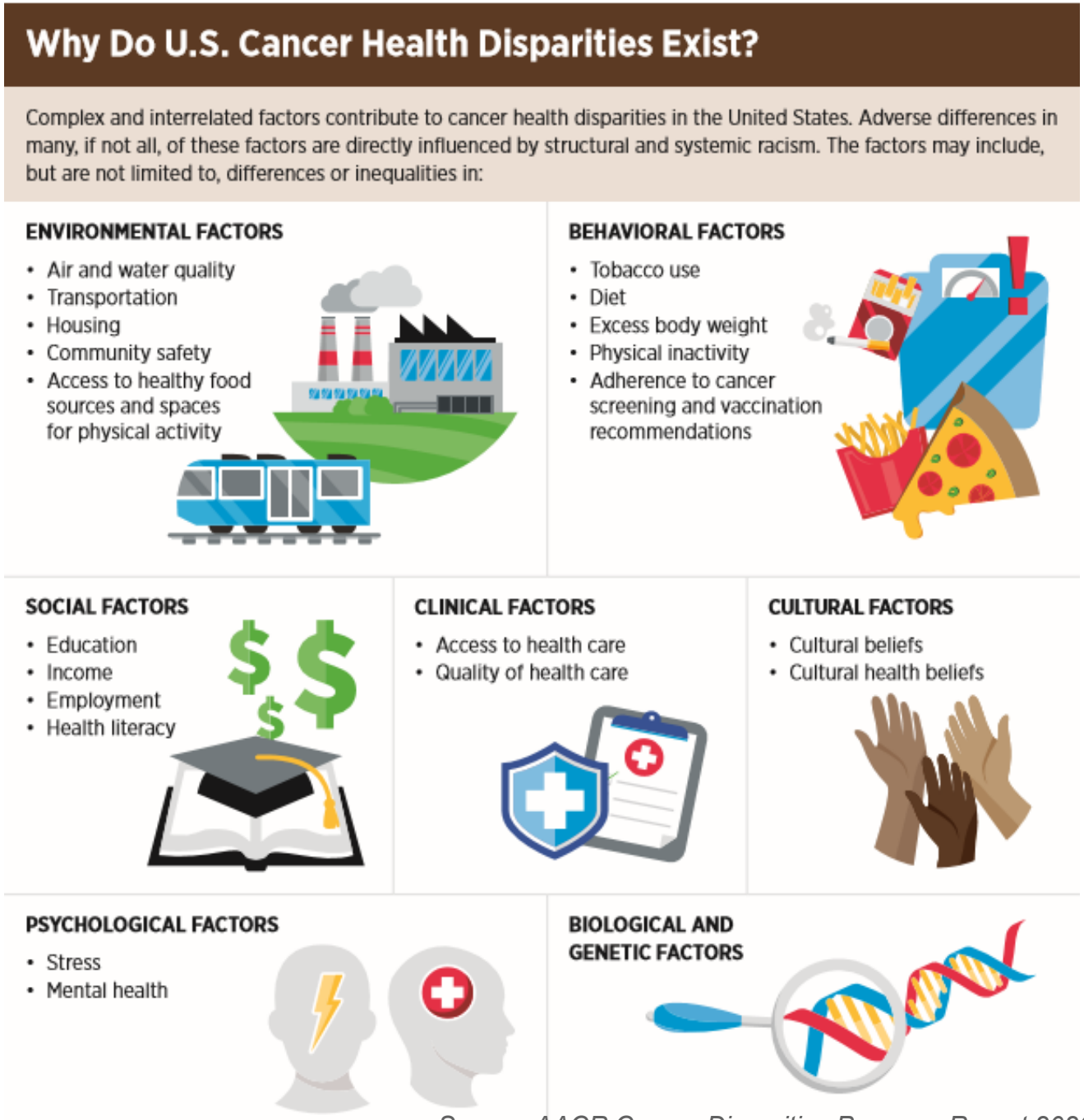
Population groups may be characterized by:

- Race
- Ethnicity
- Disability
- Gender and sexual identity
- Geographic location
- Income
- Education
- Other characteristics

Adapted from: cancer.gov/cancer-disparities

The causes of cancer disparities are multifactorial and complex

All directly influenced by structural inequalities and societal injustices.



Source: AACR Cancer Disparities Progress Report 2020

Examples NCI Cancer Disparity-Related Research Programs

- **Cancer Control and Population Sciences**
  - Persistent Poverty

- **Equity and Inclusion in Clinical Trials**
  - Connecting Underserved Populations to Clinical Trials (CUSP2CT) Program
  - Create Access to Targeted Cancer Therapy for -Underserved Populations (CATCH-UP.2020)

- **Basic and Translational Research**
  - Specialized Programs of Research Excellence (SPOREs)
  - PDX Development and Trial Centers Research Network (PDXNet)
  - Basic Research in Cancer Health Disparities

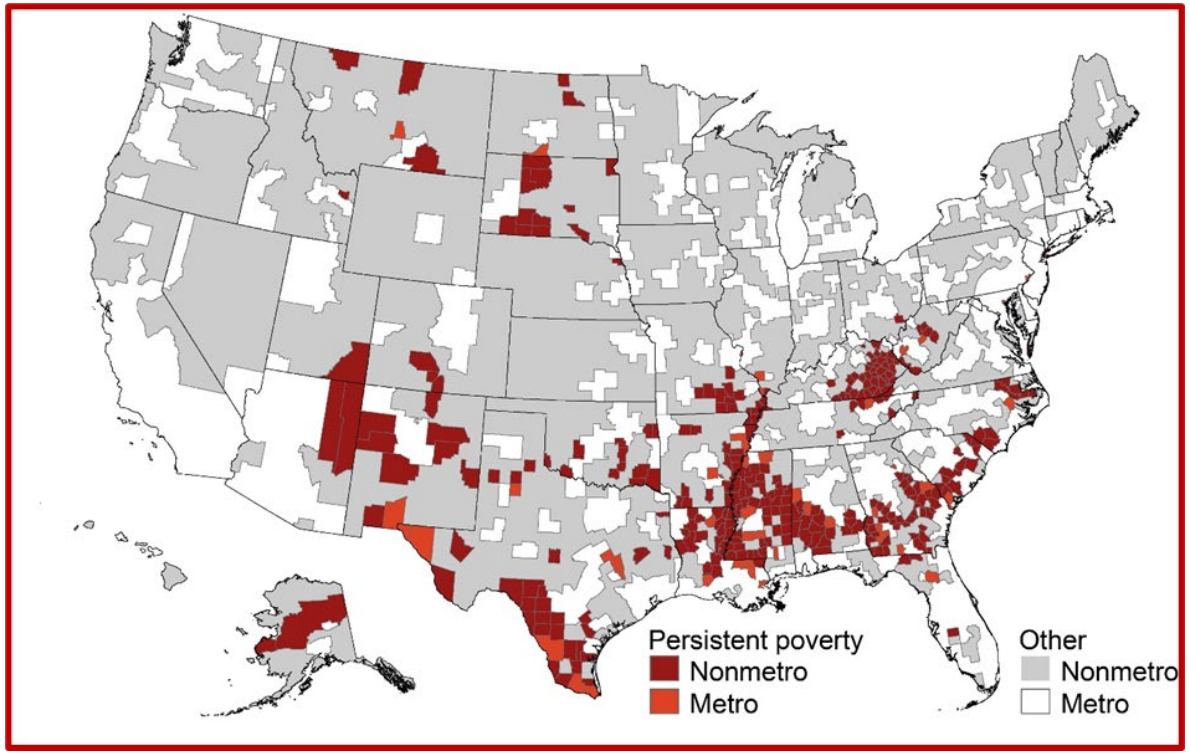
Persistent Poverty Areas

- **Persistent poverty (PP) area**: a county that has had poverty rates of 20% or more in U.S. Census data from 1980, 1990, and 2000

- Current categorization includes ~10% of U.S. counties
  - most in the rural South

- Working with USDA to expand the definition to the census tract level (*more granular*)
  - each of the 50 states, including District of Columbia, has a PP area

Persistent Poverty Counties,



https://www.ers.usda.gov/data-products/county-typology-codes/descriptions-and-maps.aspx#ppov

RFA-CA-22-015: Cancer Control Research in Persistent Poverty Areas (U54)

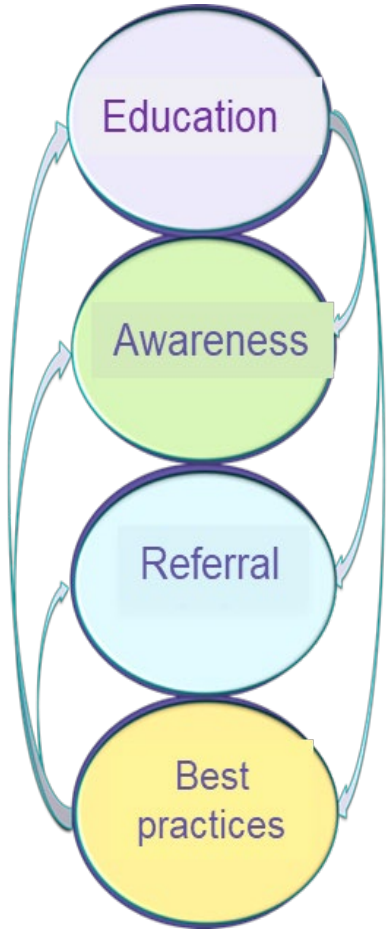
Connecting Underserved Populations to Clinical Trials (CUSP2CT) Program

RFA-CA-21-063 (U54)
RFA-CA-21-057 (U24)

CUSP2CT Purpose and Objectives

Implement and evaluate multi-level and culturally tailored outreach and education interventions to increase referral of racial/ethnic (R/E) minority populations to NCI-supported clinical trials, using Lay Health Advisors and Community Health Educators in integrated teams

- Educate R/E minority populations about NCI-supported clinical trials
- Engage primary care and referring providers to increase clinical trial awareness to refer R/E minority populations to clinical trials
- Enhance referral of R/E minority populations to clinical trials
- Address barriers and facilitators and disseminate best practices



CATCH-UP.2020 Initiative

Create Access to Targeted Cancer Therapy for -Underserved Populations

https://ctep.cancer.gov/initiativesPrograms/etctn_catch-up2020.htm#h04

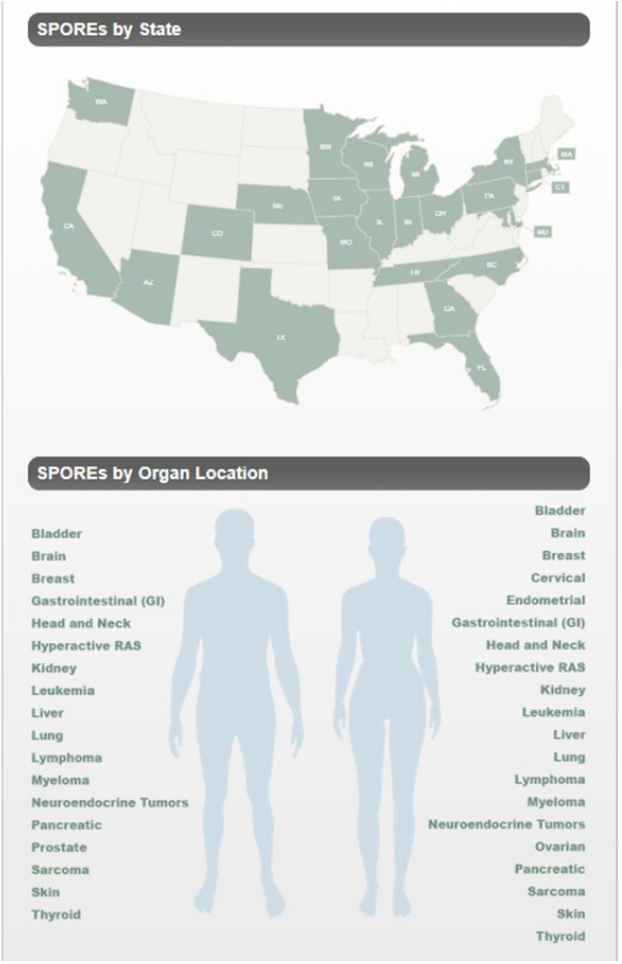
- Administrative supplements for NCI-Designated Cancer Centers (CC)
- Intended to enhance access to targeted cancer therapy for minority/underserved populations
- Each CC awarded has shown the ability to accrue minority/underserved populations to precision medicine cancer trials sponsored through the NCI's Experimental Therapeutics Clinical Trials Network (ETCTN)

- 8 NCI-Designated CC
- 31 Participating Sites
- 49 Clinical Trials

Institution	NCI-Designated CC
UC Irvine Health	Chao Family CCC
Wake Forest University Health Sciences	Wake Forest Baptist CCC
NYU Langone Health	Perlmutter CC
Univ of Kansas Medical Center	Univ of Kansas CC
Univ of Alabama at Birmingham	O'Neal CCC
Univ of Miami	Sylvester CCC
Dartmouth-Hitchcock Medical Center	Norris Cotton CC
Wayne State Univ	Karmanos Cancer Institute

Specialized Programs of Research Excellence (SPOREs)

- Large, multi-project, multi-component, specialized center grants (P50)
- Hallmark is **translational research;** Focused upon improving prevention, early detection, diagnosis, and treatment of cancer
- SPOREs focus on any of the following:
  - An organ-specific cancer
  - Groups of highly related cancers
  - Cross-cutting themes (e.g., **cancer disparities**)
- **P20 SPORE Planning Grants developed to focus on cancer disparities:**
  - Awarded (12) P20 SPORE planning grants (**RFA-CA-17-033, RFA-CA-19-034**)
  - Cancer sites: Acute lymphoblastic leukemia, breast, colon, endometrial, head and neck, gastric, liver, lung, ovarian, and prostate cancers
  - Populations: American Indian, Alaska Native, African American, Hispanic/Latino, and low SES



https://trp.cancer.gov/

Developing Cancer Models to Reflect Diversity of Patient Populations

Types of Cancer Models

Patient Derived Xenograft Mouse Models (PDXs)

Source: National Cancer Institute

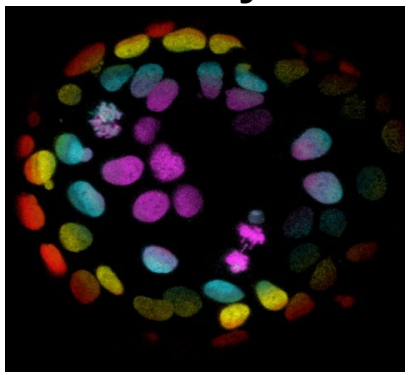
Cell Lines/ Primary Cells

Source: National Cancer Institute

Genetically Engineered Mouse Models (GEMMs)

Source: National Cancer Institute

3D Human Tissue Model Culture Systems

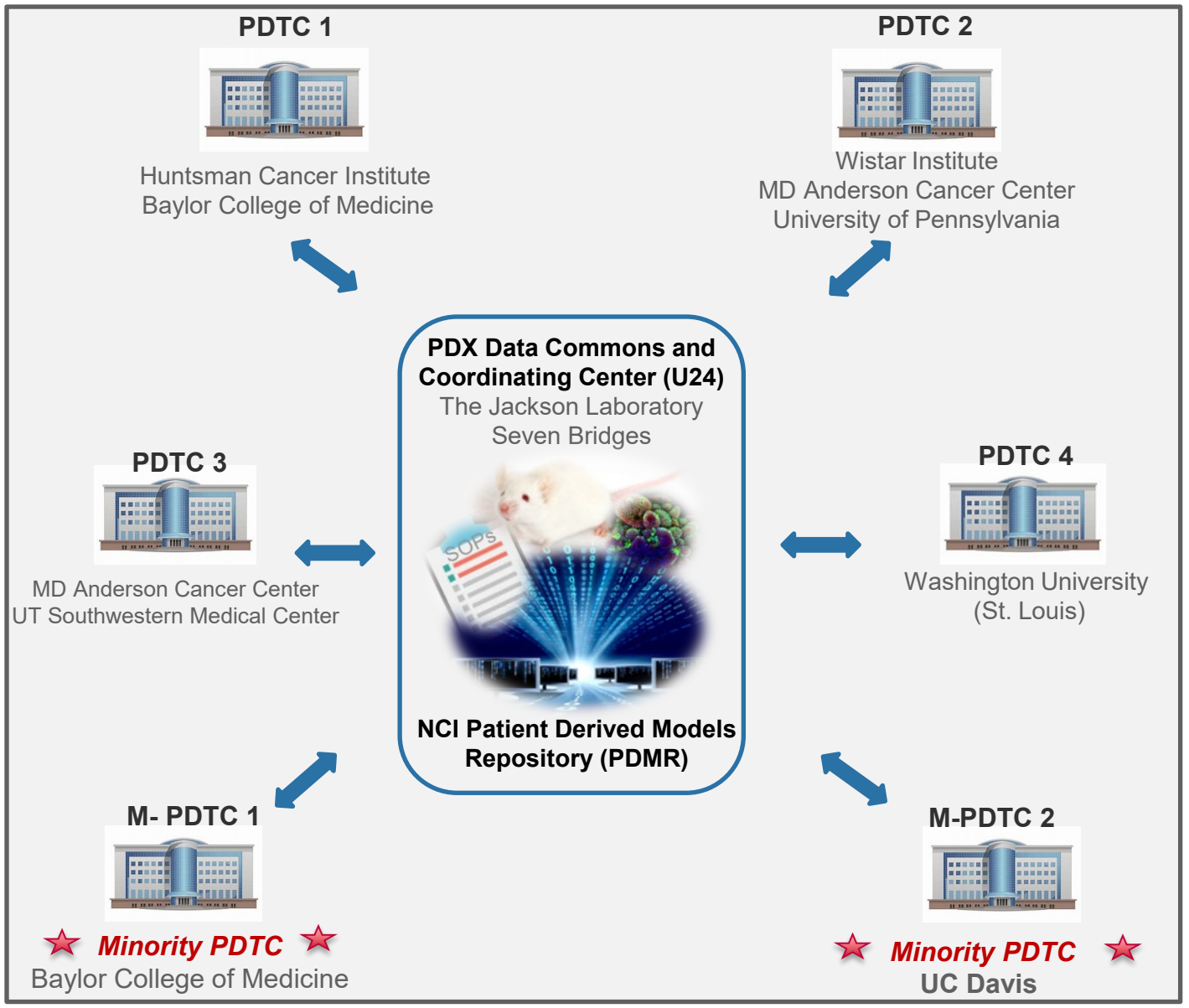


Source: Hubrecht Organoid Technology (HUB)

Humanized Mouse Models

Source: National Cancer Institute\Duncan Comprehensive Cancer Center at Baylor College of Medicine
Creator: Rita Elena Serda

PDX Development and Trial Centers Research Network (PDXNet)



PDXNet is designed to advance precision medicine research efforts.

Conducts collaborative, large-scale PDX development and preclinical testing of targeted therapeutic agents to inform early phase clinical trials.

Includes two “Minority-PDTCs” that focus on **developing models from racial/ethnically diverse populations and conducting disparities research.**

Supported through Cancer Moonshot℠ funding

Basic Research in Cancer Health Disparities

- **Three companion funding announcements**
  - PAR-21-322 (R01)
  - PAR-21-323 (R21)
  - PAR-21-324: (R03), **new in FY 22**

- **Goal:** To support innovative basic research investigating the biological/genetic contributors of cancer disparities. Projects may seek to:
  - Investigate mechanistic studies of biological factors associated with cancer disparities
  - Develop and test new methodologies and models
  - Conduct secondary data analyses.

- **Awards:** Between FY 2010 and FY 2021, **123 awards made**
  - 44 R01s
  - 54 R21s
  - 25 U01s

Stay Connected

Have questions?
Tiffany.Wallace@nih.gov

More information

@ncicrchd

NCI Center to Reduce Cancer Health Disparities (CRCHD)

http://crchd.cancer.gov

Speakers

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National Cancer Institute (NCI)

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www.cancer.gov

www.cancer.gov/espanol

Cancer Disparities:
Addressing cancer among Black men and women

Wayne R. Lawrence DrPH, MPH, CHES

Cancer Prevention Fellow

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June 1, 2022

- *The opinions expressed by the speaker are their own and this material should not be interpreted as representing the official viewpoint of the U.S. Department of Health and Human Services, the National Institutes of Health or the National Cancer Institute.*

Background

University of Hartford: B.S. in Health Sciences

Georgia Southern University: MPH in Epidemiology

State University of New York at Albany: DrPH in Epidemiology

Graduate Certificate in Health Disparities

Examining disparities in prostate cancer screening and outcome

Rural Georgia

- Racial differences in prostate cancer screening
- Barriers to initiating prostate cancer treatment
- Patient-physician interaction

Indigenous health in Australia and New Zealand

Discrimination and historical racist policies on:

- Cardiovascular disease
- Cancer
  - Cancer screening (Harris R, AJPH, 2012)
- Premature mortality
  - ~6 years New Zealand (2019)
  - ~8 years Australia (2017)

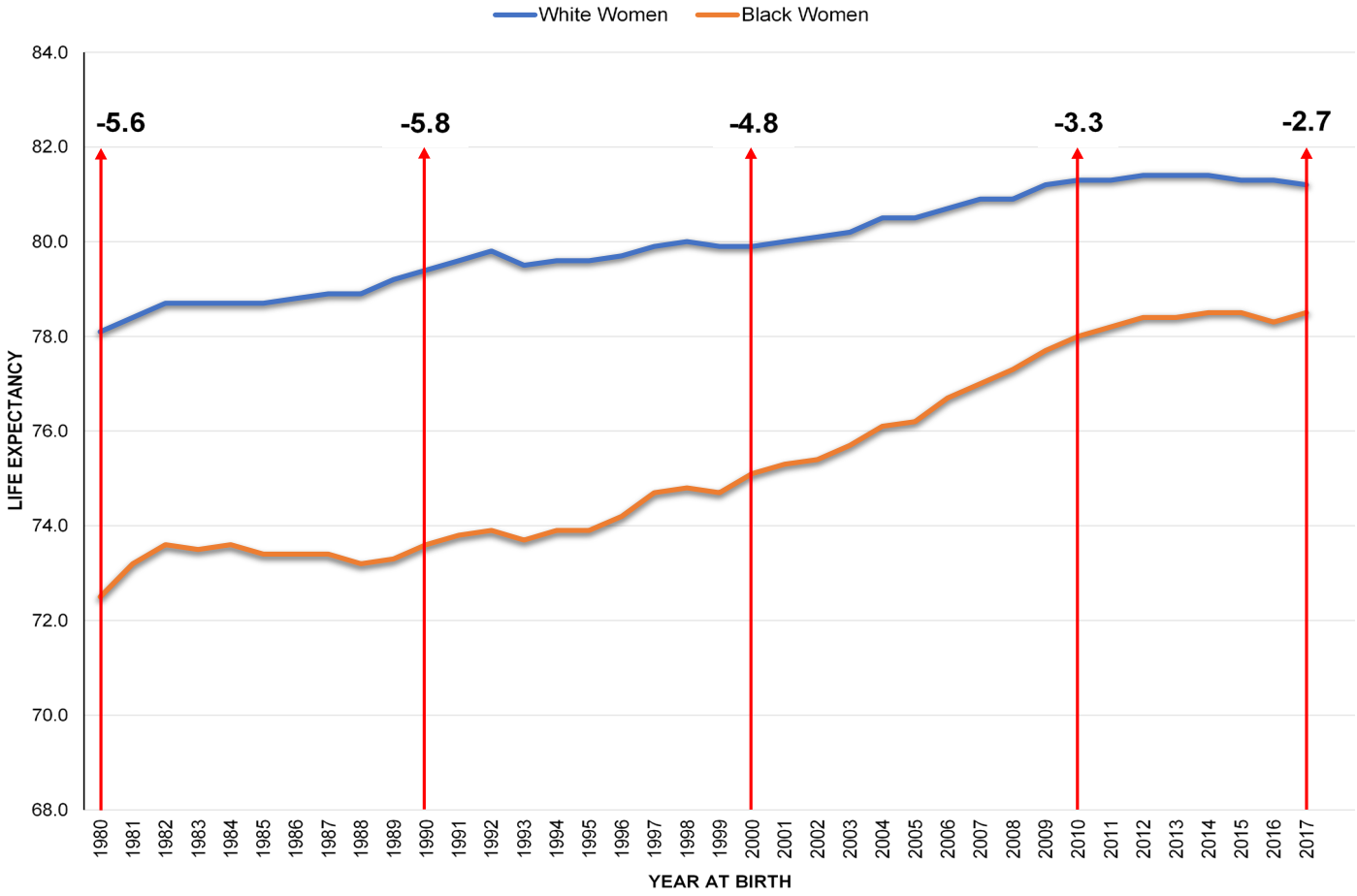
Lawrence et al. *Perspectives in Public Health*, 2021

Life expectancy

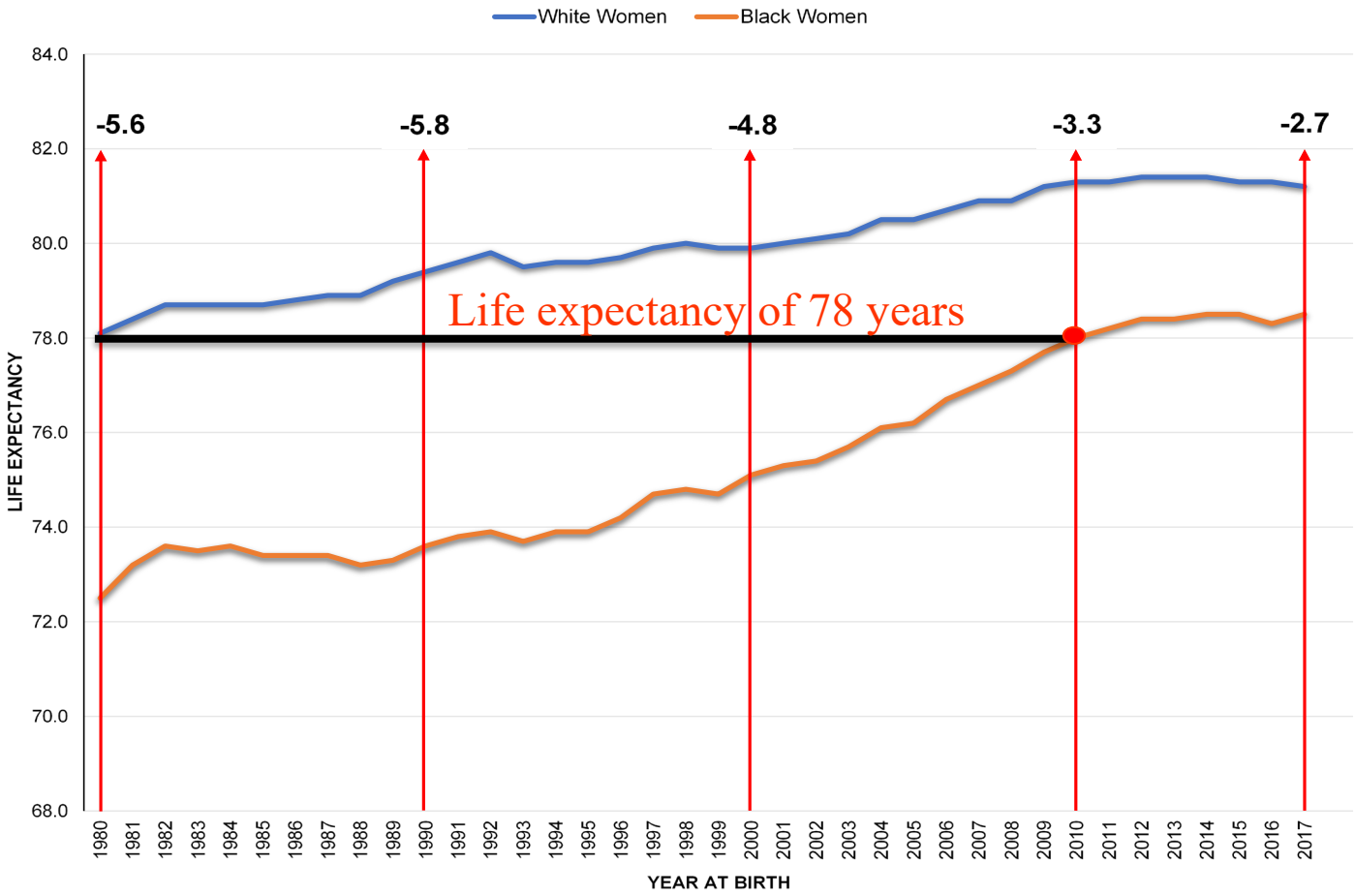
- Racial/Ethnic differences in mortality
- Societal contributors for why:
  - **Black men and women:** have the highest overall death rates in 2020 (Heron, 2019)
  - **American Indians/Alaska Native (AI/AN):** Increasing trend in cardiovascular disease premature mortality among young adults (Chen, 2019)
  - **Black and AI/AN individuals**: 2-3Xmore likely to die from pregnancy-related causes of death than their White counterpart (Petersen, 2019)
- Racial differences in life expectancy

(Mustafa Omar/Unsplash)

Life Expectancy at Birth by Racial Group: United States, 1980–2017



(National Vital Statistics System, CDC)



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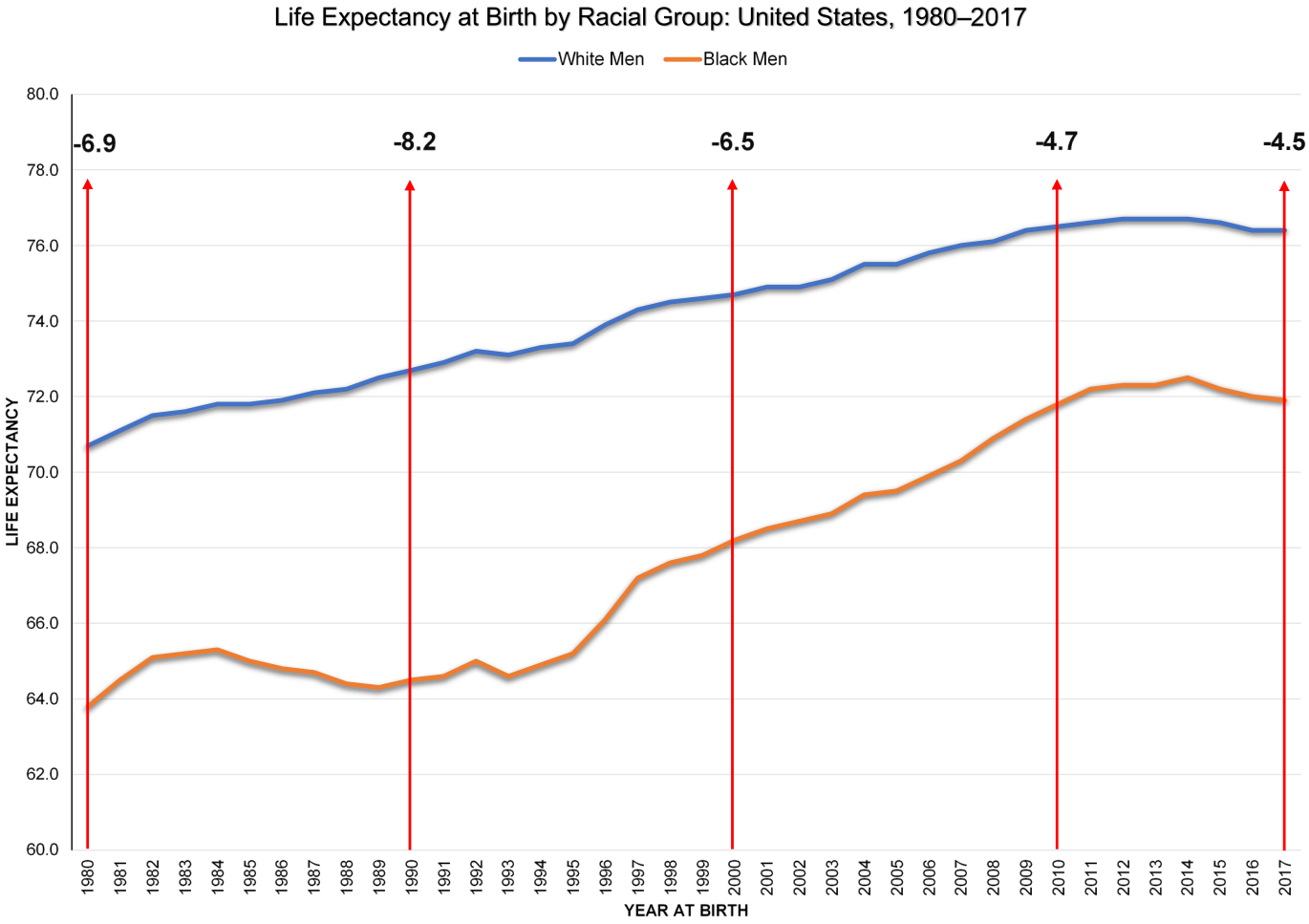

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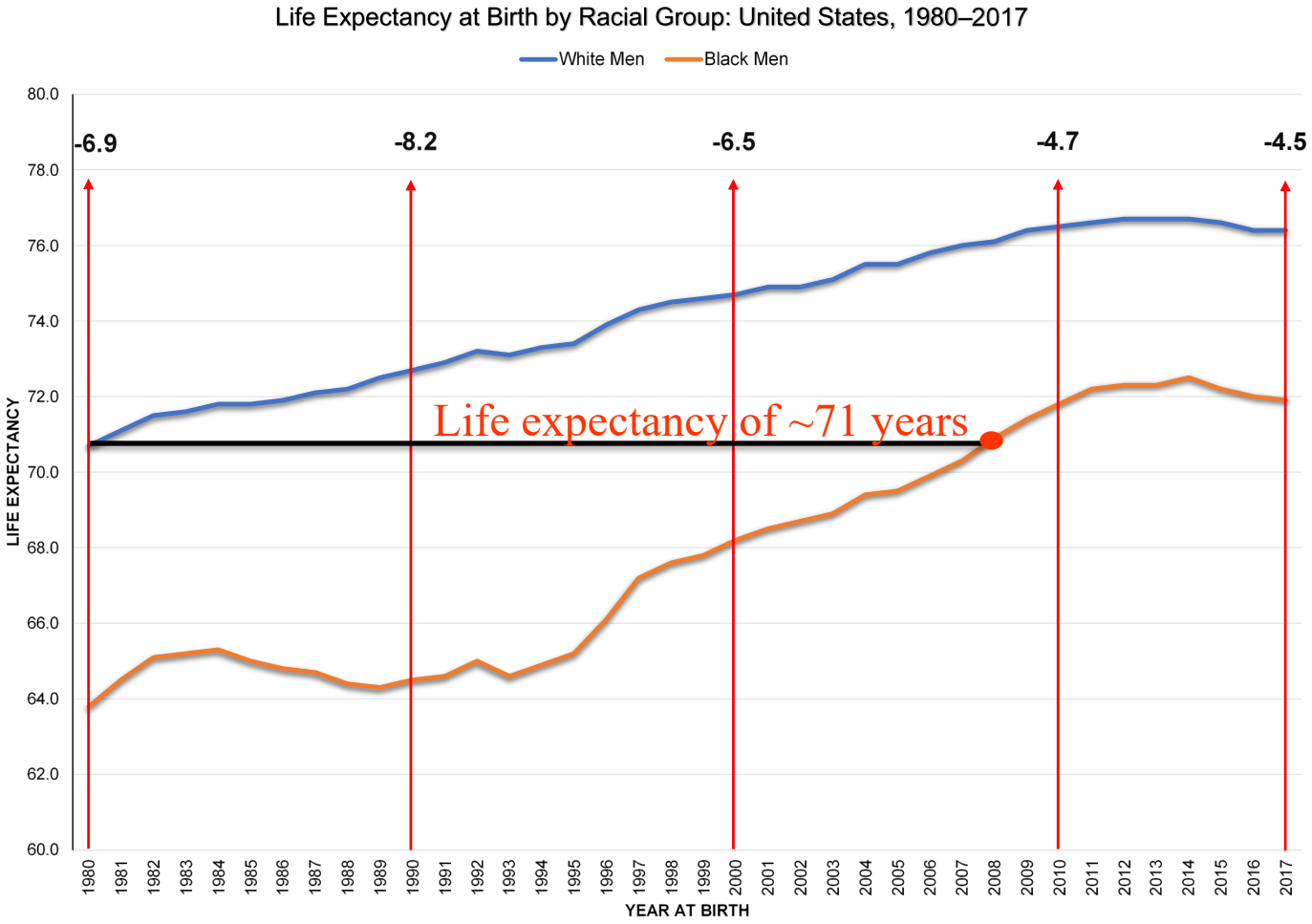
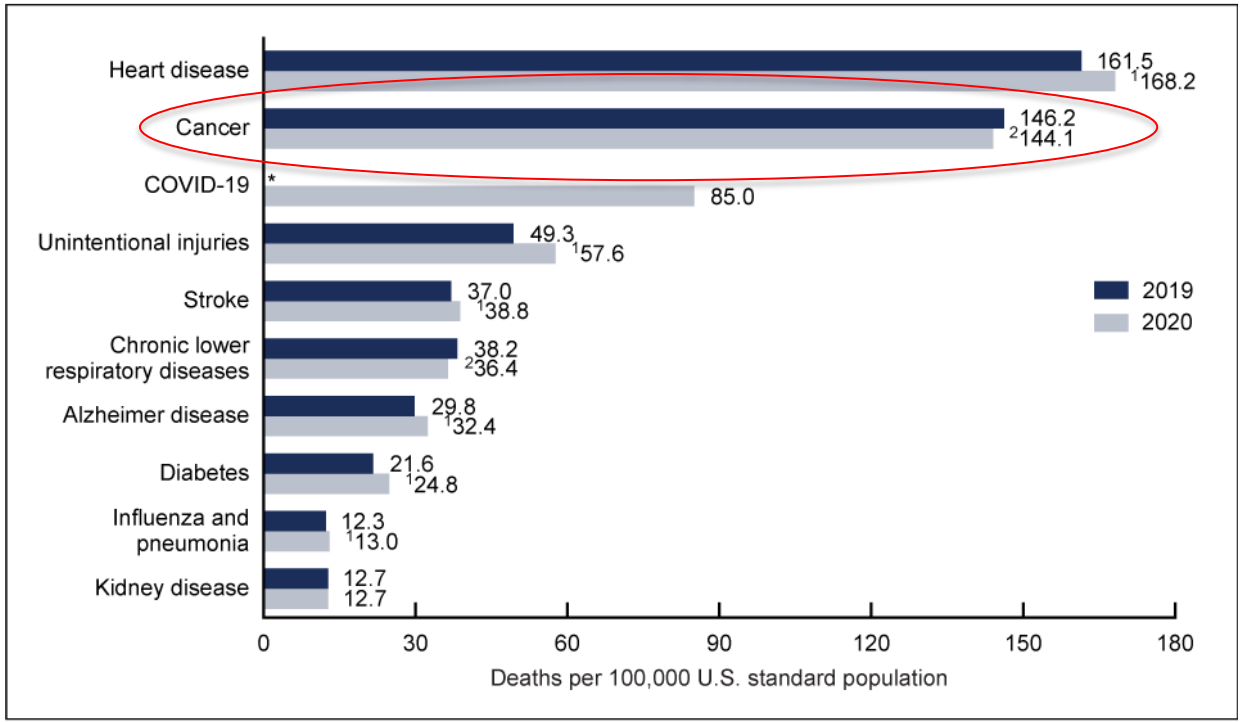


(National Vital Statistics System, CDC)

Life expectancy

Figure 4. Age-adjusted death rates for the 10 leading causes of death in 2020: United States, 2019 and 2020



* COVID-19 became an official cause of death in 2020; rates for 2019 are not applicable.
[1]Statistically significant increase in age-adjusted death rate from 2019 to 2020 ($p < 0.05$).
[2]Statistically significant decrease in age-adjusted death rate from 2019 to 2020 ($p < 0.05$).
NOTES: A total of 3,383,729 resident deaths were registered in the United States in 2020. The 10 leading causes of death accounted for 74.1% of all deaths in the United States in 2020. Causes of death are ranked according to number of deaths. Rankings for 2019 data are not shown. Data table for Figure 4 includes the number of deaths for leading causes and the percentage of total deaths. Access data table for Figure 4 at: https://www.cdc.gov/nchs/data/databriefs/db427-tables.pdf#4.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality.

Trends in Cancer Mortality among Black individuals 1999-2019

Trends in Cancer Mortality

- Cancer is the 2nd leading cause of mortality in the U.S.

- Black individuals continue to bear a higher cancer burden
  - Barriers to accessing high-quality health care
  - Socioenvironmental conditions (i.e., air pollution, neighborhood deprivation)

- Nationally, cancer mortality is decreasing annually
  - Advancement in cancer prevention, detection, treatment
  - Patient Protection and Affordable Care Act (ACA)

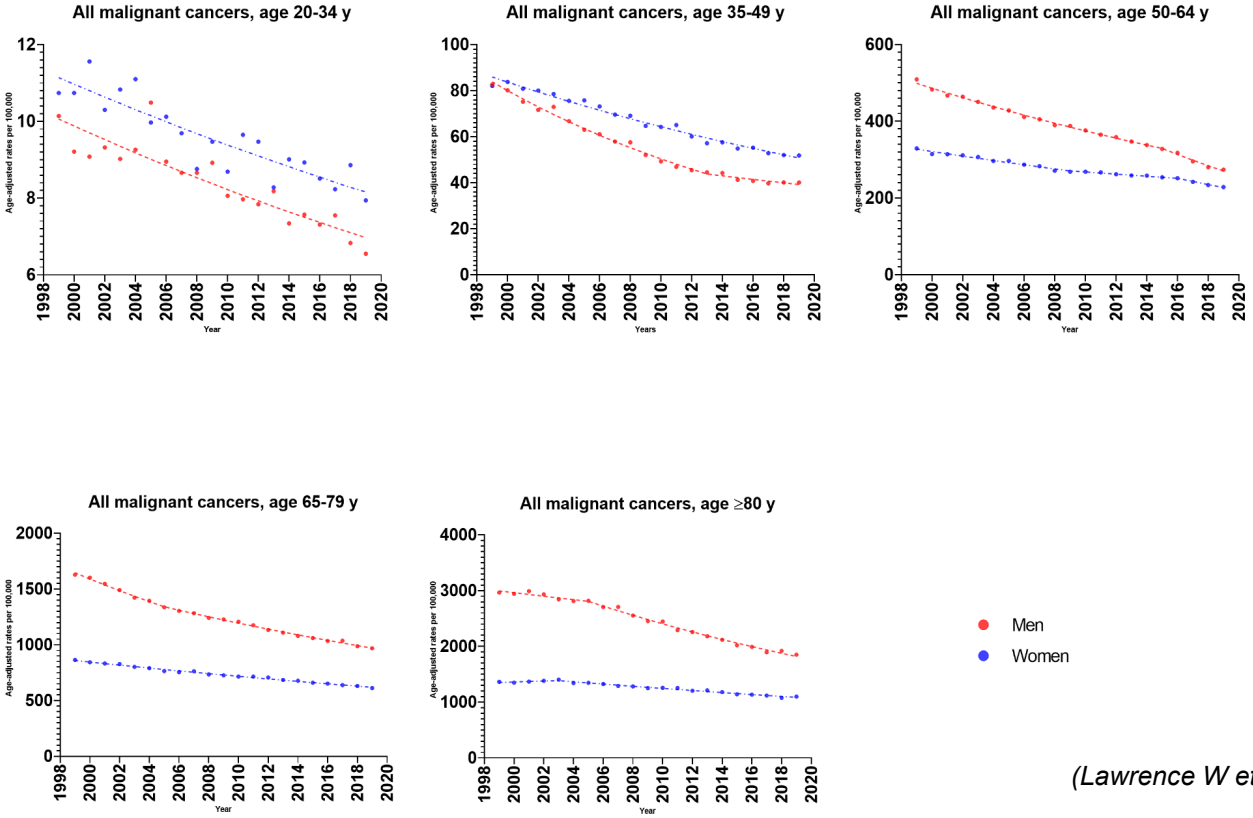
- What impact has this had on cancer mortality among Black individuals?

Trends in Cancer Mortality

- Detailed understanding of cancer mortality trends among Black individuals
  - Essential to assess recent progress
  - Inform interventions aimed at addressing disparities in cancer death rates.

- Study Aim
  - Describe trends in cancer mortality rates from 1999-2019 among Black adults
    - by cancer site, age, sex, and state

Trends in Cancer Mortality

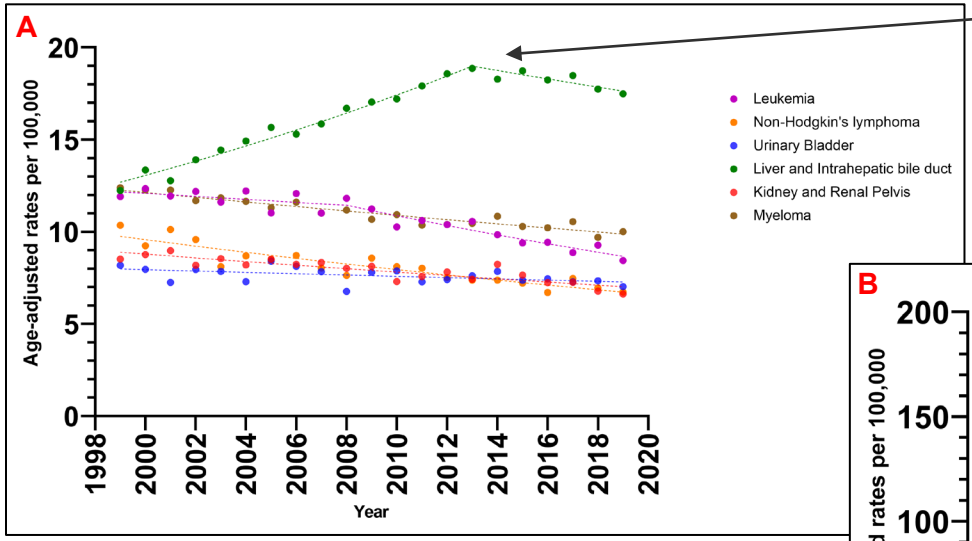


(Lawrence W et al., JAMA Oncology, 2022)

Trends in age-standardized cancer death rates (1999-2019) among Black individuals by age group. Death rates covered the entire US population. Trends were estimated using joinpoint regression and characterized by rate per 100,000.
Note: "---"represents modeled age-adjusted and "●" represents observed age-adjusted rates.

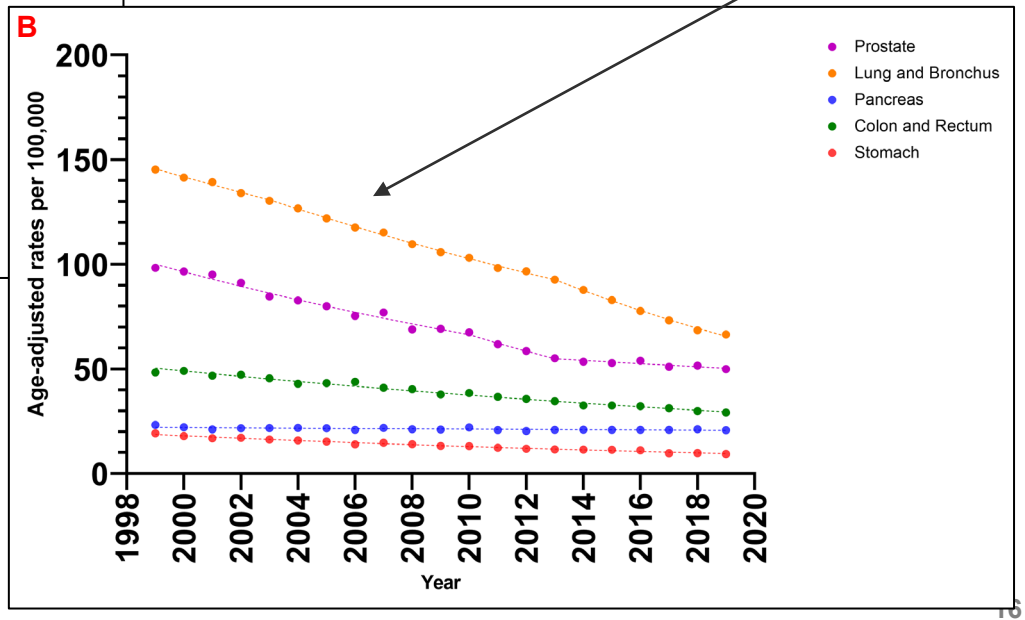
Trends in Cancer Mortality

Trends in age-standardized death rates (1999-2019) among Black **men** are illustrated by cancer site.



Increased from 1999-2013 and later declined from 2013-2019

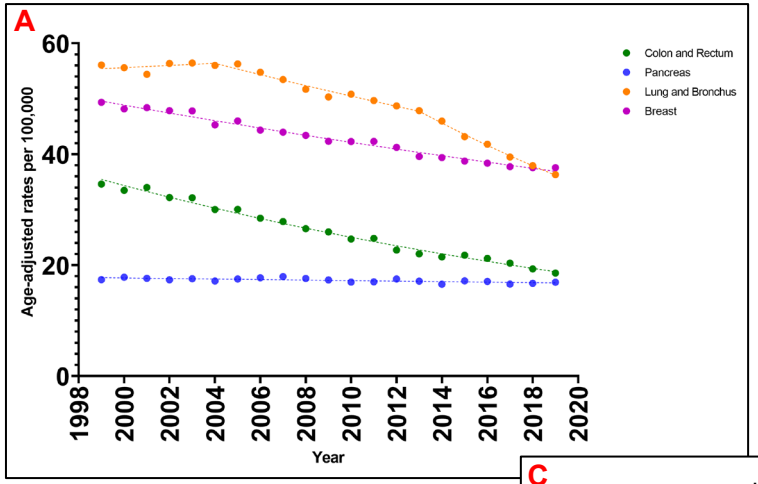
Lung cancer AAPC -3.8%

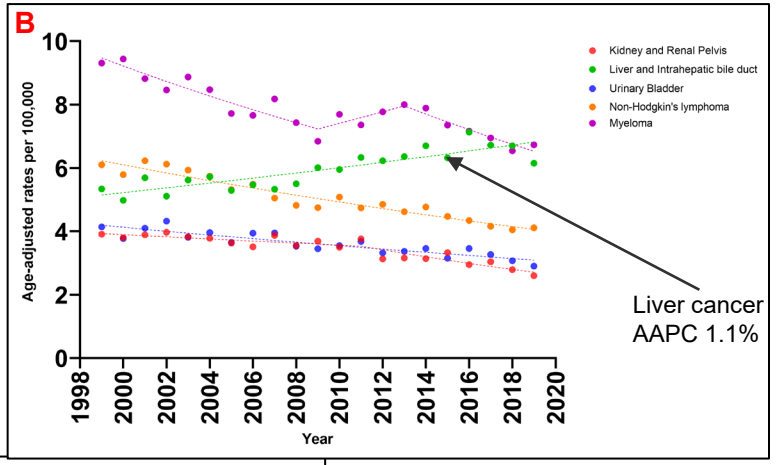


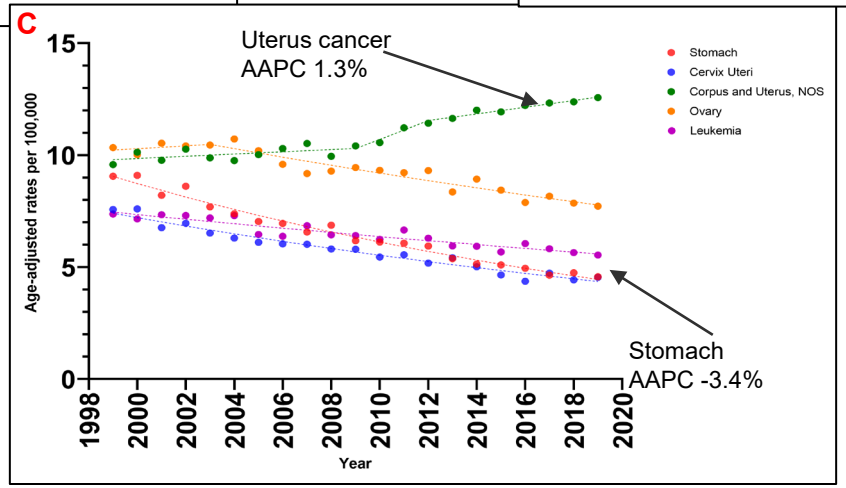
(Lawrence W et al., JAMA Oncology, 2022)

Trends in Cancer Mortality

Trends in age-standardized death rates (1999-2019) among Black **women** are illustrated by cancer site.







(Lawrence W et al., JAMA Oncology, 2022)

Trends in Cancer Mortality

Age-standardized death for the most common causes of cancer death by sex and racial/ethnic group in the United States: 2019

Sex/cancer site or type	Non-Hispanic Black Rate (95% CI)	Non-Hispanic White Rate (95% CI)	Non-Hispanic American Indian/Alaska Native (PRCDA) Rate (95% CI)	Non-Hispanic Asian or Pacific Islander Rate (95% CI)	Hispanic/Latino Rate (95% CI)
All sites					
Men	**294.1 (290.9, 297.4)**	**249 (248.0, 250.0)**	**255.2 (240.4, 270.6)**	**149.5 (146.5, 152.6)**	**176.7 (174.2, 179.2)**
Women	**205.1 (202.9, 207.3)**	**181.8 (181.0, 182.6)**	**188.5 (177.5, 199.9)**	**113.2 (110.9, 115.5)**	**127.9 (126.1, 129.7)**
Men					
Lung and Bronchus	**68.6 (67.0, 70.2)**	**59.5 (59.0, 60.0)**	**52.0 (45.4, 59.1)**	**33.6 (32.2, 35.1)**	**28.7 (27.7, 29.8)**
Prostate	**51.3 (49.8, 52.8)**	**24.5 (24.2, 24.8)**	**29.7 (24.3, 35.9)**	**11.0 (10.2, 11.9)**	**20.9 (20.0, 21.8)**
Colon and Rectum	**30.1 (29.1, 31.1)**	**21.2 (20.9, 21.5)**	**25.9 (21.4, 31.0)**	**15.2 (14.3, 16.2)**	**18.1 (17.4, 18.9)**
Pancreas	**21.4 (20.6, 22.3)**	**18.2 (17.9, 18.4)**	**14.1 (10.9, 17.9)**	**11.6 (10.8, 12.5)**	**13.8 (13.2, 14.5)**
Liver and intrahepatic bile duct	**17.9 (17.2, 18.7)**	**11.8 (11.6, 12.0)**	**23.4 (19.3, 28.2)**	**17.3 (16.27, 18.3)**	**17.9 (17.2, 18.7)**
Myeloma	**10.3 (9.7, 11.0)**	**5.2 (5.1, 5.3)**	**4.7 (2.9, 7.2)**	**2.5 (2.1, 3.0)**	**4.3 (3.9, 4.7)**
Stomach	**9.6 (9.01, 10.2)**	**4.0 (3.9, 4.1)**	**11.3 (8.5, 14.8)**	**7.7 (7.0, 8.5)**	**8.0 (7.5, 8.6)**
Leukemia	**8.7 (8.1, 9.3)**	**11.6 (11.3, 11.8)**	**6.9 (4.7, 9.7)**	**6.2 (5.5, 6.8)**	**6.7 (6.3, 7.2)**
Urinary Bladder	**7.2 (6.7, 7.8)**	**10.9 (10.7, 11.1)**	**5.3 (3.3, 8.1)**	**4.0 (3.5, 4.5)**	**5.5 (5.1, 6.0)**
Non-Hodgkin Lymphoma	**6.9 (6.4, 7.4)**	**9.6 (9.4, 9.8)**	**7.9 (5.6, 10.8)**	**6.8 (6.2, 7.5)**	**7.7 (7.2, 8.2)**
Kidney and Renal Pelvis	**6.8 (6.4, 7.3)**	**7.3 (7.2, 7.5)**	**11.0 (8.1, 14.6)**	**3.2 (2.7, 3.6)**	**6.5 (6.0, 6.9)**

Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130) standard; Confidence intervals (Tiwari mod) are 95% for rates.
Data for the non-Hispanic American Indian/Alaska Native population are restricted to Indian Health Service Purchased/Referred Care Delivery Area (PRCDA) counties.
Abbreviation: NOS = not otherwise specified; 95% CI, 95% confidence interval

(Lawrence W, et al., JAMA Oncology, 2022)

Trends in Cancer Mortality

Age-standardized death for the most common causes of cancer death by sex and racial/ethnic group in the United States: 2019

Sex/cancer site or type	Non-Hispanic Black Rate (95% CI)	Non-Hispanic White Rate (95% CI)	Non-Hispanic American Indian/Alaska Native (PRCDA) Rate (95% CI)	Non-Hispanic Asian or Pacific Islander Rate (95% CI)	Hispanic/Latino Rate (95% CI)
Women					
Breast	39.0 (38.0, 39.9)	27.1 (26.8, 27.4)	27.3 (23.2, 31.9)	16.1 (15.3, 17.0)	19.5 (18.8, 20.2)
Lung and Bronchus	37.5 (36.6, 38.5)	44.1 (43.8, 44.5)	42.6 (37.5, 48.1)	21.5 (20.5, 22.5)	15.3 (14.6, 15.9)
Colon and Rectum	19.1 (18.4, 19.8)	15.2 (15.0, 15.5)	19.3 (15.9, 23.2)	10.7 (10.0, 11.4)	11.6 (11.1, 12.2)
Pancreas	17.4 (16.7, 18.0)	13.5 (13.3, 13.8)	11.9 (9.3, 15.1)	9.5 (8.8, 10.2)	11.1 (10.6, 11.6)
Corpus and Uterus, NOS	12.9 (12.4, 13.5)	6.5 (6.3, 6.6)	7.6 (5.6, 10.2)	5.1 (4.6, 5.6)	6.0 (5.6, 6.4)
Ovary	8.0 (7.5, 8.4)	8.9 (8.7, 9.0)	6.8 (4.9, 9.3)	5.9 (5.4, 6.5)	6.7 (6.3, 7.2)
Myeloma	7.0 (6.6, 7.4)	3.0 (2.9, 3.1)	1.8 (0.9, 3.3)	1.6 (1.4, 1.9)	2.9 (2.7, 3.2)
Liver and intrahepatic bile duct	6.3 (5.9, 6.7)	5.1 (5.0, 5.2)	12.0 (9.4, 15.1)	7.1 (6.5, 7.7)	8.1 (7.7, 8.6)
Leukemia	5.7 (5.4, 6.1)	6.2 (6.1, 6.4)	4.8 (3.2, 7.0)	3.4 (3.0, 3.8)	4.5 (4.2, 4.8)
Cervix Uteri	4.7 (4.4, 5.1)	2.8 (2.7, 2.9)	4.4 (2.9, 6.4)	2.1 (1.8, 2.4)	3.3 (3.0, 3.6)
Stomach	4.7 (4.3, 5.0)	2.0 (2.0, 2.1)	5.7 (4.0, 8.1)	4.8 (4.4, 5.3)	5.4 (5.0, 5.7)
Non-Hodgkin Lymphoma	4.2 (3.9, 4.6)	5.7 (5.6, 5.8)	4.9 (3.2, 7.1)	3.6 (3.2, 4.1)	4.6 (4.3, 5.0)
Urinary Bladder	3.0 (2.7, 3.3)	3.1 (3.0, 3.2)	1.6 (0.7, 2.9)	1.4 (1.1, 1.6)	1.7 (1.5, 2.0)
Kidney and Renal Pelvis	2.7 (2.5, 3.0)	3.0 (2.9, 3.1)	5.3 (3.6, 7.6)	1.3 (1.1, 1.6)	2.9 (2.7, 3.2)

Rates are per 100,000 and age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130) standard; Confidence intervals (Tiwari mod) are 95% for rates.
Data for the non-Hispanic American Indian/Alaska Native population are restricted to Indian Health Service Purchased/Referred Care Delivery Area (PRCDA) counties.
Abbreviation: NOS = not otherwise specified; 95% CI, 95% confidence interval

(Lawrence W, et al., JAMA Oncology, 2022)

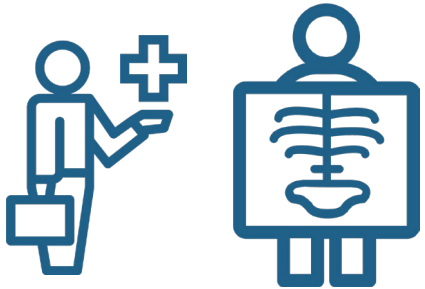
Trends in Cancer Mortality

Understanding and addressing cancer mortality among Black individuals

- May be driven by higher incidence, more aggressive cancer characteristics, and lower receipt of guideline-adherent treatment (Giaquinto et al., 2022)

- Racial disparities in cancer death rates are primarily systemic and preventable

- Black patients are more likely to experience
  - Poor patient-physician interaction (Shen et al., 2018)
  - Longer referrals, delay in treatment (Bickell et al. 2008) (Daly & Olopade , 2015)
  - Lower physician follow-up (Murphy et al., 2009)
  - Greater medical mistrust Underuse of treatment (Bickell et al., 2009)



Trends in Cancer Mortality

Understanding and addressing cancer mortality among Black individuals

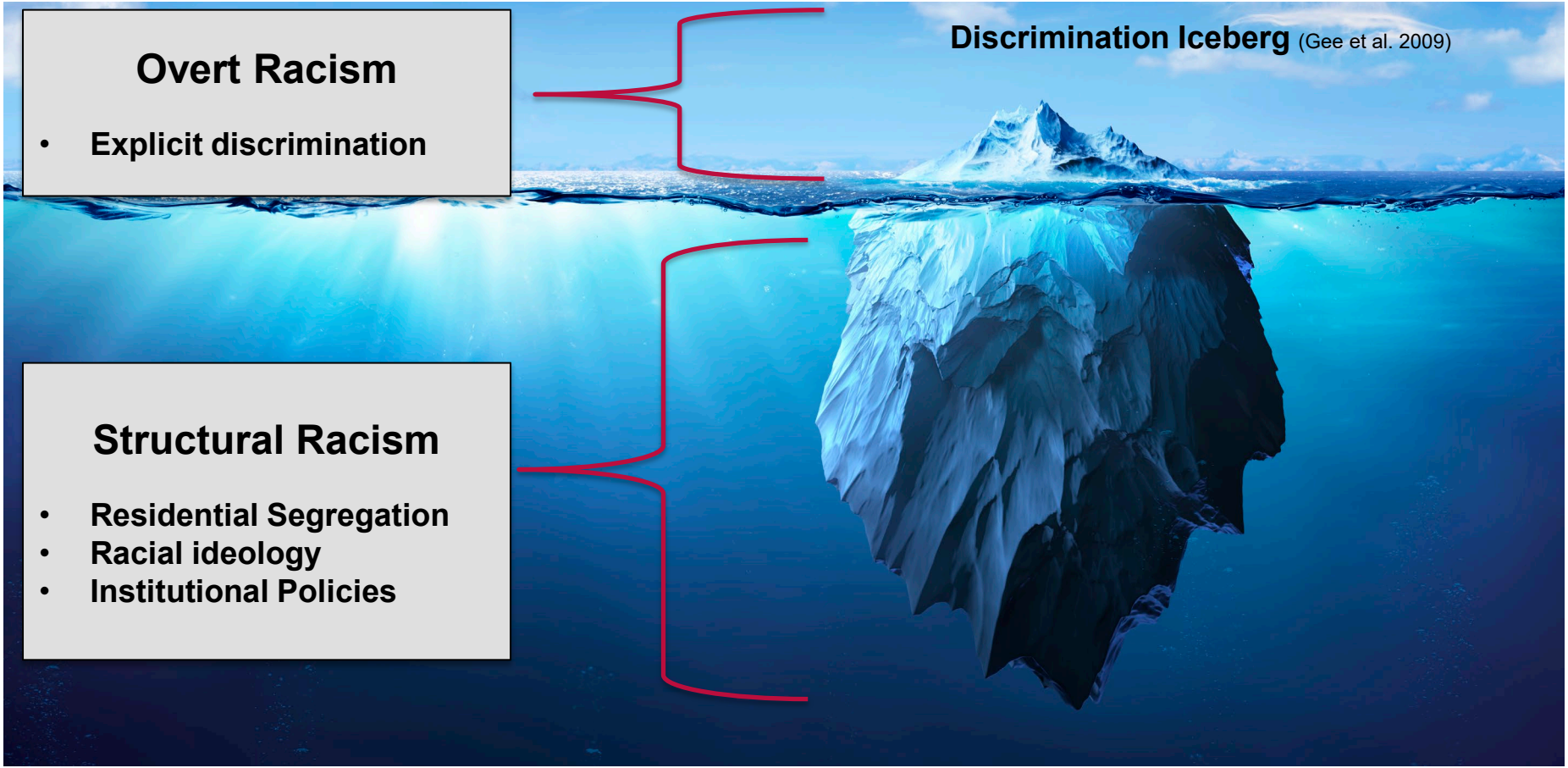
- Black individuals are more likely to
  - Reside in neighborhoods with poor accessibility to specialists (Blanco et al., 2021)
  - See a physician with lower access to clinical resources (Bach et al., 2004) (Daly & Olopade , 2015)
  - Live in communities with greater exposure to environmental toxins (Williams et al., 2016)

- Examining individual-level factors alone (behavioral and biological) is insufficient

- Greater emphasis must be aimed at understanding the contribution of social inequities to higher cancer mortality rates among Black individuals

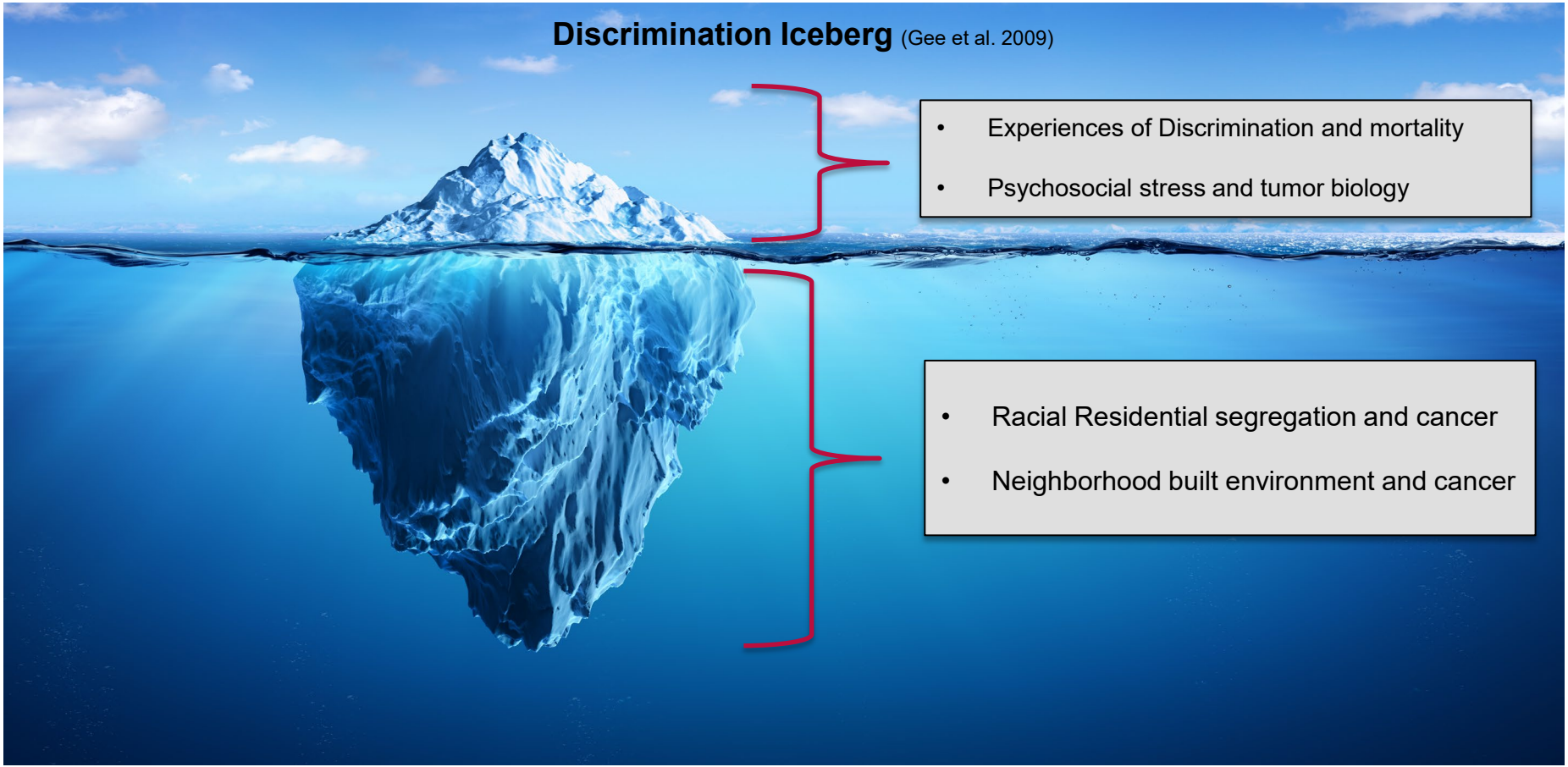
- Policies are needed to resolve adverse socioenvironmental conditions and determinants that contribute to racial inequities throughout the **entire continuum of care**

Discrimination Iceberg (Gee et al. 2009)



Gee GC, Ro A. Adapted from Racism and Discrimination. In: Trinh-Shevrin C, Islam NS, Rey MJ, eds. *Asian American Communities and Health: Context, Research, Policy and Action*. San Francisco, CA: Jossey Bass; 2009.

Discrimination Iceberg (Gee et al. 2009)



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- Koya P. Ferrell, MS
- Jacquita N. Johnson, MPH
- Allana T. Forde, PhD
- Faustine Williams, PhD

Questions?

Discrimination, Residential Segregation, and Risk of Mortality

www.cancer.gov

www.cancer.gov/espanol

Race and Educational attainment

- Disparities exists
  - Black college educated men had a lower life expectancy than their White male counterpart of similar education level (Olshansky, 2012)
  - Black women with a college degree have a higher infant mortality rate than most other racial groups who have not completed high school (Fishman, 2021)
  - COVID-19 Pandemic and Life expectancy

(Raul De Los Santos/Unsplash)

Background

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ark

Check for updates

Association between preexisting mental illnesses and mortality among medicaid-insured women diagnosed with breast cancer

Wayne R. Lawrence, DrPH [a,*], Margaret Gates Kuliszewski, ScD [a,c], Akiko S. Hosler, PhD [a], Matthew C. Leinung, MD [b], Xiuling Zhang, PhD [c], Wangjian Zhang, PhD [a], Zhicheng Du, PhD [a], Maria J. Schymura, PhD [a,c], Francis P. Boscoe, PhD [a]

Xiuling Zhang , ...

Guang-Hui Dong

Trends in Cancer Mortality

- Demographic characteristics and underlying causes of death were ascertained from national death certificate data from the National Center for Health Statistics
- Deaths categorized codes by SEER Cause of Death Recodes
- Focused on overall cancer mortality and leading national cancer site causes of death
- Estimated age-adjusted mortality rates by age group, sex, and cancer cause of death
- Joinpoint Regression Program was used to estimate Average Annual Percent Change (AAPC) in mortality rates, representing the summary measure from 1999 to 2019.

Experiences of Discrimination and Mortality

- It is plausible that this psychosocial stress may increase mortality risk

  - Discrimination relationship with mortality risk factors
    - Tobacco use
    - Cardiovascular disease
    - Metabolic disorders (e.g., type 2 diabetes)
    - Cardiovascular disease

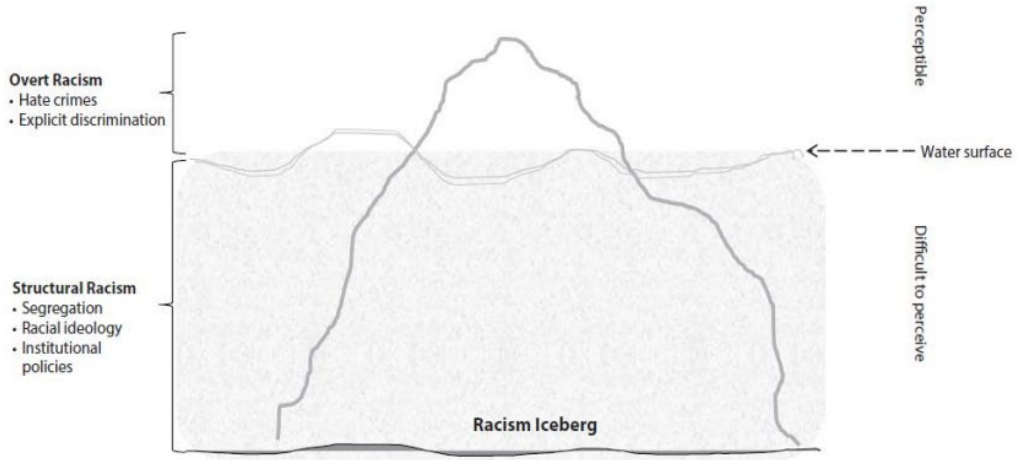
<u>Cardiovascular mortality?</u>

- Emerging studies have reported a link between discrimination and incident cardiovascular disease (CVD), as a result of
  - Heightened vascular inflammation
  - Endothelial dysfunction

Racism

(Braveman et al., *Health Affairs*, 2022)

APPENDIX EXHIBIT 1. The racism iceberg, with systemic racism as the hidden base



Source: Gee GC, Ro A. Racism and discrimination. In: Trinh-Shevrin C, Islam NS, Rey MJ, eds. *Asian American Communities and Health: Context, Research, Policy and Action*. San Francisco, CA: Jossey Bass; 2009. Adapted with permission from Wiley. Copyright © 2009 by John Wiley & Sons, Inc. All rights reserved.

Racism: "the state-sanctioned and/or extra-legal production and exploitation of group-differentiated vulnerability to premature death, in distinct yet densely interconnected political geographies" – Dr. Ruth Gilmore

Questions?

The Making of a Health Disparities Researcher

LORNA H. MCNEILL

Professor & Chair, Department of Health Disparities Research

I am a…

- Community-engaged Health Disparities/Equity Researcher
- Obesity Researcher
- Health Disparities/Equity Leader
- Mentor

Career Path

Background

- Daughter of Jamaican immigrants; first child born in US
- From Roosevelt, NY – small all-Black town on Long Island.
- Poor education; little to no health care

Undergraduate/ PhD/Postdoc

- Undergraduate – UNC-Chapel Hill
- MPH – UNC-Chapel Hill
- PhD – Saint Louis University, SPH
- Postdoctoral Fellowship – Harvard School of Public Health

Academic Positions

- Assistant Professor, MD Anderson, 2006-2012
- Associate Professor, MD Anderson, 2012-2019
- Professor, MD Anderson, 2019-Present
- Department Chair, MD Anderson, 2017

Health Disparities Community-engaged Researcher

Project CHURCH: Creating a Higher Understanding of Cancer Research and Community Health

1

Research study: investigate the role of biological, behavioral, social, and environmental factors on minority health and cancer disparities among African Americans

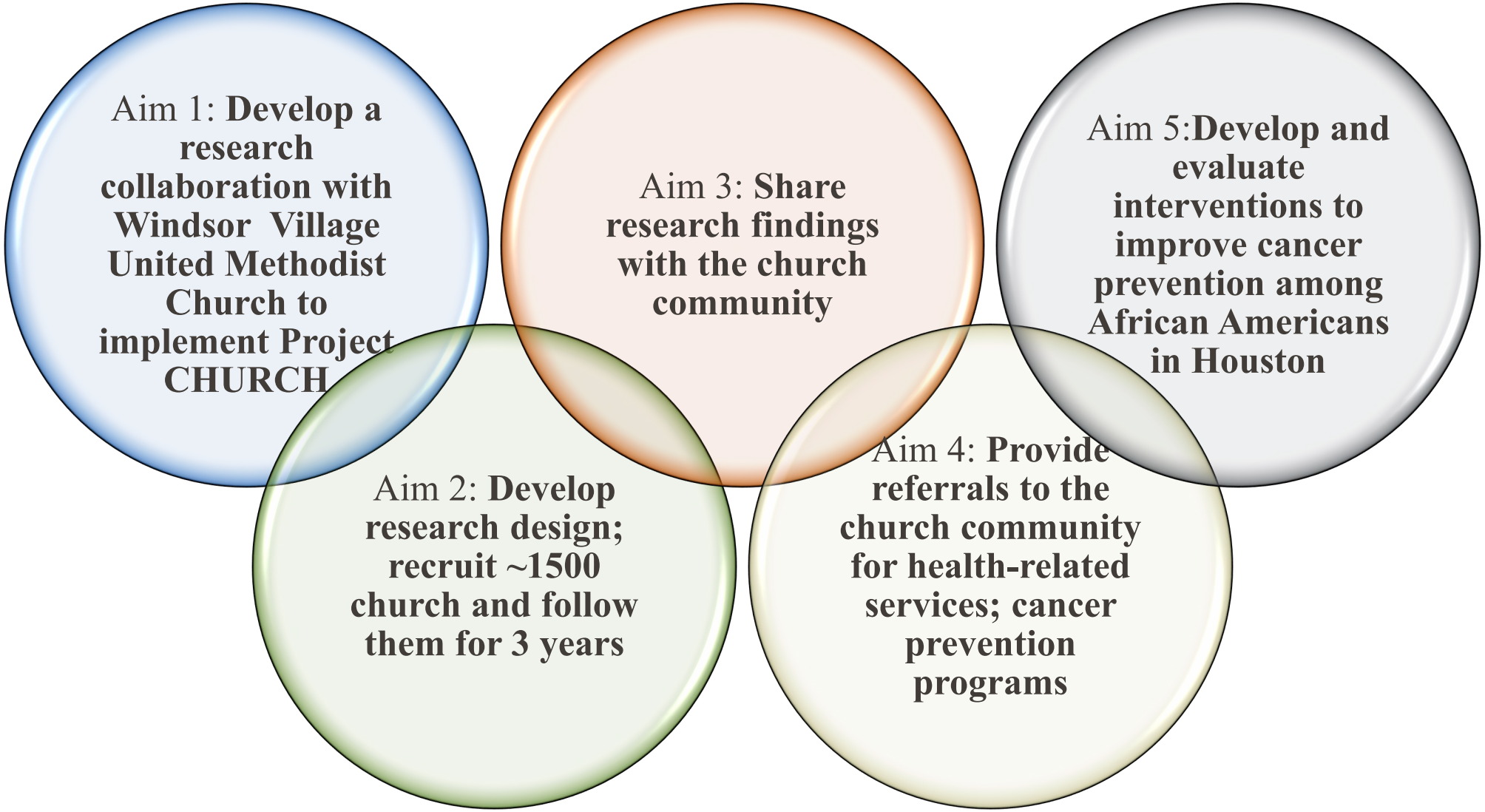
2

Long term goal: use this knowledge to help African Americans in the Houston area reduce their risk for cancer and improve quality of life

3

Partnership: create a longstanding mutually-beneficial relationship for future collaborations and to increase opportunities for African Americans to participate in cancer research

Project CHURCH Aims



Risk Reduction with African American Faith-Based Communities of Houston: Project CHURCH

2008
Project CHURCH N=2,500

2010
Pilot Studies

2014
A faith-based partnership to address obesity in African American families (R13)

2016
NON National Outreach Network supplement (P30)

2017
Community scientist program (CTSA - U54 Program)

2018
A family-based approach to reducing obesity risk among African American families (R21)

2018
A peer and family-based approach to obesity in African American families (ACS-RSG)

2019 & Beyond
Clinical trials navigators and additional African American community liaisons

Identify opportunities for HPV Vax education in AA (P30 NON)

New partnerships to exploring AA disparities in rural Texas (P30 NON)

Obesity Researcher

9/3/20XX

Behavior Settings

- Behavior settings are the physical and social contexts in which behavior occurs
- Examples include:
  - Home
  - Schools
  - Neighborhood
  - Parks
  - Recreational facilities
  - Workplace
  - Healthcare settings
  - Residential facilities, i.e., public housing, senior homes
  - Churches

What do we know about the social contextual environment?

- Social support/networks
- Social cohesion/social capital
- Neighborhood socioeconomic status
- Seeing people exercise
- Marital status
- Few children
- Multiple roles

What do we know about the physical environment?

- Safety from crime
- Safety from traffic
- Availability of facilities
- Sidewalks/footpaths
- Shops within walking distance
- Land-use mix

Sample obesity intervention studies

Churches

Sister ACTive: Increasing physical activity through Social Support

Sister ACTive

"... Therefore glorify God in your body, and in your spirit, which are God's" (1 Corinthians 6:20).

Health Clinics

Path to Health: Health coaching to select commercially-available weight management programs

Neighborhoods

Walking Trails: Reasons for using neighborhood walking paths for physical environmental factors

Health Disparities Leader

Build capacity to advance health equity

- Department chair, Department of Health Disparities Research
- Director, Center for Community-engaged Translational Research
- Co-investigator/Core Lead – CTSA Community Engagement
- CCSG Associate Director, Cancer Health Disparities & Community Outreach
- MD Anderson strategic plan for health equity
- Serve on local and national advisory boards
- Serve my community
- In 2020, helped to support 40 grant applications focused on health disparities research

Mentor

9/3/20XX

Current and Prior Mentees

Dr. Scherezade Mama

Tenure-track Asst Prof at Penn State

Tenure-Track Asst Prof, MD Anderson Cancer Center

K07; American Institute for Cancer Research; NIH R01 Pending

Dr. Dalnim Cho

Tenure-Track Asst Prof, MD Anderson Cancer Center

DoD Prostate Cancer Grant, NIH R21

Dr. Natalia Heredia

Tenure-Track Asst Prof, UTHealth Health Science Center at Houston, School of Public Health

Prevent Cancer Foundation; K01 Pending

Dr. Ivan Wu

Tenure-Track Asst Prof at University of Minnesota School of Public Health

NIMHD K99/R00

Dr. Demetria McNeal

Tenure-Track Asst Prof, School of Medicine, University of Colorado Anschutz Medical Campus

CTSA Diversity KL2

Good mentors

Tell you the truth; *be open and listen*

Gives you opportunities; *say yes to most*

Shares their ideas; *being innovative can be challenging initially*

Help you grow in areas you are weak; *know your strengths AND weaknesses*

Help you run your own race; *social comparison kills dreams and spirits*

Good mentorship is the magic glue