Creating Infrastructure to Support Research in Equity, Aging, Cancer and Health

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I-REACH LEADERSHIP

Dr. Lucile Adams-Campbell, Dr. Traci Bethea - Georgetown

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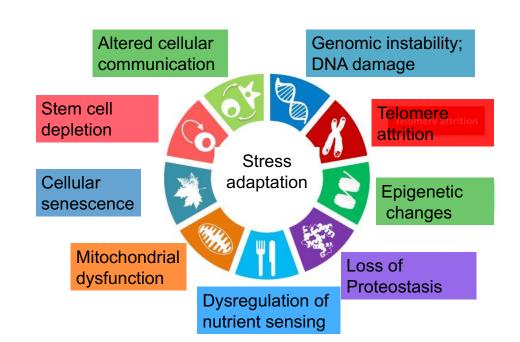
Dr. Jay Magaziner, Dr. Joanne Dorgan and Dr. Alice Ryan - University of Maryland and Greenebaum Cancer Center.

Dr. Carroll – UCLA

No Conflicts of Interest to Disclose

I-REACH MISSION

Apply transdisciplinary knowledge about aging across the life span to improving the lives of our cancer patients and their families and achieve equity in cancer outcomes



HOW WILL WE ACCOMPLISH THIS MISSION?

Provide a community and infrastructure to:

- 1. Expand the scientific workforce and increase the proportion of under-represented minority (URM) scientists conducting research at the crossroads of aging, disparities and cancer
- 2. Accelerate knowledge essential to increasing equity and improving the health of older cancer survivors and reducing racial/ethnic disparities

OBJECTIVES

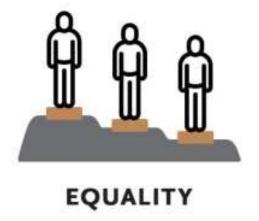
- Define equity
- Present background on minority aging
- Present overview of I-REACH
- Discuss opportunities for synergy with CARG

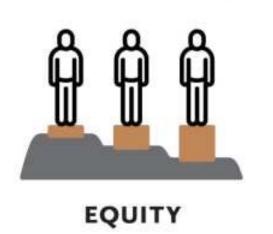
DEFINITIONS

Heath disparities - differences between in health between population groups (e.g., based on age, gender, race/ethnicity, SES, geography, disability, sexual identify, etc.)

(Minority) health - health within a group

Equity – ensuring resources to re-dress unequal "playing field"







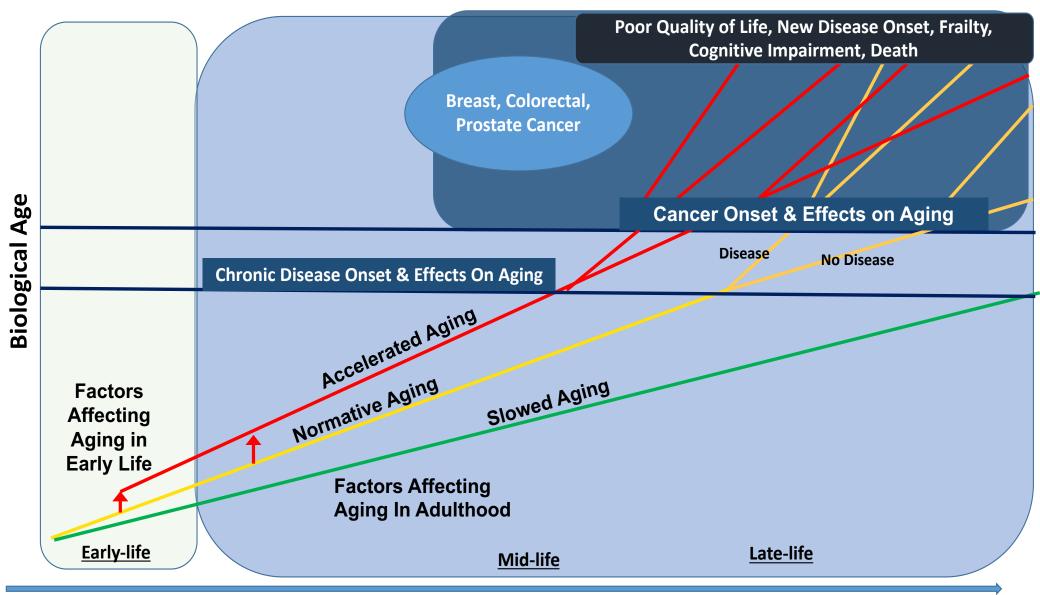
THE "ETHNOGERIATRIC IMPERATIVE"

- Numbers of older race/ethnic minority cancer survivors in the US are increasing:
 - Minority populations growing faster than nonminorities
 - All race/ethnic groups are living longer
 - Cancer rates increase with age for all race/ethnicities
- 99% increase in older minority survivors expected (vs. 31% for whites) by 2030

MINORITY AGING

- On average, minorities age faster than nonminorities due to many complex multilevel factors:
 - Higher chronic life stress
 - More experiences of discrimination
 - Greater multimorbidity
 - More limits in opportunity and access to care
- Cancer and Rx are disease drivers of aging and interact with life course aging

LIFE COURSE FRAMEWORK



IMPLICATIONS OF MINORITY AGING FOR OLDER CANCER SURVIVORS

- Compared to Whites, older minority cancer survivors have
 - Lower rates of receiving recommended treatment
 - Less survivorship care
 - Greater declines in function
 - More fatigue
 - Worse stage-specific survival
- Disparities are exacerbated by:
 - Evidence gaps due to low study enrollment of older minority survivors
 - Low number of scientists, especially minority scientists focused at nexus of aging, disparities and cancer

MULTI-LEVEL DETERMINANTS OF AGING & HEALTH

Biological: Genotype, ancestry, disease, obesity **Behavioral:** smoking, activity, diet, sleep, coping

Environment: Chronic life stress, adverse childhood events, pollution, built environment, discrimination, education, support

Structure/System: Few URM scientists, structural racism affecting access to quality care and healthy diet, policies

CANCER

- Time from diagnosis
- Stage, subtype
- Surgery, radiotherapy, systemic therapy

ACCELERATED CELLULAR AGING

- DNA damage
- Epigenetic age, telomere attrition
- Cell senescence (P16^{INK4A})
- Glycation, DAMPs, SASPs
- Inflammation and transcription control pathways

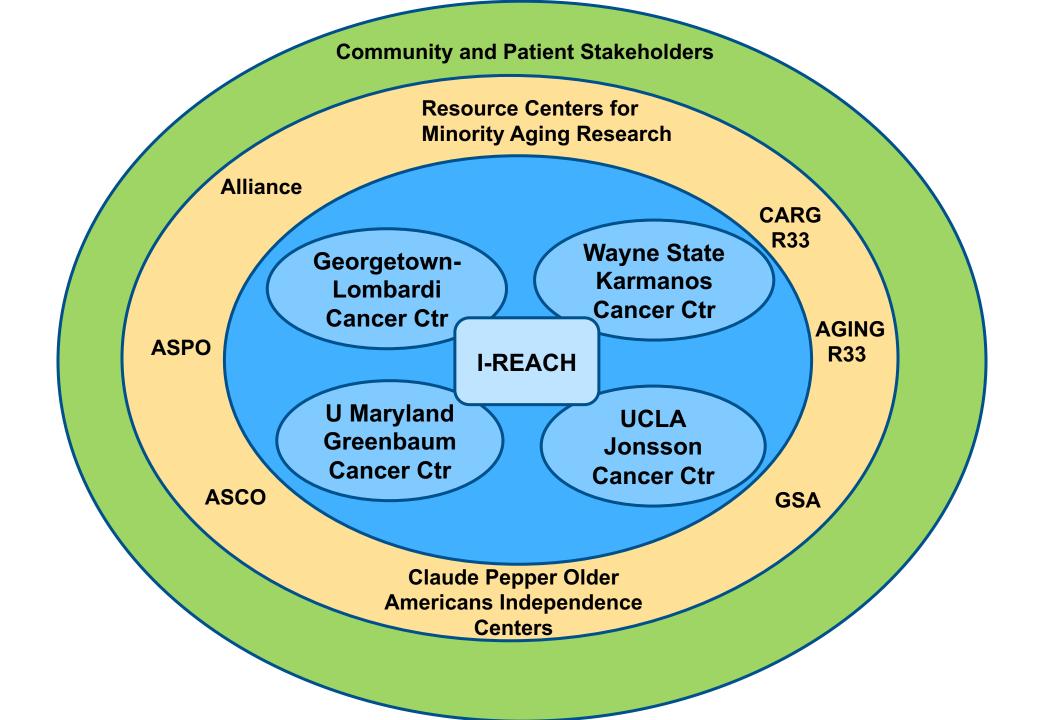


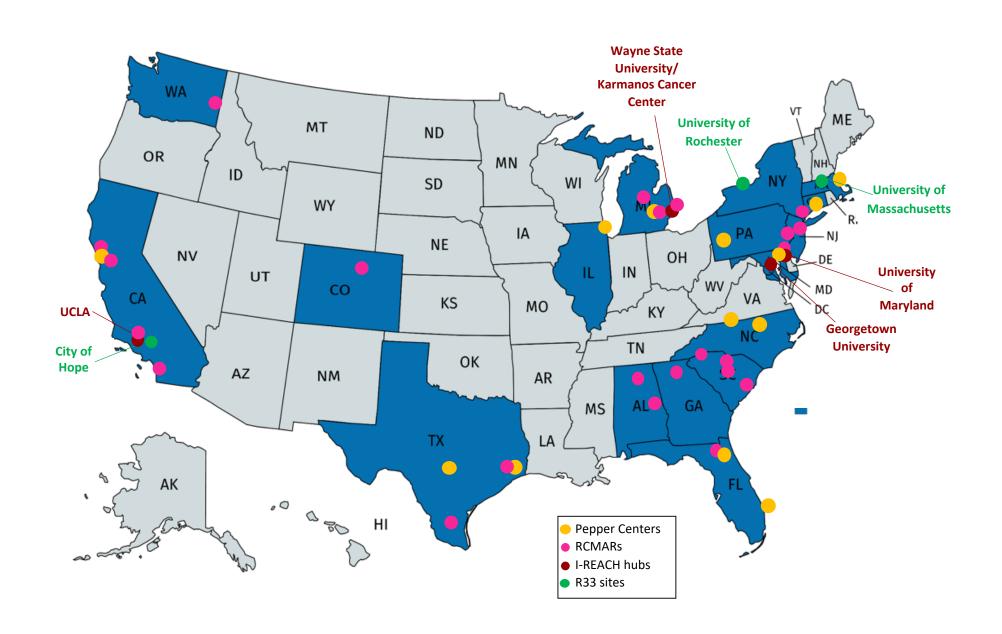
DISPARITIES IN SURVIVORSHIP OUTCOMES

- Quality of life (QOL)
- Daily functioning
- Fatigue, pain
- Frailty, disease
- Recurrence, death

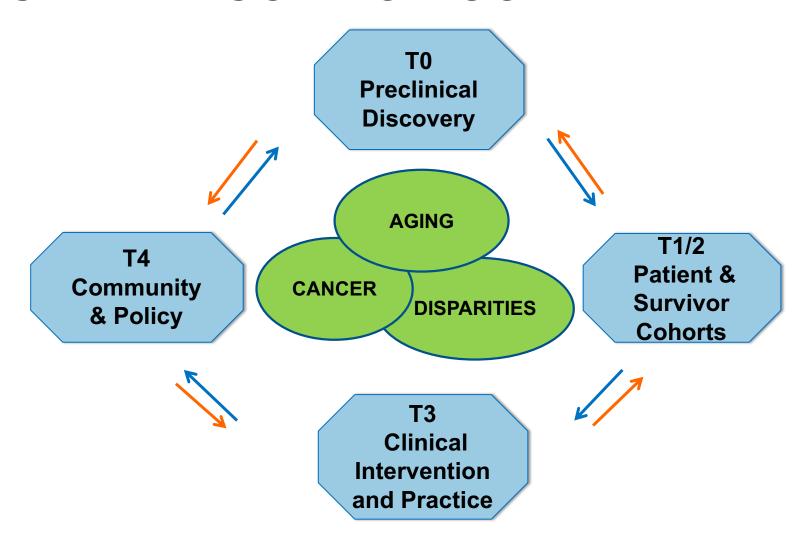
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MULTIDIRECTIONAL INTERACTOME ACROSS DISCIPLINES WITH A COMMON GOAL



I-REACH CORES AND PROGRAMS

- Stakeholder Core
- Data Core
- Career Core
- Scholar Program
- Pilot Program

STAKEHOLDER CORE

Ensure activities reflect needs of our patients, caregivers and communities

- Reflect age and racial/ethnic diversity
- Reflect a variety of perspectives
- Develop charter
- Work within all Cores, Programs
- Paid for time; receive research training

CAREER CORE

Engage scientists from different disciplines and career stages to study contributions of multilevel factors to the health of older cancer survivors and identifying potential actionable intervention targets to reduce disparities and increase health equity

- Providing CIMER mentoring program for all members (mentoring, culturally aware mentoring, becoming a training facilitator)
- Develop a foundational curriculum knowledge in aging, disparities and cancer for Scholars and mentors using distance learning.

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DATA CORE

Enable use of secondary data to fill knowledge gaps in our disparities framework

- Provide links and data access
- Provide statistical consultation

PROGRAMS

- Scholars program for pre-doctoral, doctoral and early stage to senior scientists, including URM scientists and support career success.
- Pilot Program to award and guide stakeholderinformed grants addressing gaps in our multi-level framework

POTENTIAL OPPORTUNITIES FOR SYNERGY WITH CARG

- Share I-REACH mentor-mentee curriculum to CARG members that join I-REACH
- Share disparities, aging and cancer curriculum to CARG members that want to join I-REACH
- Sponsor joint (larger) pilots
- Provide data to CARG
- CARG members become I-REACH scholars and use travel awards

DISCUSSION

