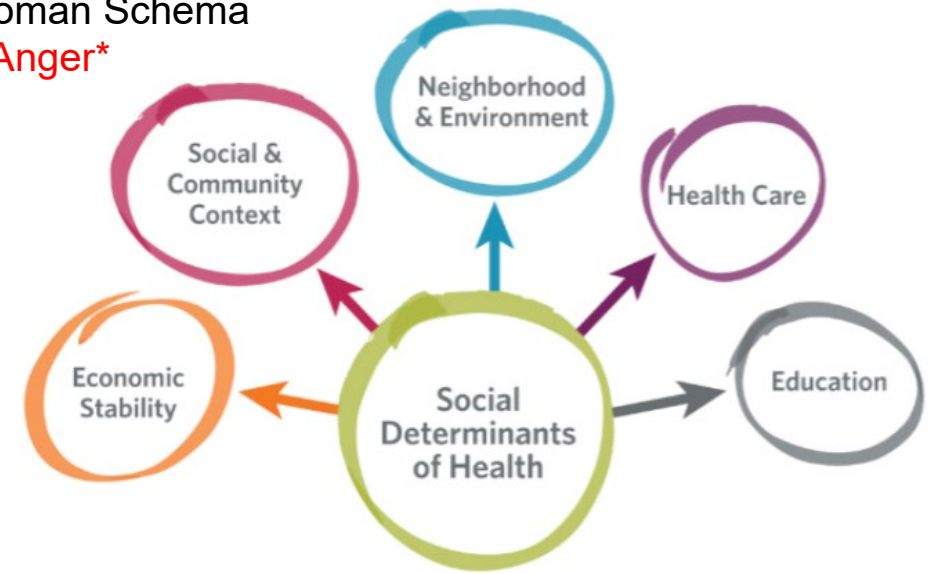


Determinants of aging outcomes in African Americans

Lisa L. Barnes, PhD
Rush University Medical Center

- Contextual/Neighborhood factors
 - Residential segregation
 - Resources (access to parks, green space)
 - **Disorder/cohesion***
 - Safety & security
 - **Social vulnerability***
- Stressors
 - **Discrimination***
 - Racism vigilance
 - **Perceived stress***
 - Loss
 - Financial fragility
 - Goal striving stress
- Early-life factors
 - **School segregation experience***
 - **Adversity***
 - **Occupation (prestige/complexity, job strain)***
- Psychosocial coping
 - **John Henryism***
 - Psychological resilience
 - Optimism
 - Hopefulness
 - Super Woman Schema
 - **Hostility/Anger***



*Risk factors that the Rush group has published on African Americans

Neighborhood environment

Social Vulnerability Index

- Socioeconomic status
- Household characteristics
- Racial/ethnic minority status
- Housing type & transportation

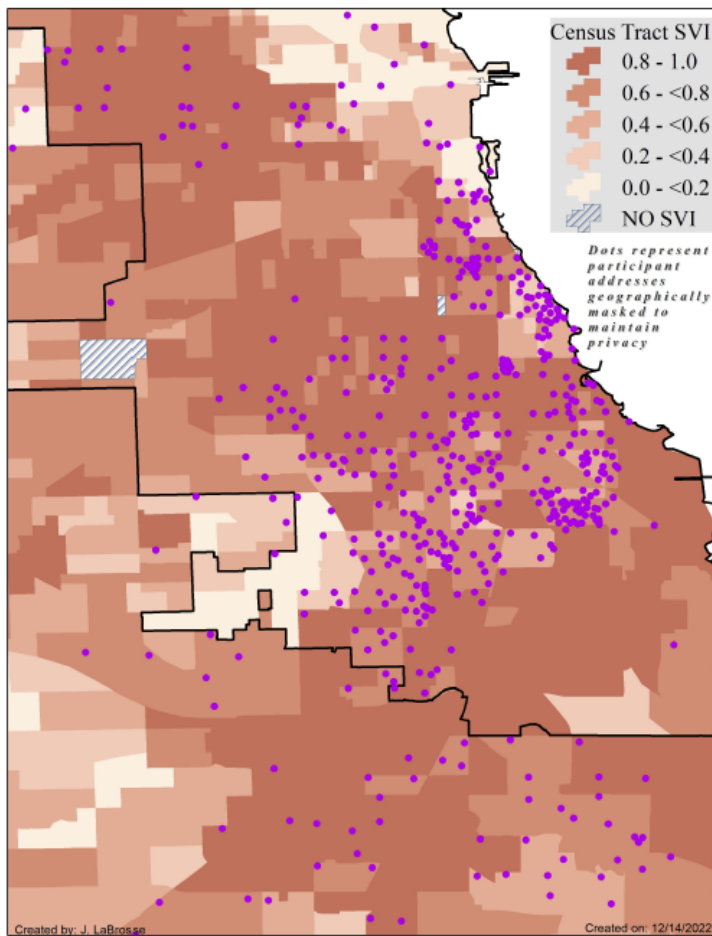
****Higher neighborhood-level social vulnerability was associated with lower baseline level of global cognition in African Americans (-0.019, SE=0.09, $p<.05$) and episodic memory (-0.027, SE=0.11, $p<.05$)**

Lamar, Kershaw, Leurgans et al., Front Hum Neurosci, 2023

Home Owners' Loan Corporation (HOLC) grading

- Grade A – Green “Best neighborhood”
- Grade B – Blue “Still desirable”
- Grade C – Yellow “Definitely declining”
- Grade D – Red “Hazardous”

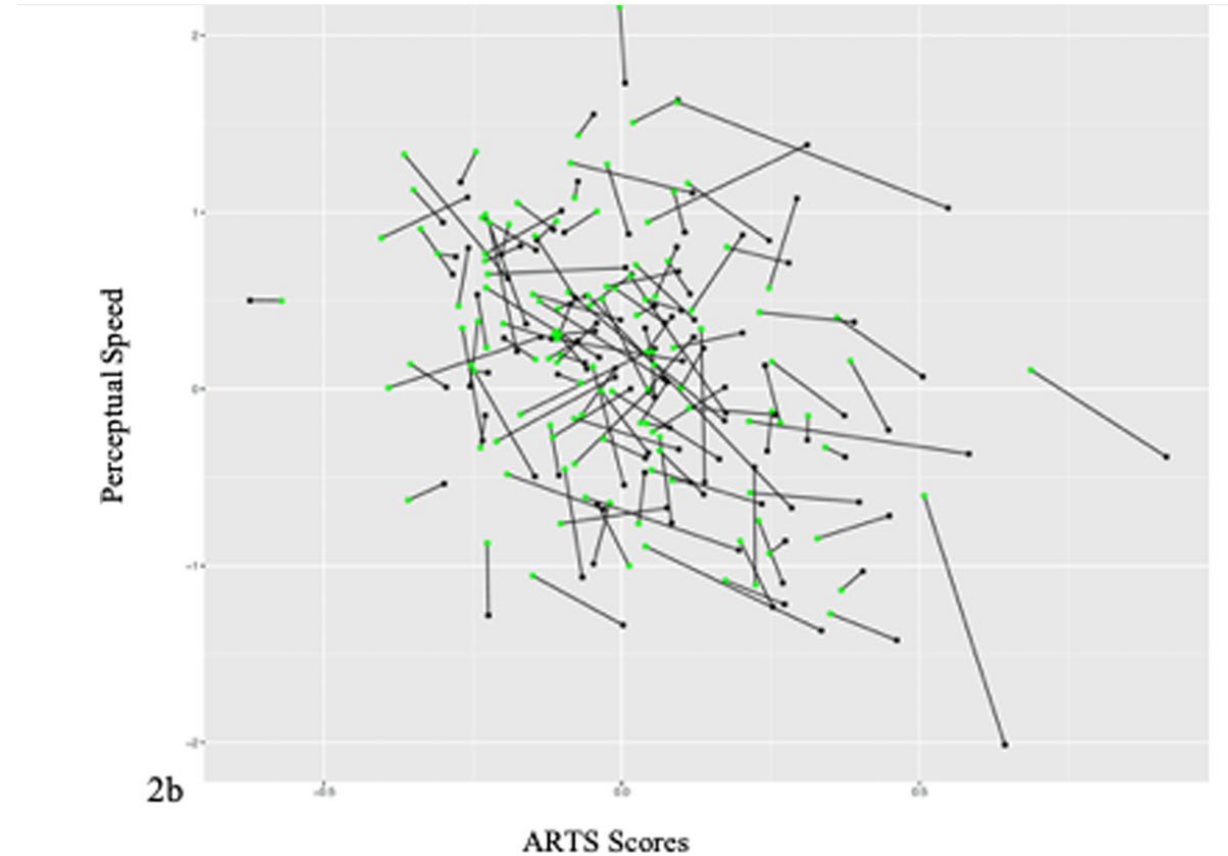
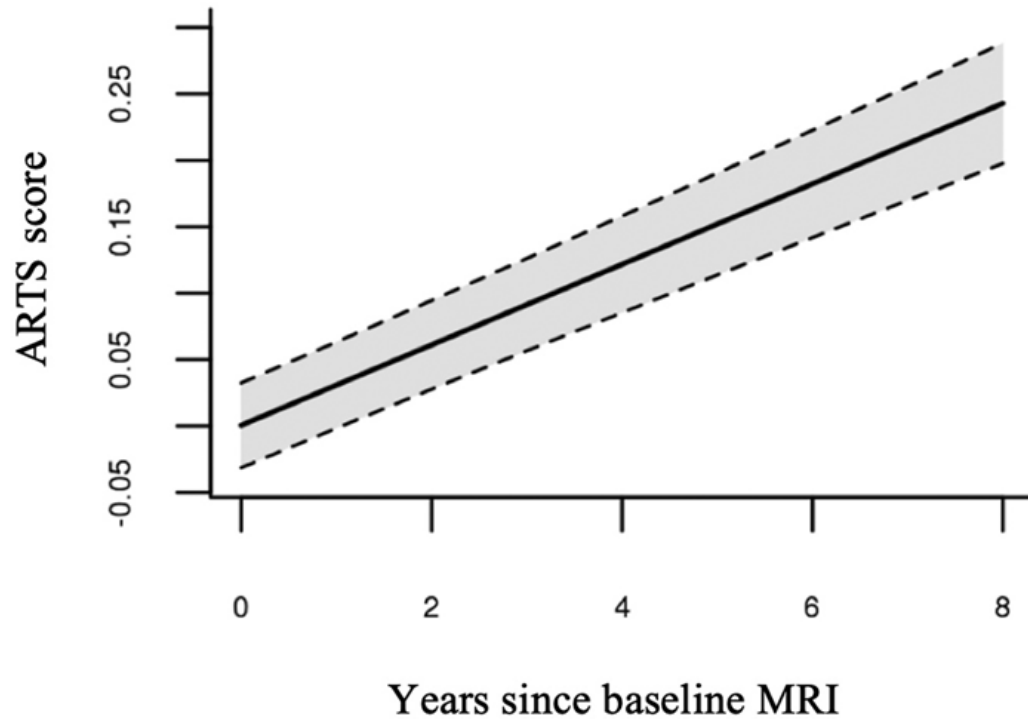
****Historic gradings + contemporary segregation patterns associated with level and rate of decline (Lange-Maia et al., in preparation)**



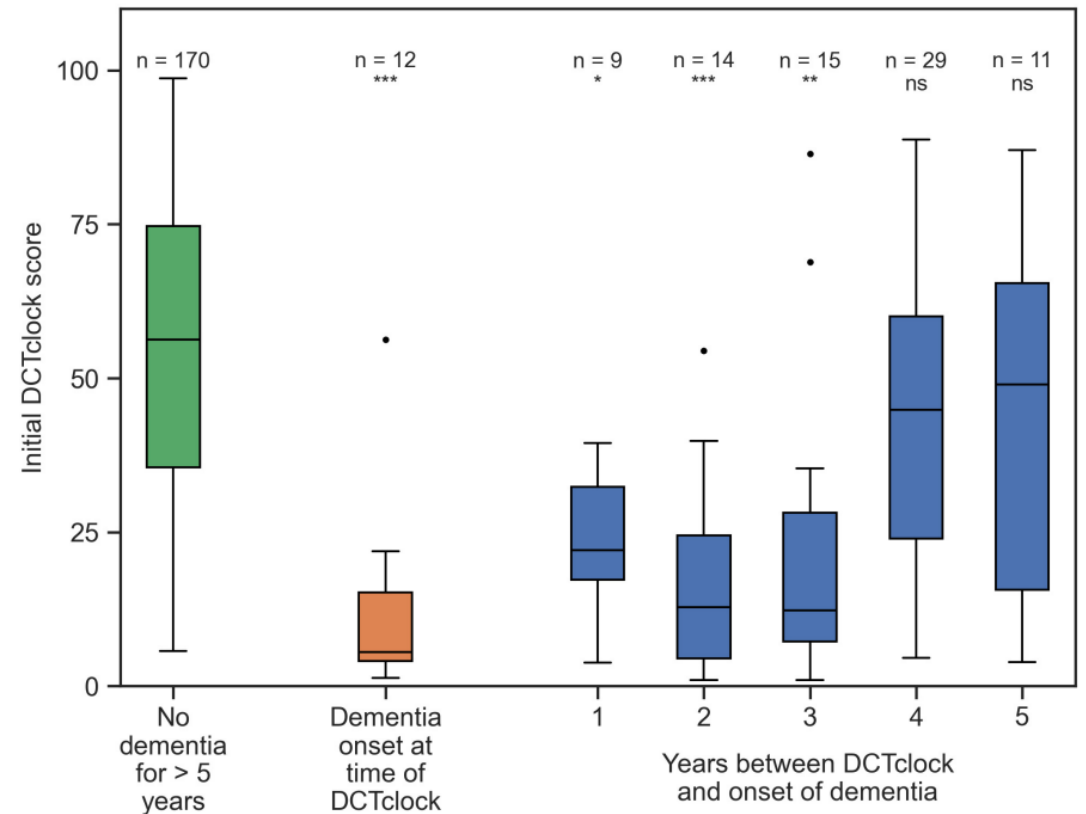
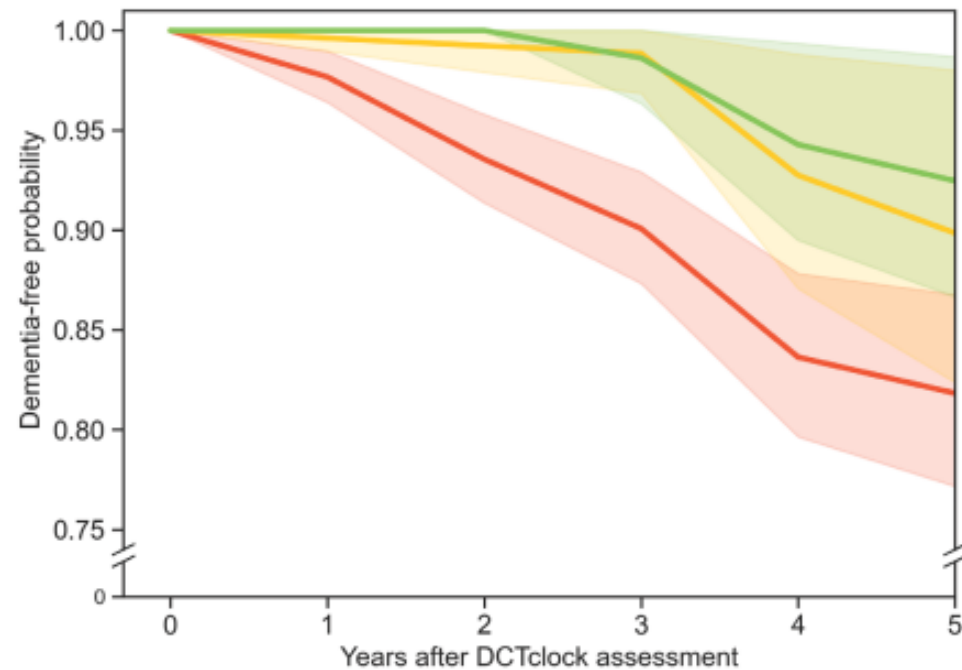
Purple dots represent 590 African American participants in MARS, Chicago metropolitan area

What can we learn from pathology in diverse populations?:

Arteriolo sclerosis increases over time, and faster changes in arteriolo sclerosis associated with faster decline



Novel tools: Digital clock drawing test can estimate the risk of dementia conversion up to 5 years prior to a clinical diagnosis in African Americans



Summary: promising areas that should be studied further

- Social determinants to understand how they may modify cognition and risk of ADRD, and ultimately help eliminate disparities
- Tools to measure underlying biology that we know is related to cognition and may impact risk of disease
- Novel digital tests and metrics to measure cognition and risk of disease
- Identify resilience markers as targets to delay ADRD
- Examine heterogeneity across intersections of social identities (e.g., race x gender; race x education or income)