AGENDA

- **Welcome**

- **Overview of Health Disparities**
  - Elena Martinez, PHD, UC San Diego Moores Cancer Center

- **Gastric Cancer: Examining Incidence, Survival, and Molecular Disparities**
  - Winta Mehtsun, MD, MPH, UC San Diego School of Medicine

- **Understanding Cancer Etiology Among Hispanic/Latino Heritage Groups: The Hispanic Community Health Study/Study of Latinos (HCHS/SOL)**
  - Humberto Parada, PHD, San Diego State School of Public Health

- **Question & Answer Session**

- **Closing Remarks**

MEETING REMINDERS

AUDIO
Please make sure your line is muted throughout the duration of the summit.

ZOOM CHAT
Use the chat to introduce yourself & ask questions throughout the roundtable!

MEETING RECORDING
Slides, recording and resources will be shared with all attendees

OVERVIEW OF HEALTH DISPARITIES IN SAN DIEGO

ELENA MARTINEZ, PHD

Associate Director, Population Science, Disparities and Community Engagement, Moores Cancer Center at UC San Diego

Cancer Health Disparities

- "Health disparities are preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged population." *Centers for Disease Control & Prevention*

- Populations that are most affected lack access to equal opportunities.

- Population groups include, but not limited to:
  - Race/ethnicity
  - Socioeconomic status: Poor, lack health insurance, medically underserved
  - Rural
  - LGBTQIA+

Equality, Equity, and Justice

- Unequal conditions in which people grow and live, <u>including the health system</u>

- Unfair and avoidable factors in health status
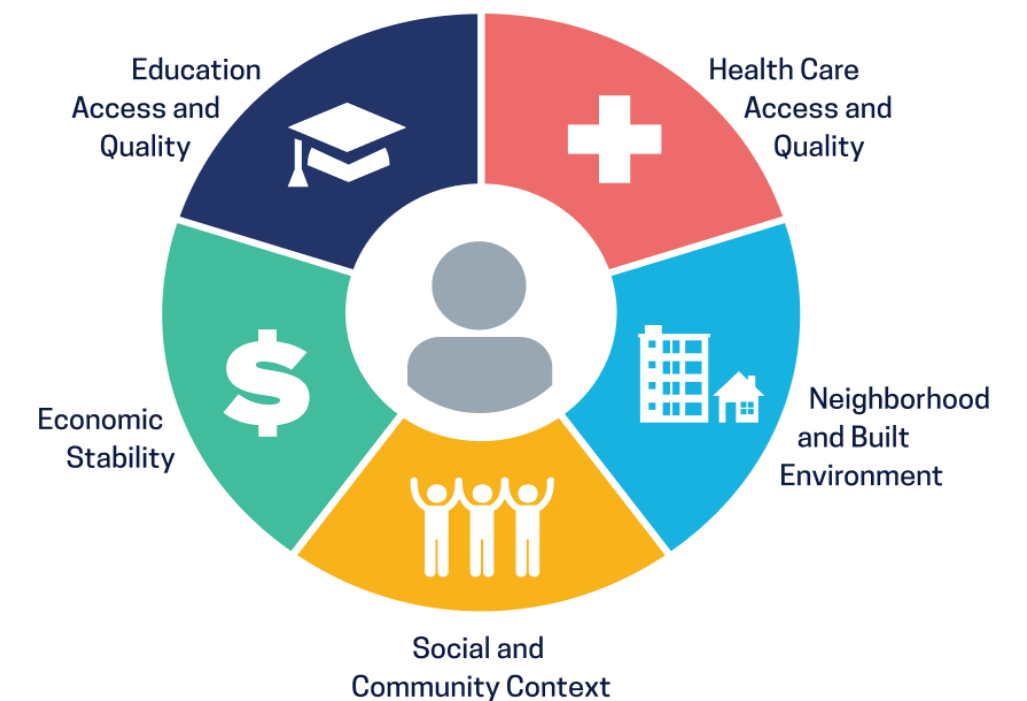
Social Determinants of Health (SDOH)

- Conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks *(Healthy People 2030)*.

- Contribute to health disparities and inequities.

- Have a major impact on people's health, well-being, and quality of life.

Social Determinants of Health

Education Access and Quality

Health Care Access and Quality

Neighborhood and Built Environment

Economic Stability

Social and Community Context

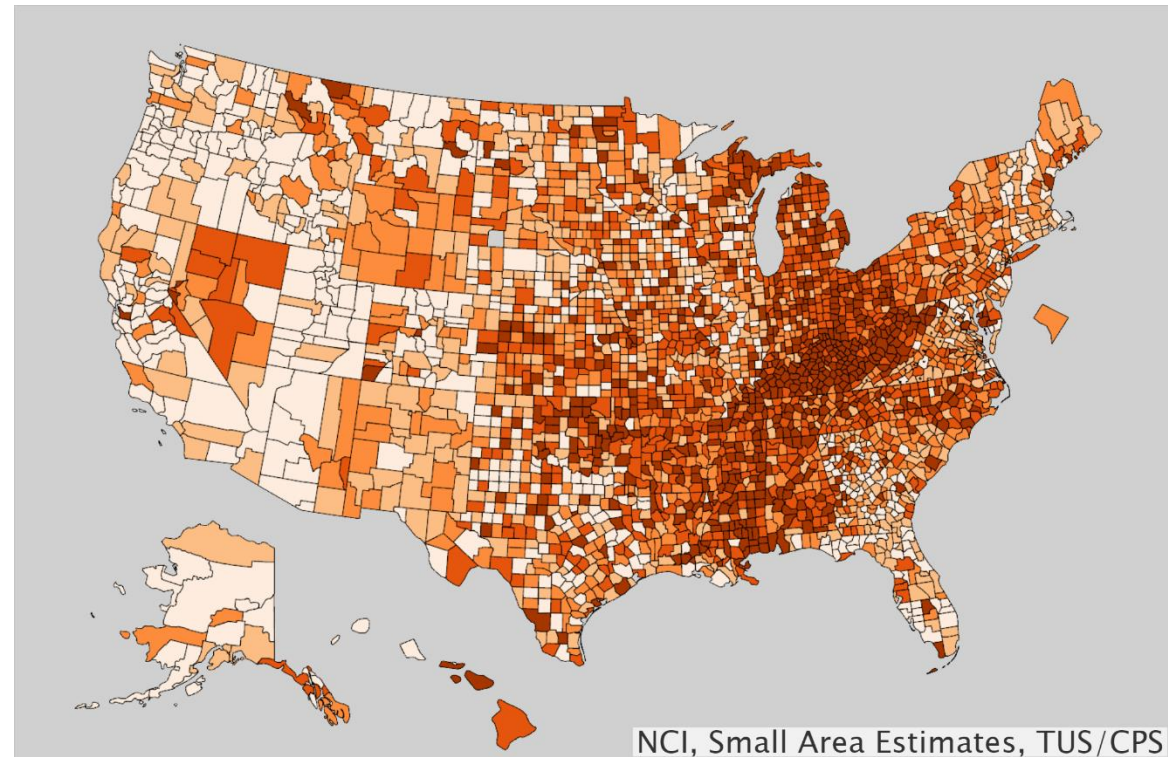Social Determinants of Health
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Healthy People 2030

Social Determinants of Health

- Safe housing and local food markets

- Educational, economic, and job opportunities

- Health care services

- Transportation options

- Public safety

- Social support

- Social norms and attitudes (e.g., discrimination, racism, and distrust of government)

- Exposure to crime, violence, and social disorder (e.g., lack of cooperation in a community)

- Socioeconomic conditions (e.g., concentrated poverty and the stressful conditions that accompany it)

- Access to mass media and emerging technologies (e.g., cell phones, the Internet, and social media)
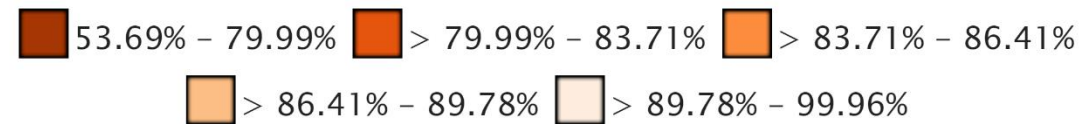

Social Determinants of Health

Education Access and Quality

Health Care Access and Quality

Neighborhood and Built Environment

Economic Stability

Social and Community Context

Social Determinants of Health
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Healthy People 2030

Zip Code Better Predictor of Health than Genetic Code

Smoke-Free Home (Age 18+)
Estimated Percent
US by County, 2014-2015

NCI, Small Area Estimates, TUS/CPS

■ 53.69% – 79.99%	■ > 79.99% – 83.71% ■ > 83.71% – 86.41%
■ > 86.41% – 89.78%	■ > 89.78% – 99.96%

Generated by https://sae.cancer.gov/tus-cps/estimates on 4/23/2023 at 8:20 am
Small Area Estimates for Tobacco Use and Policies. National Cancer Institute, DCCPS, Statistical Research & Applications Branch, released May 2016 (sae.cancer.gov). Underlying data provided by the Tobacco Use Supplement to the Current Population Survey (http://cancercontrol.cancer.gov/brp/tcrb/tus-cps/).

Death Rates for United States by County
Lung & Bronchus, 2016 - 2020
All Races (includes Hispanic), Both Sexes, All Ages

Age-Adjusted Annual Death Rate (Deaths per 100,000)
Quantile Interval

■ 9.0 to 32.0
■ > 32.0 to 39.0
■ > 39.0 to 45.0
■ > 45.0 to 52.0
■ > 52.0 to 119.0
⊠ Suppressed *

United States Rate (95% C.I.) 34.0 (34.9 - 35.0)

Healthy People 2030 Goal C-02 25.1
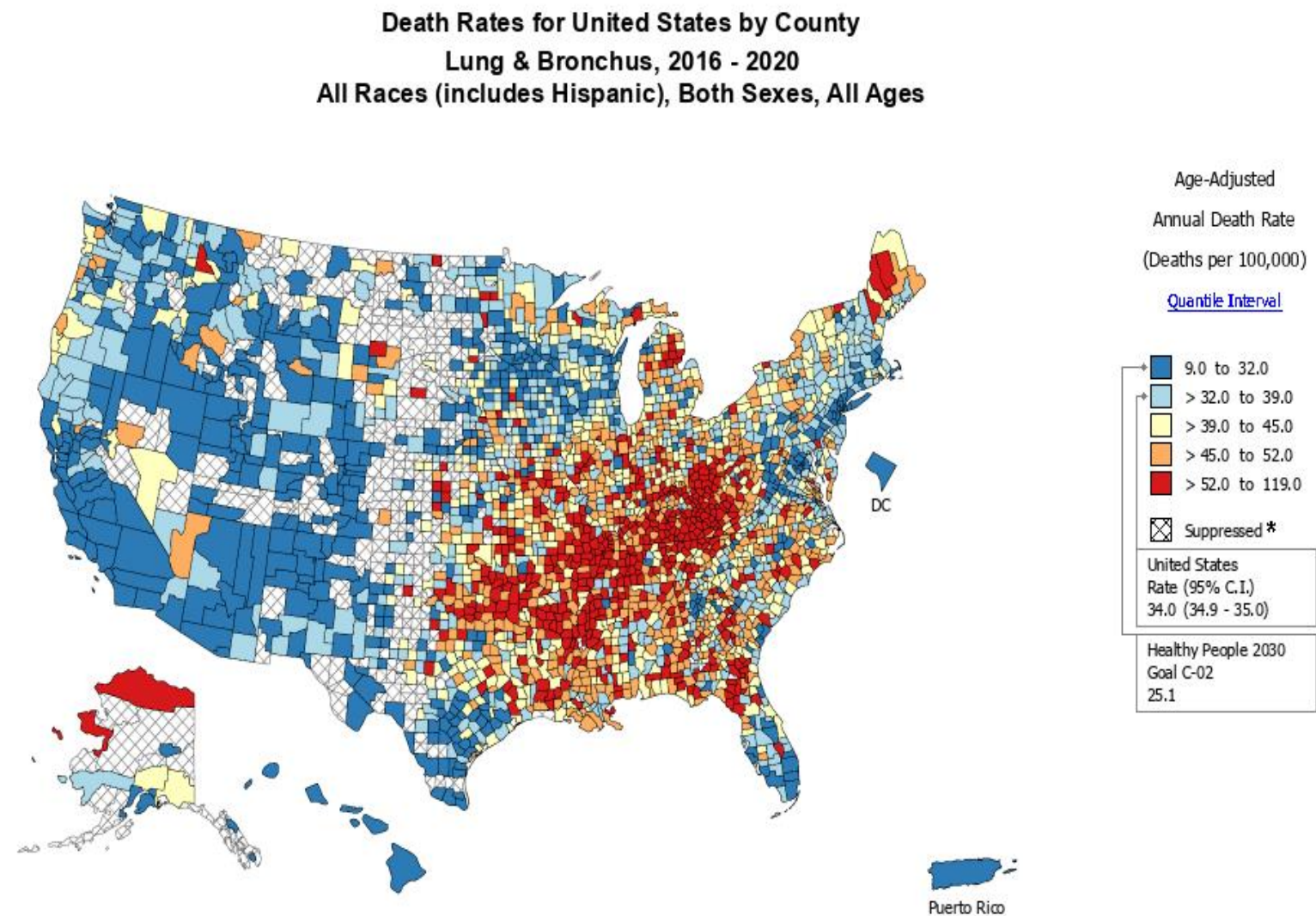
Notes:
Note: Alaska, DC, Hawaii and Puerto Rico are not drawn to scale.
State Cancer Registries may provide more current or more local data.
Data presented on the State Cancer Profiles Web Site may differ from statistics reported by the State Cancer Registries (for more information).
Source: Death data provided by the National Vital Statistics System public use data file. Death rates calculated by the National Cancer Institute using SEER*Stat. Death rates (deaths per 100,000 population per year) are age-adjusted to the 2000 US standard population (19 age groups: <1, 1-4, 5-9, ... , 80-84, 85+). The Healthy People 2030 goals are based on rates adjusted using different methods but the differences should be minimal. Population counts for denominators are based on the Census US Population Data File as modified by NCI.
* Data have been suppressed to ensure confidentiality and stability of rate estimates. Data is currently being suppressed if there are fewer than 16 counts for the time period.
Healthy People 2030 Goal C-02 : Reduce the lung cancer death rate to 25.1.
Healthy People 2030 Objectives provided by the Centers for Disease Control and Prevention.
Data for the United States does not include data from Puerto Rico

"Your ZNA is as important as your DNA"
Robert Winn, MD
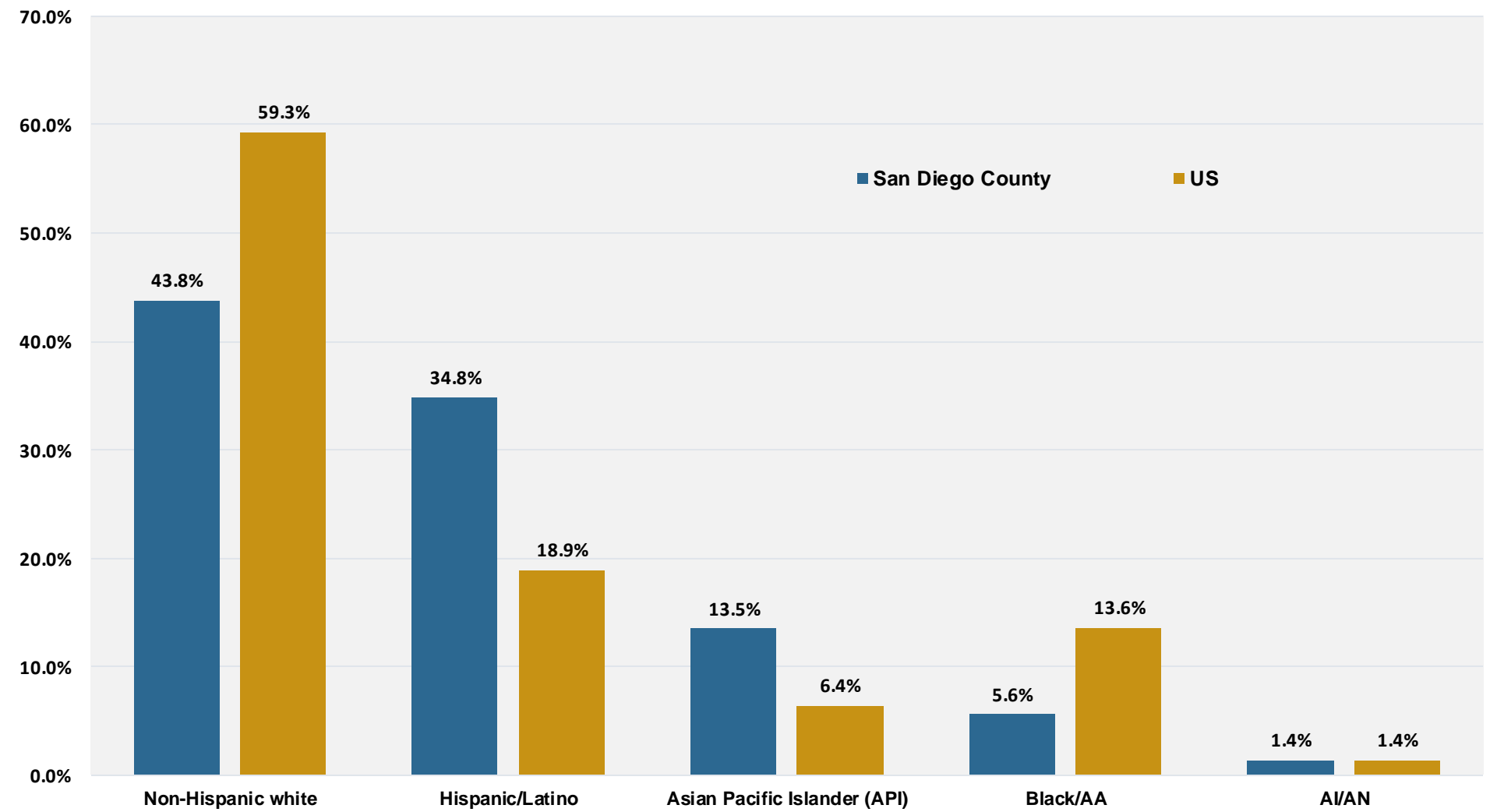
Moores Cancer Center Catchment Area

SAN DIEGO COUNTY

- 3.3 Million Residents
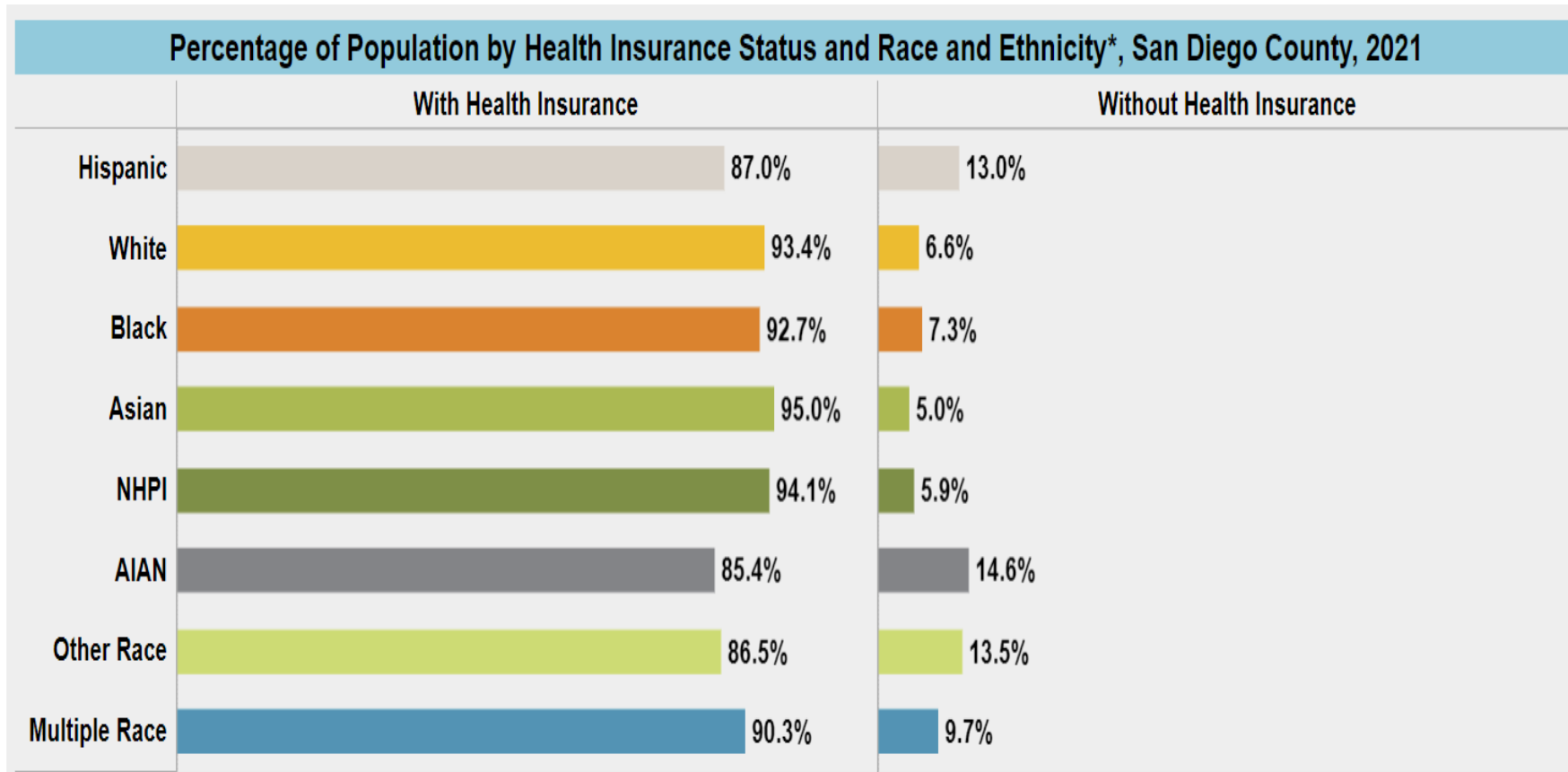- 5th Most Populous in US
- 4206 Square Miles

CATCHMENT AREA RESEARCH

Moores Cancer Center

SAN DIEGO COUNTY DEMOGRAPHIC CHARACTERISTICS MAJORITY-MINORITY BORDER REGION

■ San Diego County   ■ US

Category	San Diego County	US
Non-Hispanic white	43.8%	59.3%
Hispanic/Latino	34.8%	18.9%
Asian Pacific Islander (API)	13.5%	6.4%
Black/AA	5.6%	13.6%
AI/AN	1.4%	1.4%

Source: 2021 US Census

Social Determinants of Health in San Diego County
Health Insurance and Usual Source of Care

Percentage of Population by Health Insurance Status and Race and Ethnicity*, San Diego County, 2021

	With Health Insurance	Without Health Insurance
Hispanic	87.0%	13.0%
White	93.4%	6.6%
Black	92.7%	7.3%
Asian	95.0%	5.0%
NHPI	94.1%	5.9%
AIAN	85.4%	14.6%
Other Race	86.5%	13.5%
Multiple Race	90.3%	9.7%

Legend: Hispanic, White, Black, Asian, NHPI, AIAN, Other Race, Multiple Race

NHPI: Native Hawaiian/Pacific Islander, **AIAN:** American Indian/Alaska Native.
*Data by race and ethnicity includes possible overlap between racial and ethnic groups, as Hispanic includes population of Hispanic/Latino origin of all races and each racial group includes population of all ethnicites.
If blank, data is statistically unstable or unavailable.

Usual Source of Care (2017-2021) by Race/Ethnicity, San Diego County

	Have a usual source of care					Did not have a usual source of care				
	Hispanic	NH White	NH Black	NH Asian	NH Multiple Race	Hispanic	NH White	NH Black	NH Asian	NH Multiple Race
	83.8%	91.0%	92.0%	86.9%	91.3%	16.2%	9.0%	8.0%	13.1%	8.7%

Life Expectancy (in years) by Race/Ethnicity, San Diego County, 2021

Hispanic	79.9
NH White	80.9
NH Black	75.1
NH Asian	84.9

Legend: Hispanic, NH White, NH Black, NH Asian, NH Multiple Race
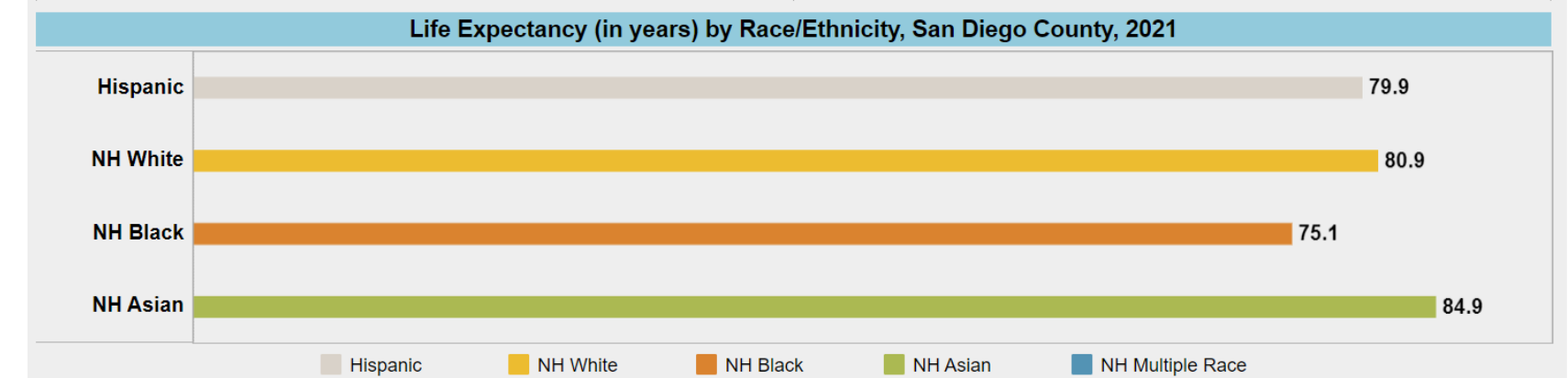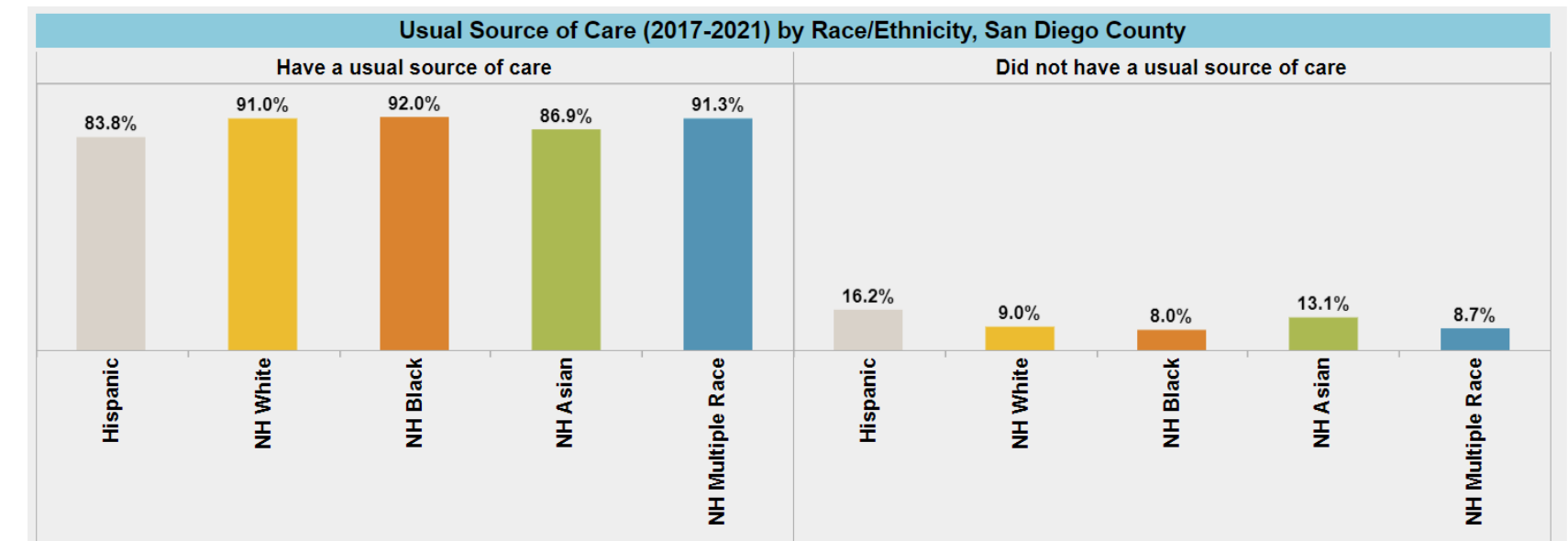
Note: **NH** indicates Non-Hispanic.
If blank, data is statistically unstable or unavailable.

Social Determinants of Health in San Diego County
Education and Poverty
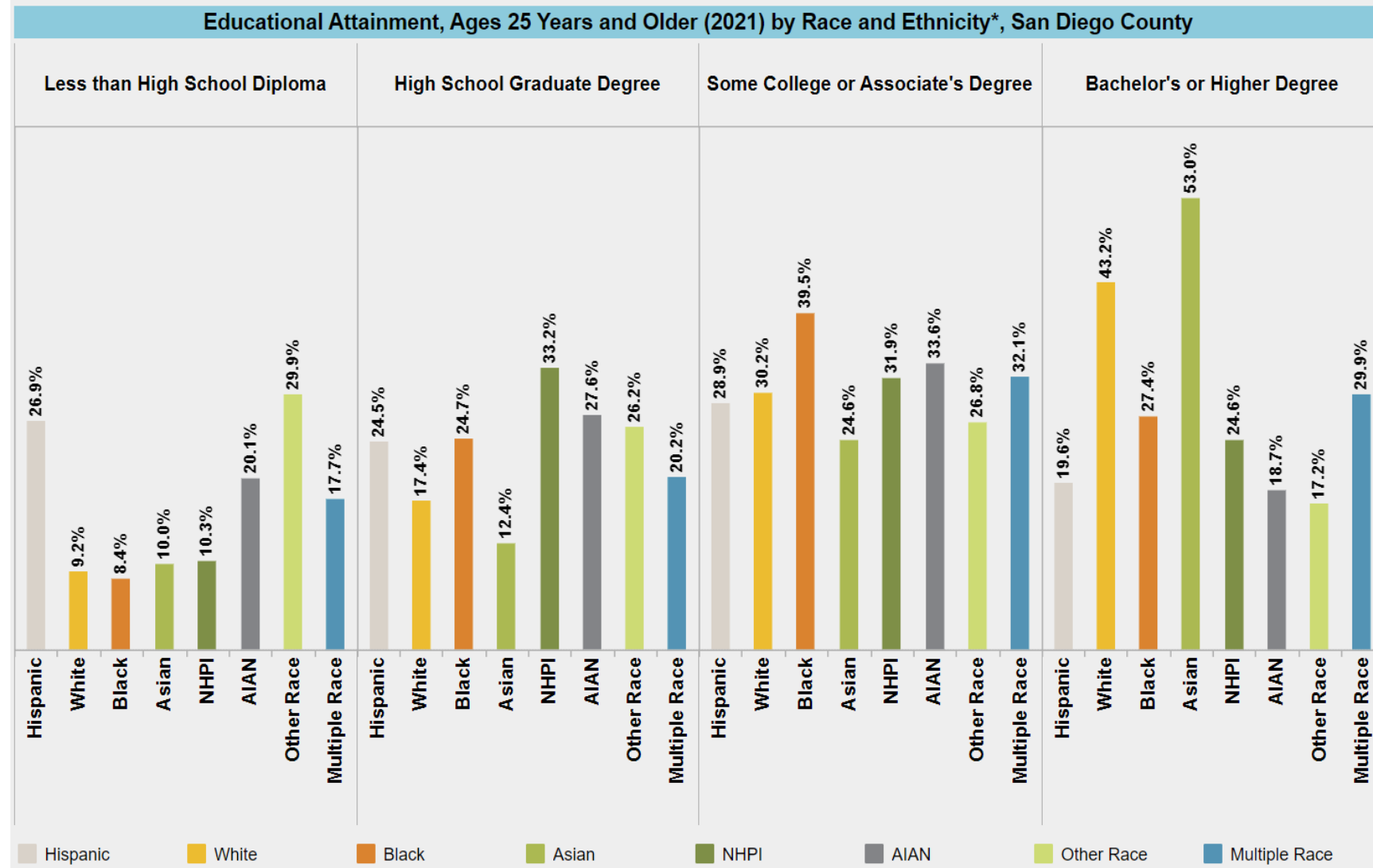
Educational Attainment, Ages 25 Years and Older (2021) by Race and Ethnicity*, San Diego County

Less than High School Diploma
- Hispanic: 26.9%
- White: 9.2%
- Black: 8.4%
- Asian: 10.0%
- NHPI: 10.3%
- AIAN: 20.1%
- Other Race: 29.9%
- Multiple Race: 17.7%

High School Graduate Degree
- Hispanic: 24.5%
- White: 17.4%
- Black: 24.7%
- Asian: 12.4%
- NHPI: 33.2%
- AIAN: 27.6%
- Other Race: 26.2%
- Multiple Race: 20.2%

Some College or Associate's Degree
- Hispanic: 28.9%
- White: 30.2%
- Black: 39.5%
- Asian: 24.6%
- NHPI: 31.9%
- AIAN: 33.6%
- Other Race: 26.8%
- Multiple Race: 32.1%

Bachelor's or Higher Degree
- Hispanic: 19.6%
- White: 43.2%
- Black: 27.4%
- Asian: 53.0%
- NHPI: 24.6%
- AIAN: 18.7%
- Other Race: 17.2%
- Multiple Race: 29.9%

Legend: Hispanic, White, Black, Asian, NHPI, AIAN, Other Race, Multiple Race

NHPI: Native Hawaiian/Pacific Islander, **AIAN:** American Indian/Alaska Native.
If blank, data is statistically unstable or unavailable.
*Data by race and ethnicity includes possible overlap between racial and ethnic groups, as Hispanic includes population of Hispanic/Latino origin of all races and each racial group includes population of all ethnicites.
Sources: U.S. Census Bureau; 2017-2021 American Community Survey 5-Year Estimates, Tables C15002B-I; C15010A-G,I; B14007A-G,I.
Prepared by: County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit, January 2023.
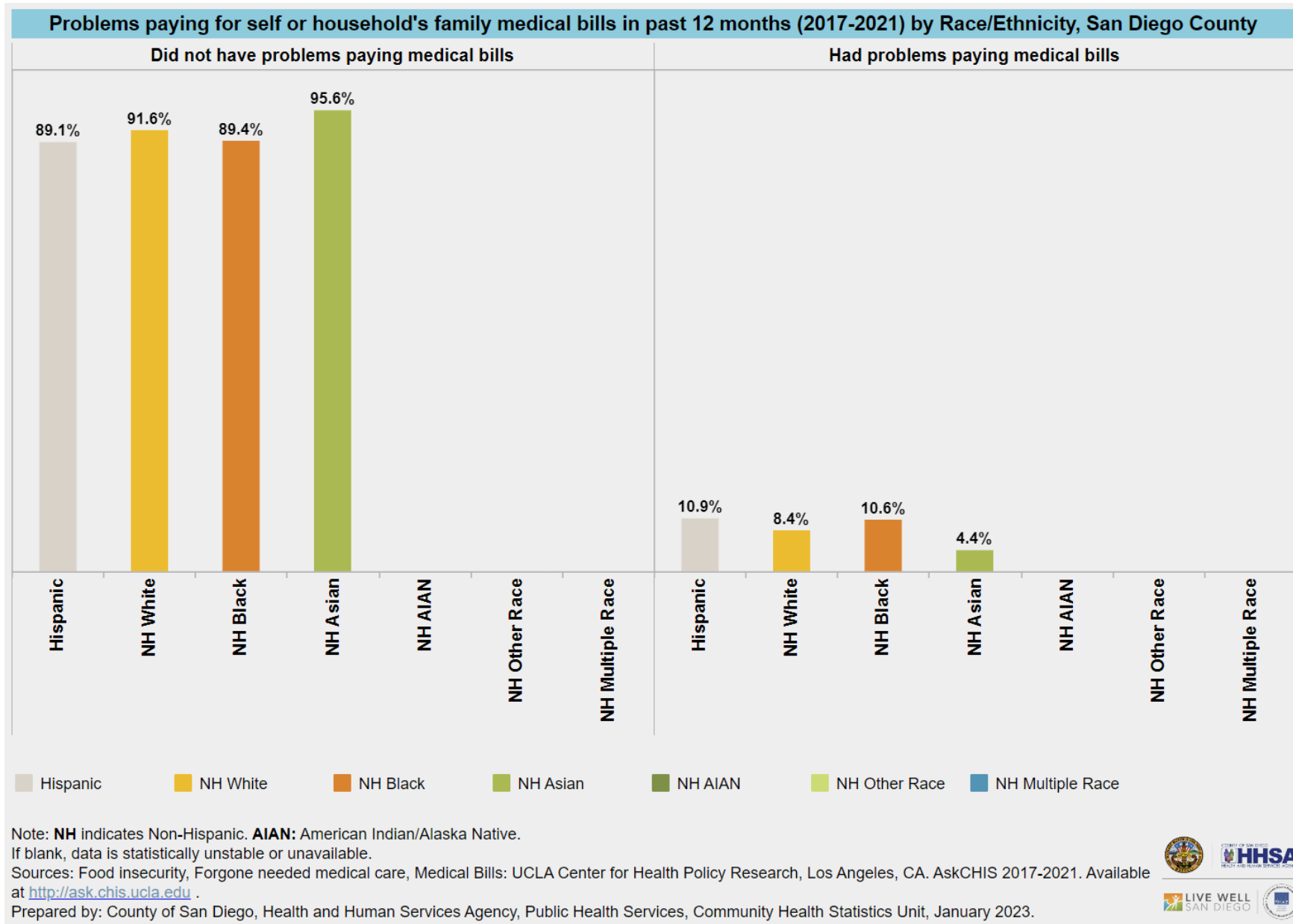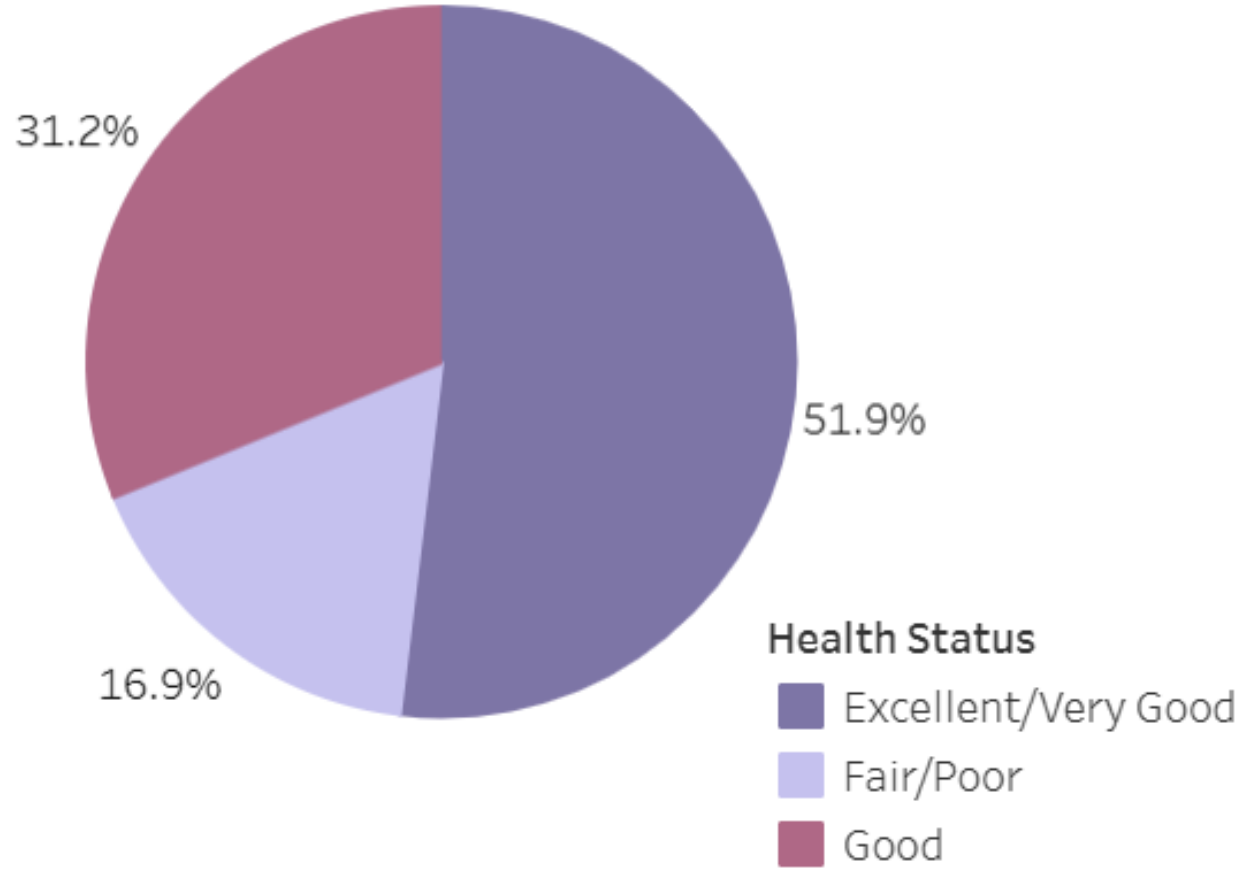
Poverty Status (2021) by Race and Ethnicity*, San Diego County

Below poverty level
- Hispanic: 13.8%
- White: 9.8%
- Black: 20.1%
- Asian: 9.0%
- NHPI: 14.1%
- AIAN: 12.0%
- Other Race: 14.0%
- Multiple Race: 11.0%

At or above poverty level
- Hispanic: 86.2%
- White: 90.2%
- Black: 79.9%
- Asian: 91.0%
- NHPI: 85.9%
- AIAN: 88.0%
- Other Race: 86.0%
- Multiple Race: 89.0%

Geography: San Diego County

Median Household Income by Geography, 2022: San Diego County — $92,914

Average Median Household Income by Race and Ethnicity*, San Diego County, 2021
- Hispanic: $69,724
- White: $91,626
- Black: $57,347
- Asian: $107,832
- NHPI: $88,936
- AIAN: $63,960
- Other Race: $68,636
- Multiple Race: $80,507

Legend: Hispanic, White, Black, Asian, NHPI, AIAN, Other Race, Multiple Race

NHPI: Native Hawaiian/Pacific Islander, **AIAN:** American Indian/Alaska Native.
If blank, data is statistically unstable or unavailable.
*Data by race and ethnicity includes possible overlap between racial and ethnic groups, as Hispanic includes population of Hispanic/Latino origin of all races and each racial group includes population of all ethnicites.
Sources: U.S. Census Bureau; 2017-2021 American Community Survey 5-Year Estimates, Tables C23002A-G,I; B17001A-G,I; B19001A-G,I; S1903; B22005A-G,I. Median household income source: ESRI Community Analyst, 2022. Upward economic mobility: Census, Opportunity Insights, PolicyMap, 2018.
Prepared by: County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit, January 2023.

Social Determinants of Health in San Diego County
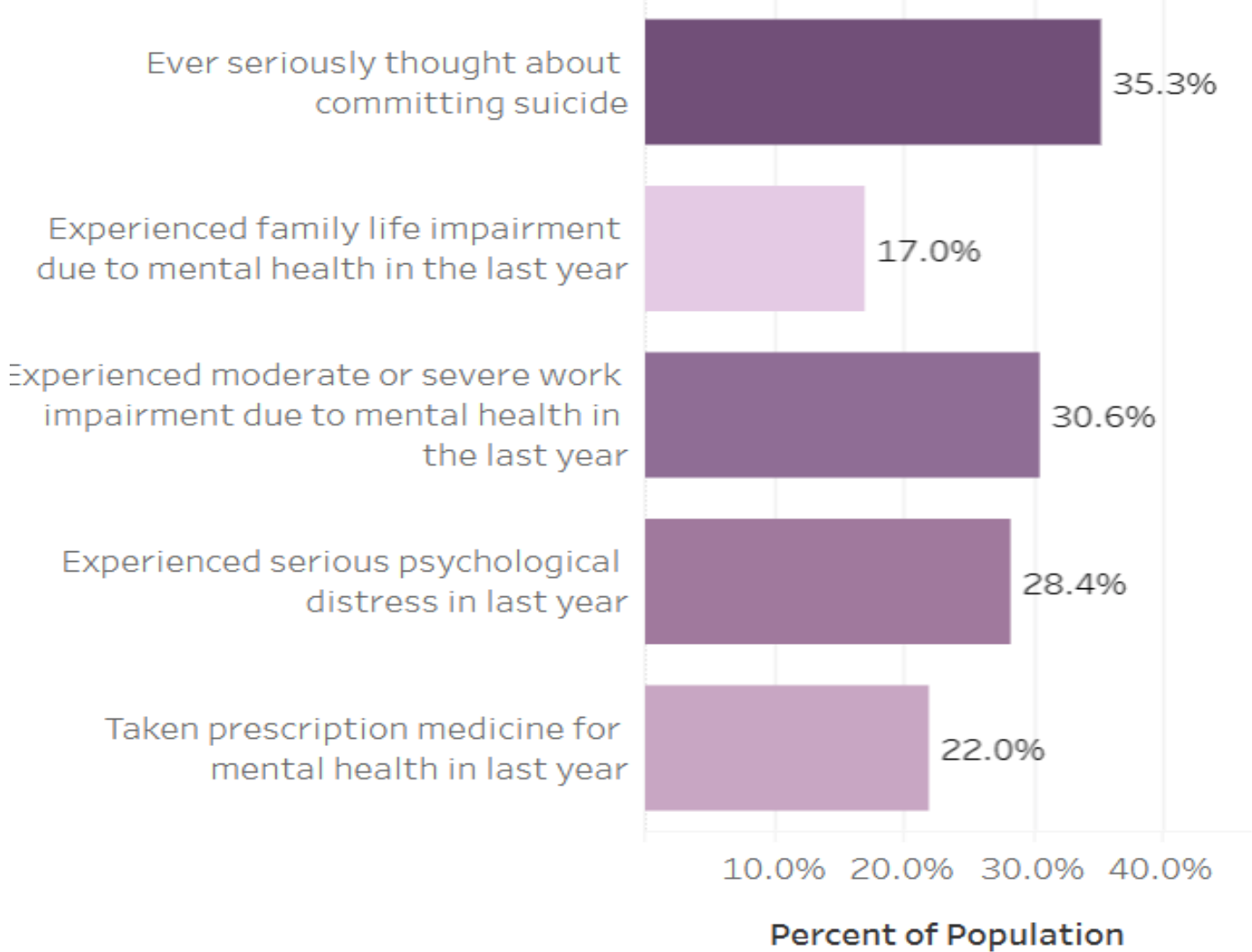## *Problems Paying Medical Bills and Food Insecurity*

Problems paying for self or household's family medical bills in past 12 months (2017-2021) by Race/Ethnicity, San Diego County

Did not have problems paying medical bills

Race/Ethnicity	%
Hispanic	89.1%
NH White	91.6%
NH Black	89.4%
NH Asian	95.6%

Had problems paying medical bills

Race/Ethnicity	%
Hispanic	10.9%
NH White	8.4%
NH Black	10.6%
NH Asian	4.4%

Legend: Hispanic, NH White, NH Black, NH Asian, NH AIAN, NH Other Race, NH Multiple Race

Note: **NH** indicates Non-Hispanic. **AIAN:** American Indian/Alaska Native.
If blank, data is statistically unstable or unavailable.
Sources: Food insecurity, Forgone needed medical care, Medical Bills: UCLA Center for Health Policy Research, Los Angeles, CA. AskCHIS 2017-2021. Available at http://ask.chis.ucla.edu .
Prepared by: County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit, January 2023.

Food insecurity among adults whose income is <200% FPL (2017-2021) by Race/Ethnicity, San Diego County

Able to afford enough food

Race/Ethnicity	%
Hispanic	65.4%
NH White	68.9%
NH Black	53.4%
NH Asian	67.6%
NH Multiple Race	67.0%

Not able to afford enough food

Race/Ethnicity	%
Hispanic	34.6%
NH White	31.1%
NH Black	46.6%
NH Asian	32.4%
NH Multiple Race	33.0%

Legend: Hispanic, NH White, NH Black, NH Asian, NH AIAN, NH Other Race, NH Multiple Race

Note: **NH** indicates Non-Hispanic. **AIAN:** American Indian/Alaska Native.
If blank, data is statistically unstable or unavailable.
Sources: Food insecurity, Forgone needed medical care, Medical Bills: UCLA Center for Health Policy Research, Los Angeles, CA. AskCHIS 2017-2021. Available at http://ask.chis.ucla.edu .
Prepared by: County of San Diego, Health and Human Services Agency, Public Health Services, Community Health Statistics Unit, January 2023.

Health and Wellbeing among LGBTQ Population in San Diego County

Overall Health Status Among the Adult LGBQ Population in San Diego County

- 51.9% Excellent/Very Good
- 31.2% Good
- 16.9% Fair/Poor

Health Status
- Excellent/Very Good
- Fair/Poor
- Good

Mental Health Outcomes Among the Adult LGBQ Population in San Diego County

- Ever seriously thought about committing suicide — 35.3%
- Experienced family life impairment due to mental health in the last year — 17.0%
- Experienced moderate or severe work impairment due to mental health in the last year — 30.6%
- Experienced serious psychological distress in last year — 28.4%
- Taken prescription medicine for mental health in last year — 22.0%

Percent of Population

Percent with no health insurance

Health Insurance/No Health Insurance (all ages) / Percent / Unadjusted / 2017

Percent of households receiving food stamps

Food Insecurity/Households Receiving Food Stamps/SNAP / Percent / Unadjusted / 2017

C. McDaniels-Davidson

http://moores.healthdat.org/

Additional Resources for Cancer Statistics

San Diego Community Snapshots
moorescancercenter.ucsd.edu/outreach

2021 Community Profiles by HHSA Region
public.tableau.com/app/profile/chsu

Take Home Messages

- Health disparities come in many forms and affect different populations in different ways.

- Although progress has been made in decreasing the burden of cancer in the U.S., the burden is unequal--disparities and inequities continue to exist.

- Social Determinants of Health contribute to health disparities and inequities.

- We all have a part in assessing and addressing health disparities in our communities and beyond.

¡Muchas Gracias!

Gastric Cancer : Examining Incidence, Survival, and Molecular Disparities

Winta T. Mehtsun MD MPH
Assistant Professor
Department of Surgery
University of California San Diego

UC San Diego
HEALTH SYSTEM

Outline

- Gastric Cancer Basics
- Gastric Cancer Incidence Disparities Across Race and Ethnicity
- Gastric Cancer Survival Disparities Across Race and Ethnicity
- Gastric Cancer Mortality and Social Determinants of Health
- Future Direction – Molecular Subtypes

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Gastric Cancer is a Leading Cause of Mortality

- 3rd most common cause of cancer-related deaths
  - 5 yr survival ~ 20%

- 4th most common cause of cancer

- anatomic location correlates with prognosis

- incidence varies globally

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Population-Based Analysis of Differences in Gastric Cancer Incidence Among Races and Ethnicities in Individuals Age 50 Years and Older

Shailja C. Shah,[1,2] Meg McKinley,[3,4] Samir Gupta,[5,6,7] Richard M. Peek Jr,[2] Maria Elena Martinez,[6,8] and Scarlett L. Gomez[4,9]
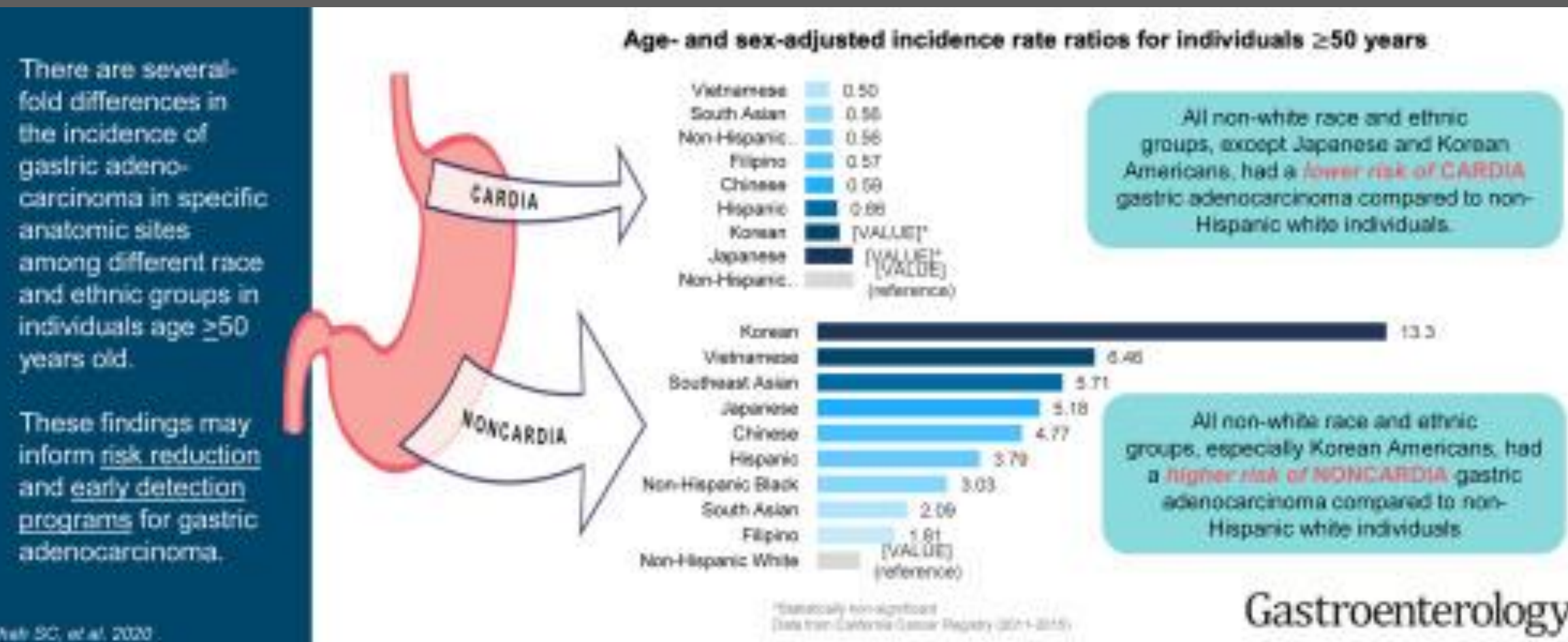
Evaluation of treatment and outcomes for Hispanic patients with gastric cancer at Commission on Cancer-accredited centers in the United States

Beiqun Zhao MD, Lawrence P. Leichman MD, Santiago Horgan MD, Michael Bouvet MD, Kaitlyn J. Kelly MD ✉

TABLE 3 Surgery-related comparisons for stage 0 to III patients

	Hispanics	Non-Hispanics	P value
Gastrectomy performed	2716 (63.5%)	24 607 (56.9%)	< 0.001[a] OR: 1.32
Partial gastrectomy	1807 (67.7%)	16 399 (67.4%)	0.777[a]
Total gastrectomy	862 (32.3%)	7927 (18.3%)	
Gastrectomy upfront	1747 (71.8%)	13 713 (61.1%)	< 0.001[a] OR: 1.62
Staging laparoscopy	239 (5.6%)	2100 (4.9%)	0.037[a] OR: 1.16
Minimally invasive gastrectomy	397 (25.6%)	3831 (29.1%)	0.004[a] OR: 0.84
Greater than 15 LNs examined	1457 (57.3%)	11 750 (51.7%)	< 0.001[a] OR: 1.25
R0 Resection	2262 (91.2%)	21 245 (92.8%)	0.004[a] OR: 0.80
30-d Unplanned readmission	168 (6.3%)	1558 (6.5%)	0.706[a]
30-d Mortality	62 (2.7%)	780 (3.7%)	0.015[a] OR: 0.72
90-d Mortality	128 (5.6%)	1609 (7.6%)	< 0.001[a] OR: 0.71

TABLE 4 Adjunctive therapy

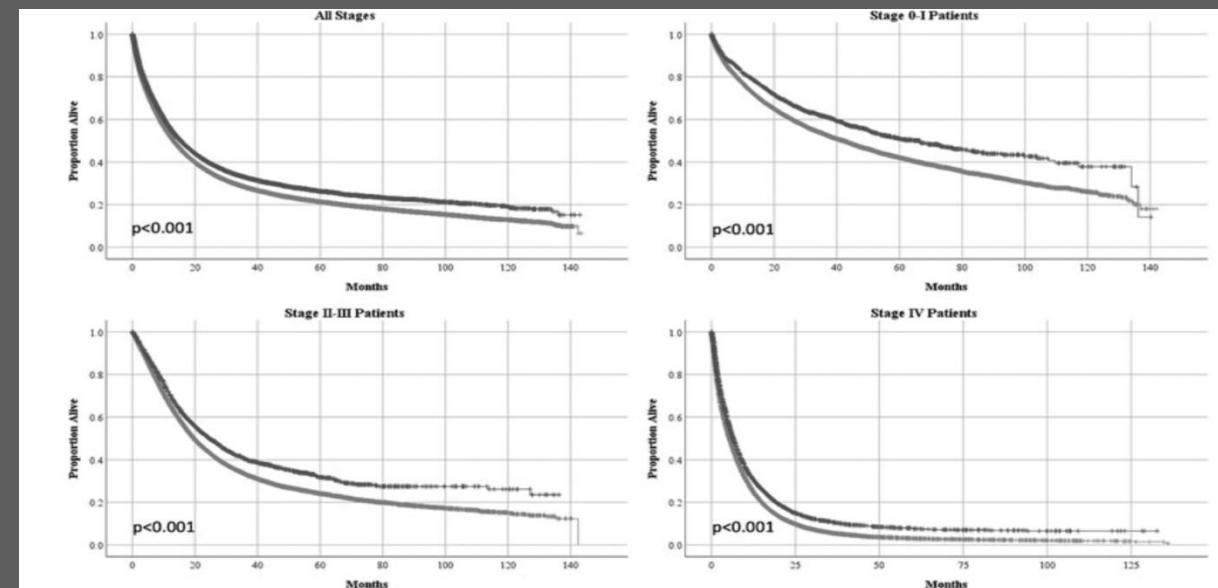|	Hispanics	Non-Hispanics	P value
Neoadjuvant therapy (stage 0-I)	157 (16%)	1246 (11.6%)	< 0.001[a] OR: 1.45
Neoadjuvant therapy (stage II-III)	560 (31.7%)	7792 (38.7%)	< 0.001[a] OR: 0.74
Multimodal therapy (stage 0-I)	438 (24.8%)	3174 (17.7%)	< 0.001[a] OR: 1.53
Multimodal therapy (stage II-III)	1171 (48.9%)	11 381 (46.1%)	0.010[a] OR: 1.12

FIGURE 1 Overall survival of Hispanic and non-Hispanic gastric cancer patients by clinical stage (Black = Hispanic patients, Gray = non-Hispanic patients)

UC San Diego HEALTH SYSTEM

Racial/ethnic differences in survival among gastric cancer patients in california

Amy K Klapheke [1] [2], Luis G Carvajal-Carmona [3] [4], Rosemary D Cress [5] [6] [3]

Subgroup	NHB vs. NHW HR (95% CI)	Hispanic vs. NHW HR (95% CI)	API vs. NHW HR (95% CI)
Overall	1.06 (0.98, 1.15)	0.94 (0.90, 0.99) [*]	0.83 (0.79, 0.88) [**]

	Latinos (n = 3879)	NLW (n = 4612)
Sex		
Men	2166 (56%)	3048 (66%)
Women	1713 (44%)	1564 (34%)
Age		
Early onset (≤50 years)	880 (23%)	363 (8%)
Late onset (>50 years)	2999 (77%)	4249 (92%)
Socioeconomic status		
Lowest	1285 (37%)	435 (14%)
Medium/high	2145 (63%)	2736 (86%)
Histology		
Intestinal	1929 (62%)	2739 (77%)
Diffuse	1187 (38%)	828 (23%)
Stage		
Localized	887 (23%)	1282 (38%)
Regional/remote	2580 (77%)	2895 (62%)

County Rurality and Socioeconomic Deprivation Is Associated With Reduced Survival From Gastric Cancer in the United States

Robert J. Huang,[1,*] Shailja C. Shah,[2,*] M. Constanza Camargo,[3] Latha Palaniappan,[4] and Joo Ha Hwang[1]

Table 1. Association Between County-level Factors and Gastric Cancer–specific Survival

County-level Factor	All Stages (N = 107,562)		Localized Stage (n = 27,078)		Advanced Stage (n = 80,484)	
	HR (95% CI)	P	HR (95% CI)	P	HR (95% CI)	P
Rurality						
Rural (vs urban)	1.06 (1.03–1.10)	<.001	1.27 (1.16–1.39)	<.001	1.03 (0.99–1.06)	.2
Educational attainment (% of population aged $\geq$ 25 years with at least a high-school degree)						
Lowest tertile (<80.0%)	1.00	Ref.	1.00	Ref.	1.00	Ref.
Middle (80.0%–88.2%)	0.99 (0.97–1.02)	.6	1.11 (1.05–1.20)	.001	0.97 (0.95–1.01)	.2
Highest (>88.2%)	0.91 (0.89–0.93)	<.001	0.91 (0.85–0.98)	.01	0.92 (0.90–0.94)	<.001
P for trend		<.001		.006		<.001
Poverty (% of households below the federal poverty limit)						
Lowest tertile (<10.3%)	1.00	Ref.	1.00	Ref.	1.00	Ref.
Middle (10.3%–16.5%)	1.06 (1.04–1.08)	<.001	1.07 (1.00–1.13)	.04	1.06 (1.04–1.08)	<.001
Highest (>16.5%)	1.15 (1.11–1.18)	<.001	1.30 (1.20–1.42)	<.001	1.09 (1.05–1.12)	<.001
P for trend		<.001		<.001		<.001

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Comprehensive molecular characterization of gastric adenocarcinoma

The Cancer Genome Atlas Research Network
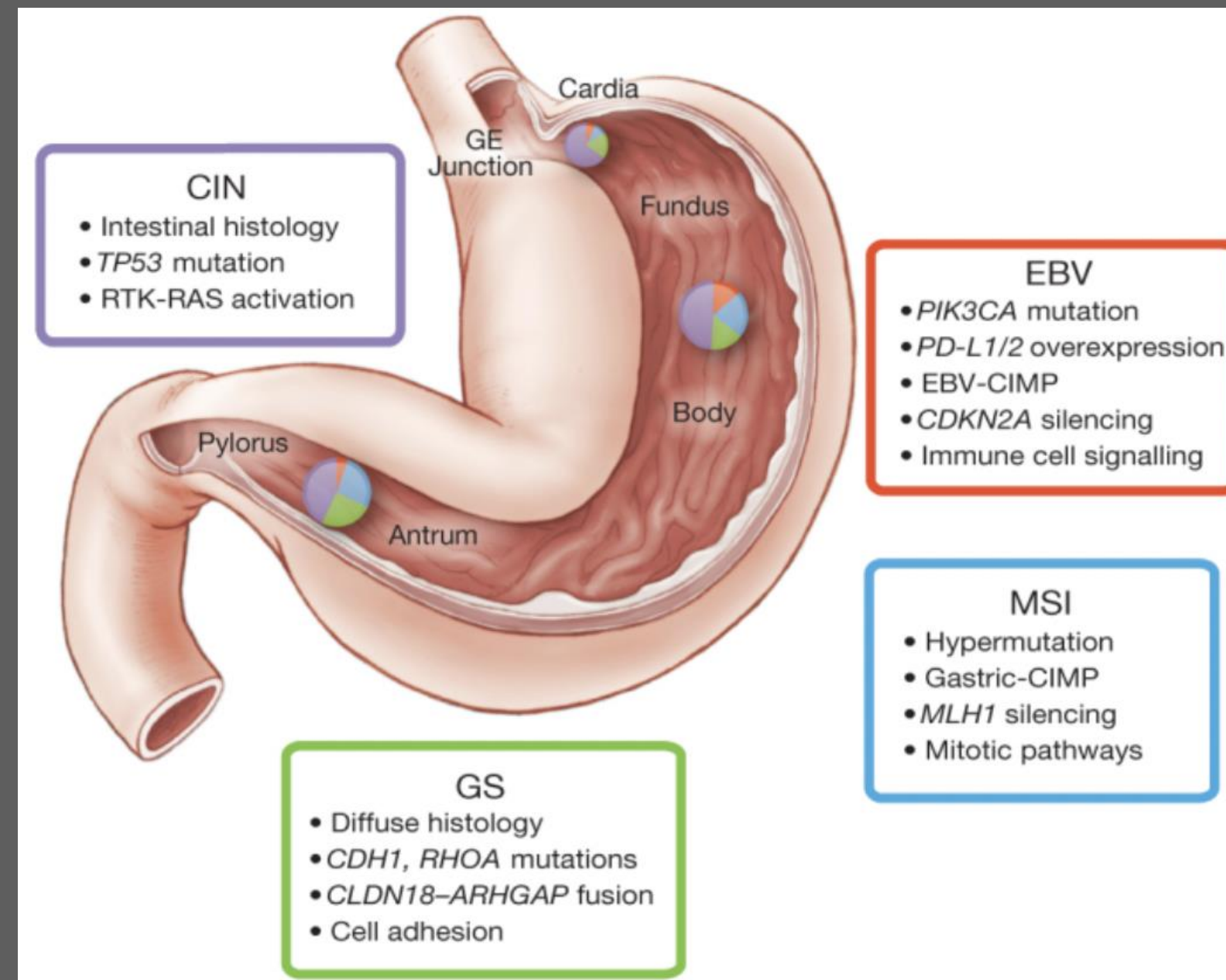
Clinical Significance of Four Molecular Subtypes of Gastric Cancer Identified by The Cancer Genome Atlas Project ⊘

Bo Hwa Sohn; Jun-Eul Hwang; Hee-Jin Jang; Hyun-Sung Lee; Sang Cheul Oh; Jae-Jun Shim; Keun-Wook Lee; Eui Hyun Kim; Sun Young Yim; Sang Ho Lee; Jae-Ho Cheong; Woojin Jeong; Jae Yong Cho; Joohee Kim; Jungsoo Chae; Jeeyun Lee; Won Ki Kang; Sung Kim; Sung Hoon Noh; Jaffer A. Ajani; Ju-Seog Lee ✉

Check for updates

+ Author & Article Information
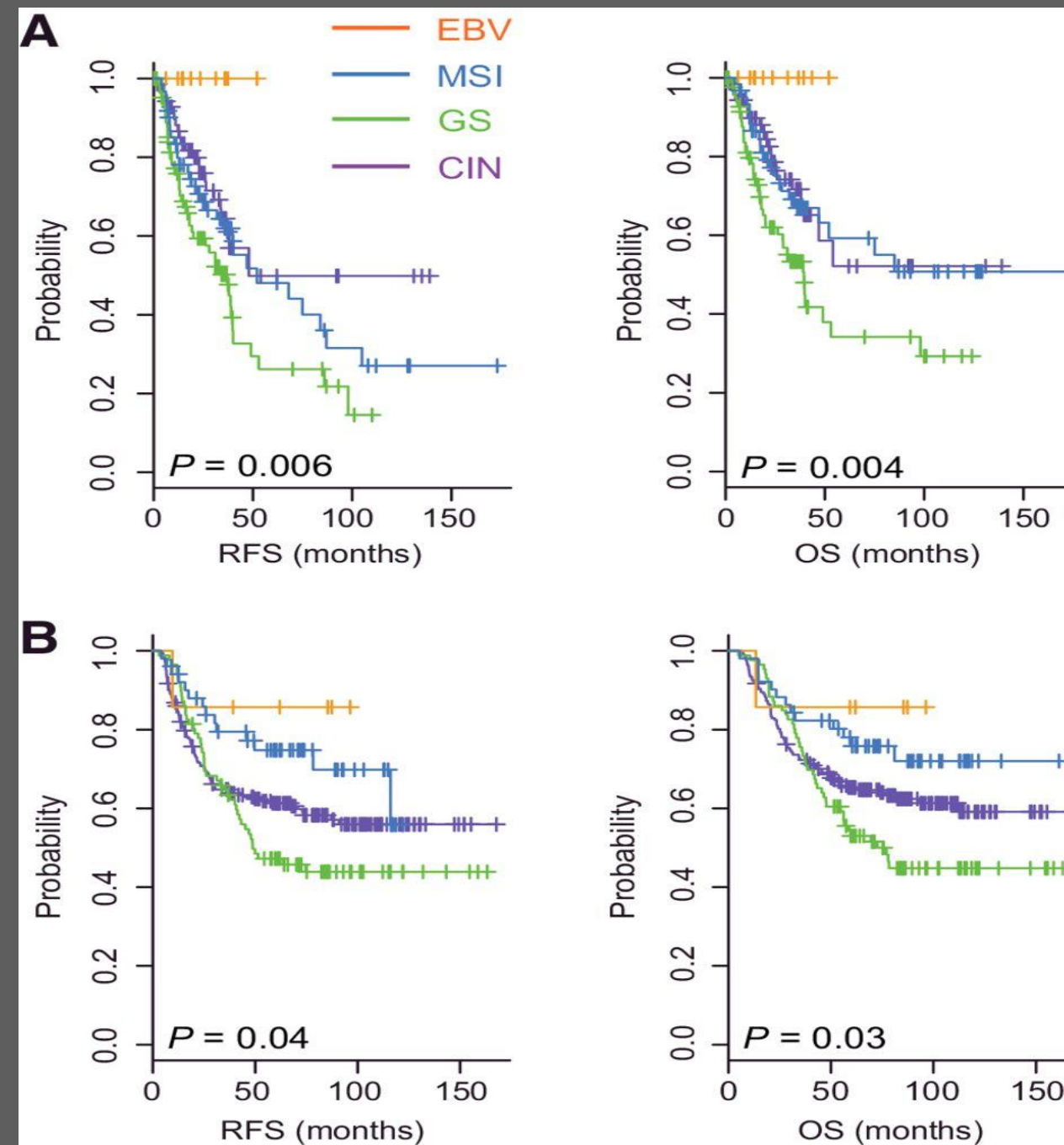
Future Direction: UC Wide Consortium led by Dr. Carvajal-Carmona

- Objective: To better understand the role genes play in cancer tumorigenesis among racial/ethnic minority gastric cancer patients.

  - minority patient-derived organoids

  - elucidate therapeutic sensitivity and resistance mechanisms in minority patients

Future Direction: Intersectionality of Molecular and and Social Determinants in San Diego Gastric Cancer Patients

- Objective: To better understand the intersectionality of molecular and social determinants in local gastric cancer treatment access and survival.
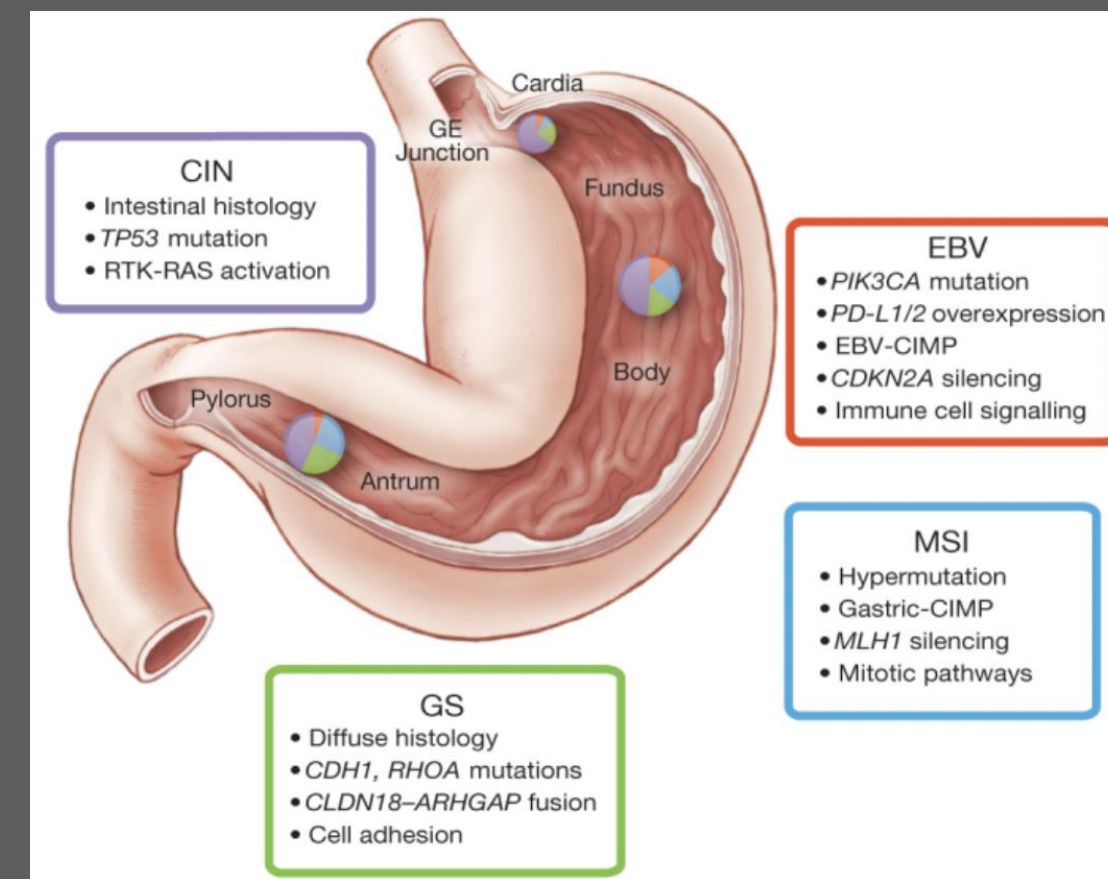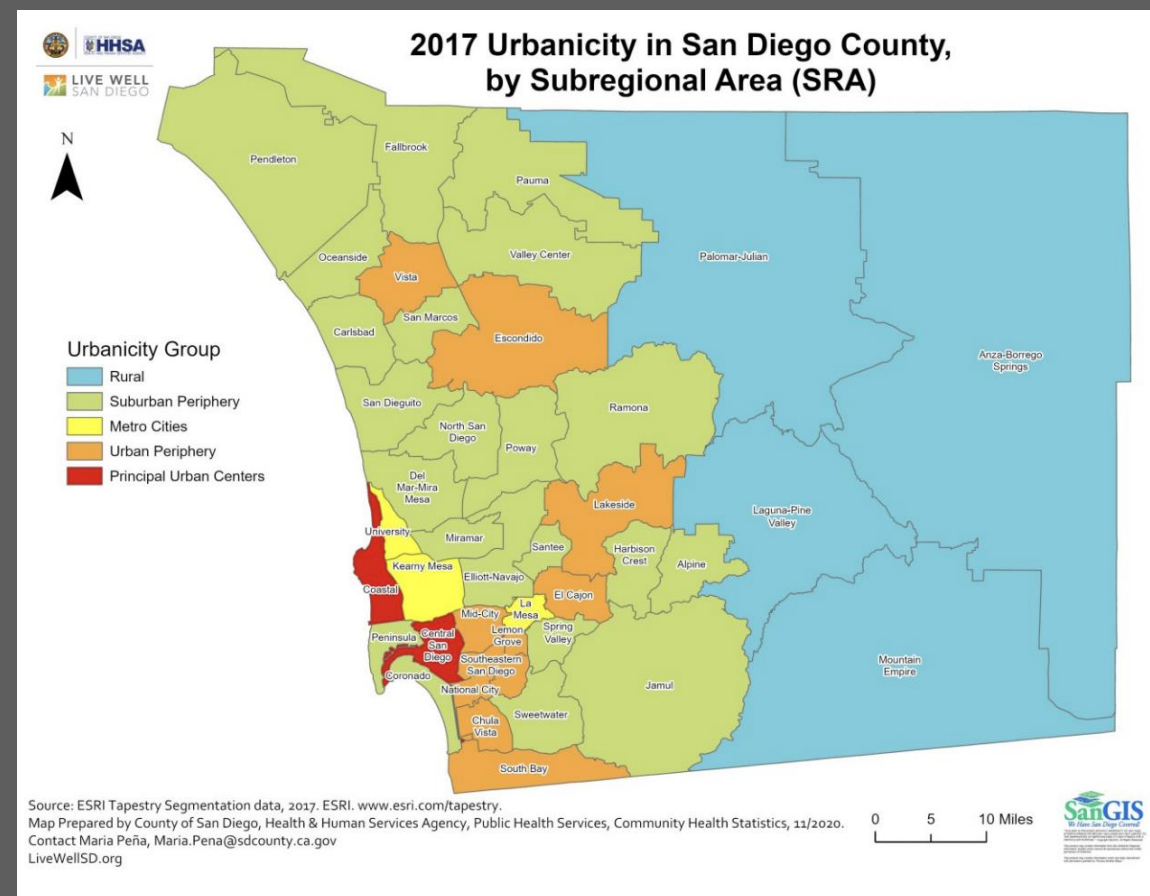
Thank You

Elena Martinez
Samir Gupta
Jim Murphy
Luis Carvajal-Carmona

UNDERSTANDING CANCER ETIOLOGY AMONG HISPANIC/LATINO HERITAGE GROUPS: THE HISPANIC COMMUNITY HEALTH STUDY/STUDY OF LATINOS (HCHS/SOL)

HUMBERTO PARADA, PHD, MPH

Associate Professor & Division Head of
Epidemiology and Biostatistics at
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Understanding Cancer Risk among Hispanic/Latino Heritage Groups:

The Hispanic Community Health Study (HCHS) / Study of Latinos (SOL)

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U.S. Hispanics/Latinos

Population of 62 million, 19% of the US population in 2020

Mexican, 61.9%

Puerto Rican, 9.7%

Cuban, 4.0%

Salvadoran, 3.9%

Dominican, 3.5%

Hispanic Population Distribution as a Percent of Total County Population

Percent
- 50.0 or more
- 25.0 to 49.9
- 18.0 to 24.9
- 5.0 to 17.9
- Less than 5.0

Source: US Census Bureau, Population Estimates, July 1, 2019. Released 2020.

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(US Census Bureau, 2020)
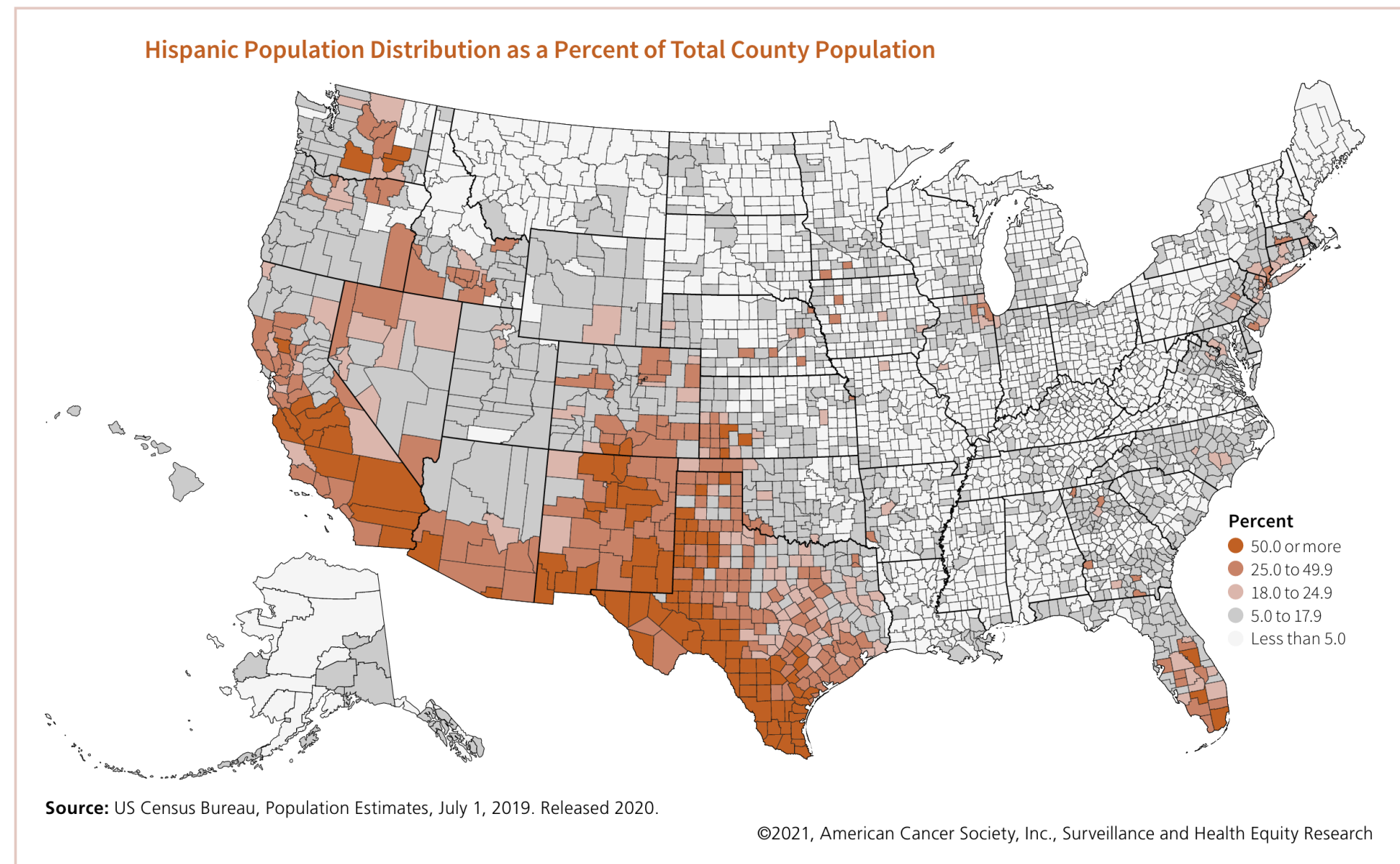
U.S. Hispanics/Latinos: Mexicans

Median Age: 27 y

Education Attainment:
        12% 25 y or older obtained at least a
bachelor's degree

Median annual personal earnings: $25,000
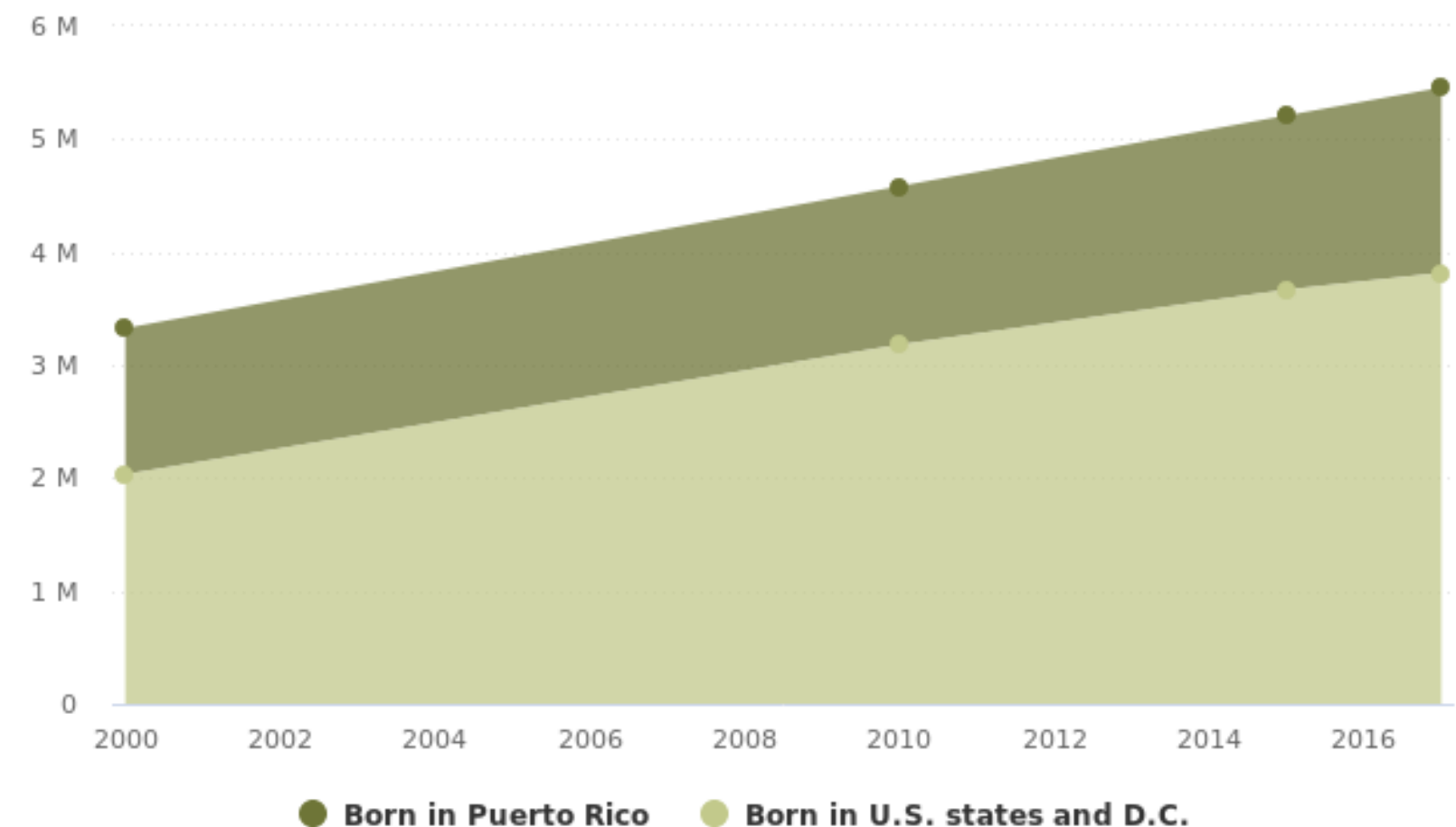
Poverty Status
        20% live in poverty

Top States of Residence
        California (35%)
        Texas (26%)
        Arizona (5%)
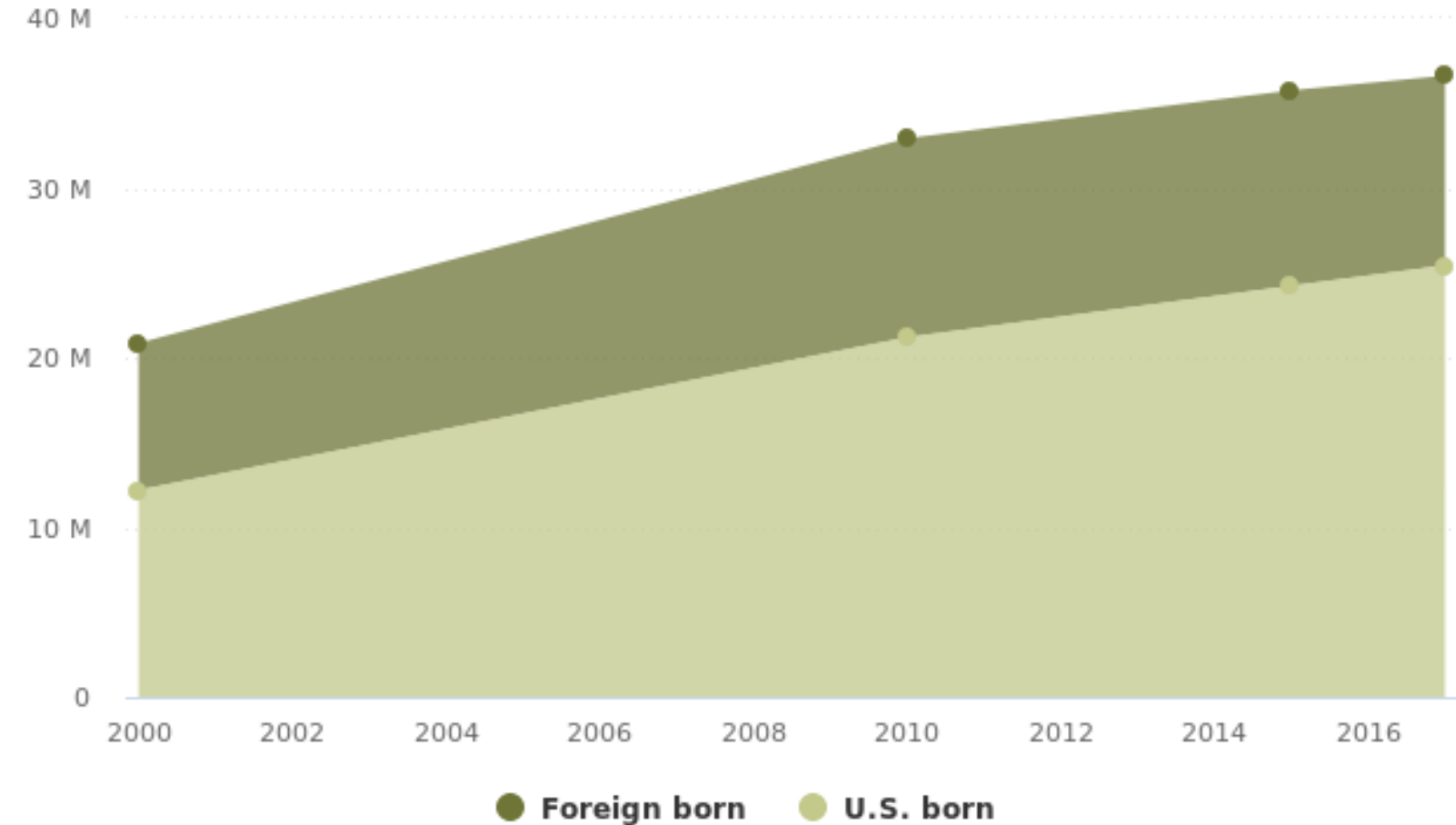
(Pew Research Center 2023)

Mexican-origin population in the U.S., 2000-2017

● Foreign born   ● U.S. born

Note: Latino origin is based on self-described ancestry, lineage, heritage, nationality group or country of birth.

Source: Pew Research Center tabulations of 2000 census (5% IPUMS) and 2010, 2015 and 2017 American Community Surveys (1% IPUMS).

U.S. Hispanics/Latinos: Puerto Ricans

Median Age: 30 y

Education Attainment:
      19% 25 y or older obtained at least a bachelor's degree

Median annual personal earnings: $28,600

Poverty Status
      23% live in poverty

Top States of Residence
      Florida (20%)
      New York (20%)
      New Jersey (8%)

(Pew Research Center 2023)

Puerto Rican-origin population in U.S. states and D.C., 2000-2017

Legend: ● Born in Puerto Rico ● Born in U.S. states and D.C.

Note: Puerto Rican-origin population living in the 50 U.S. states and the District of Columbia. Latino origin is based on self-described ancestry, lineage, heritage, nationality group or country of birth.

Source: Pew Research Center tabulations of 2000 census (5% IPUMS) and 2010, 2015 and 2017 American Community Surveys (1% IPUMS).

U.S. Hispanics/Latinos: Cubans

Median Age: 40 y

Education Attainment:
    27% 25 y or older obtained at least a
bachelor's degree

Median annual personal earnings: $28,000

Poverty Status
    16% live in poverty

Top States of Residence
    Florida (66%)
    California (5%)
    New Jersey (4%)
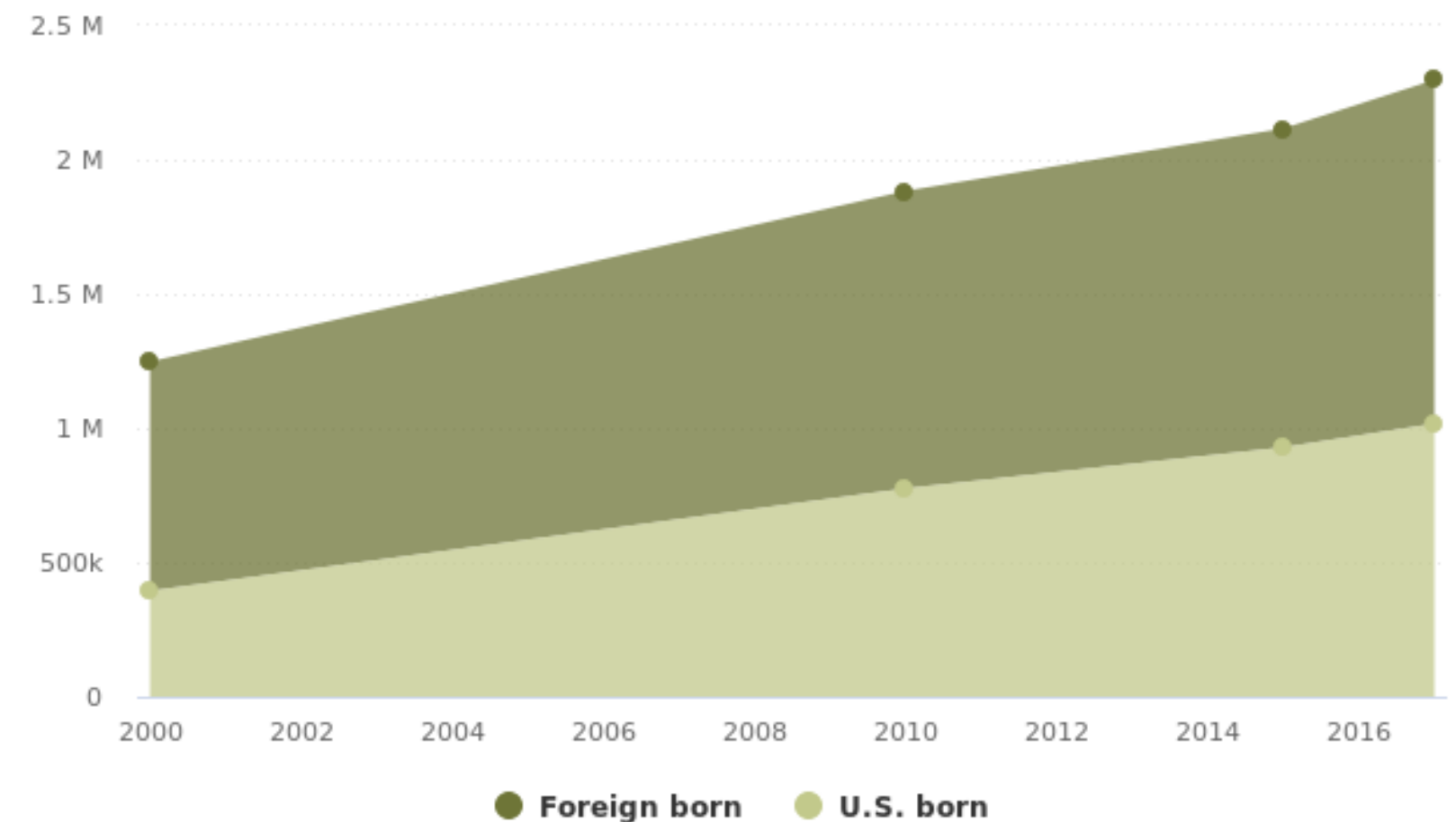
(Pew Research Center 2023)

Cuban-origin population in the U.S., 2000-2017

Foreign born   U.S. born

Note: Latino origin is based on self-described ancestry, lineage, heritage, nationality group or country of birth.

Source: Pew Research Center tabulations of 2000 census (5% IPUMS) and 2010, 2015 and 2017 American Community Surveys (1% IPUMS).

Advancing the Science of Cancer in Latinos – Chapter 2

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Chapter 2   Disaggregated Hispanic Groups and Cancer: Importance, Methodology, and Current Knowledge

Paulo S. Pinheiro, Karen E. Callahan, and Erin N. Kobetz.

▸ Author Information and Affiliations

Published online: December 13, 2019.

Cancer is the leading cause of death among Latinos/Hispanics, the largest racial/ethnic minority group in the United States. Their cancer burden has nearly doubled in 15 years, with 129,000 new cancer cases nationwide in 2014. As this relatively young Hispanic population ages, this burden will inevitably increase; thus, accurate characterization of the Hispanic cancer experience is critical. In this chapter, we summarize the current knowledge on cancer in Hispanics, with a focus on the imperative of disaggregating by specific Hispanic group (Mexicans, Puerto Ricans, Cubans, Central Americans, South Americans, and Dominicans) and nativity. We also describe for the first time some major methodological challenges in determining accurate cancer indicators for specific Hispanic groups and suggest approaches to overcome these hurdles. Our research shows that cancer patterns by specific Hispanic group can be quite distinct according to country of origin, particularly among the first-generation immigrants. For the second-generation Latinos and beyond, patterns for obesity-related cancers, poverty-related cancers, and particularly liver

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Introduction

Epidemiology of Cancer in Hispanics: Aggregated

Epidemiology of Cancer in Disaggregated Hispanic Groups

Current Knowledge: Cancer in Hispanic Groups, Based on Mortality Data

Conclusions

References

Related information

PMC

HCHS / SOL Study Design

A multi-center, community-based, prospective cohort study

Adults of Hispanic/Latino origin between the ages of 18-74 were enrolled across four field centers in:

Bronx, NY; Chicago, IL; Miami, FL; San Diego, CA

Stratified two-stage area probability sampling with stratification and oversampling incorporated at each stage

Assessments:

❖Visit 1 in 2008-2011: *n*=16,415

❖Visit 2 in 2014-2017: *n*=11,623 [73% retention rate, among eligible pts.]

❖Visit 3 in 2021-2023: *n*=##,### [*Recently completed*]

State Cancer Registries

California Cancer Registry

New York State Cancer Registry

Florida Cancer Data System

Illinois State Cancer Registry

✔

Matching Criteria
SSN*
First Name
Middle Name
Last Name*
Sex
Birth date
Telephone*
Zip code
Street Address*

Data Provided by State Cancer Registries

- Patient Demographics: name, age, gender, race, ethnicity, birthplace

- Tumor Characteristics: biological, clinical, and genomic aspects of malignancy

- Treatment: types and dates of treatments

- Outcomes: vital status, cause of death, survival time

Data on incident cancers diagnosed from
HCHS/SOL baseline (2008) through December 31, 2020

The HCHS / SOL + State Cancer Registry Linkage

HCHS / SOL
Anthropometry
Cognitive Screening
Acculturation
Alcohol and Tobacco use
Dietary Behavior
Medical History
Occupation
Physical Activity
Reproductive History
Sleep
Social Networks
Stress
'Omics

State Cancer Registries

Tumor Characteristics

Treatment

Vital Status
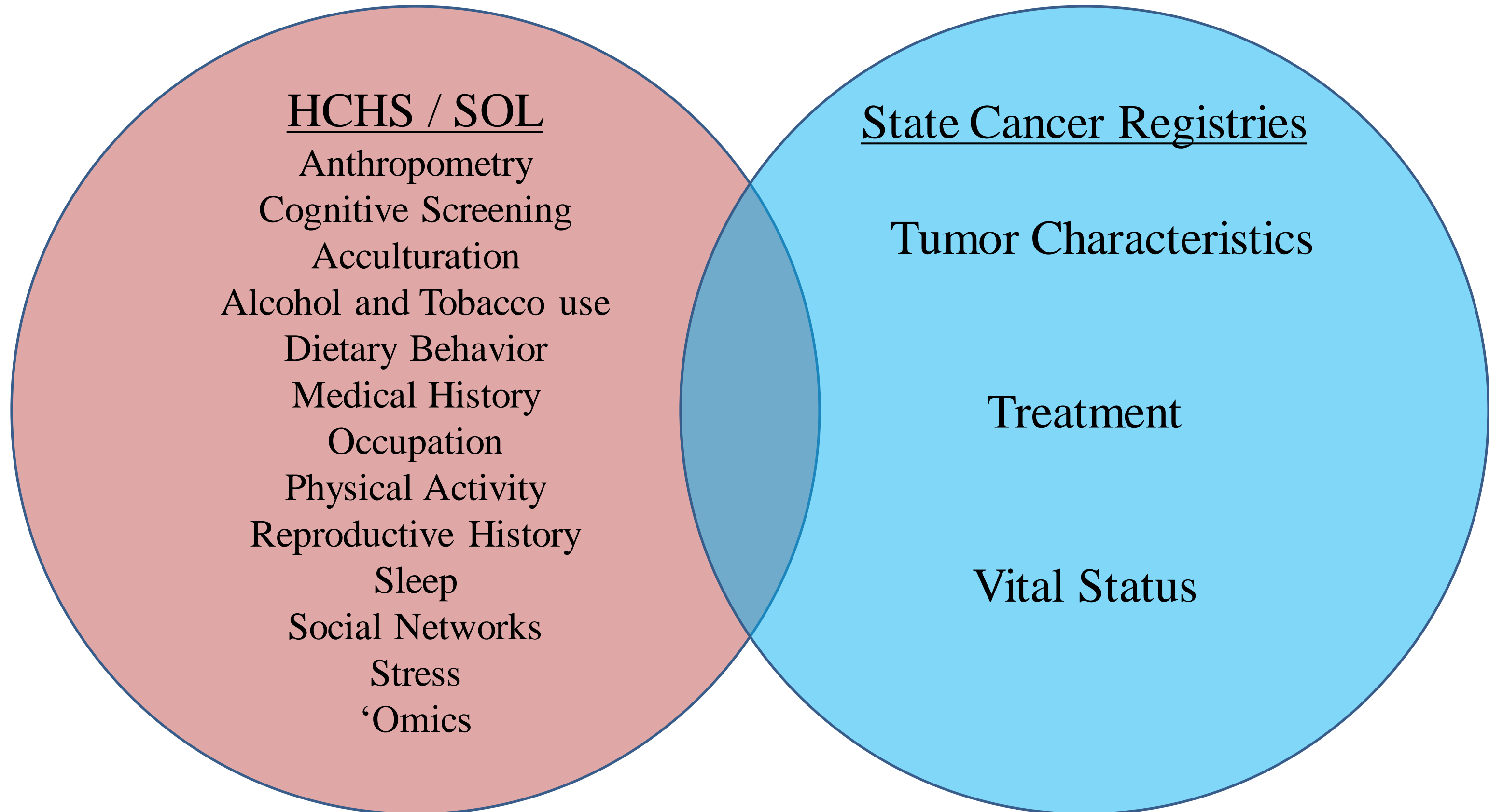
National Death Index Linkage

- As the most complete source of death information in the United States, the NDI currently holds all death records from 1979-latest for all 50 states, DC, New York City, Puerto Rico, and U.S. Virgin Islands

- The NDI assists investigators in determining whether persons in their studies have died and, if so, provides:

- Data available: States in which deaths occurred, Dates of death, Corresponding death certificate numbers, Cause(s) of death

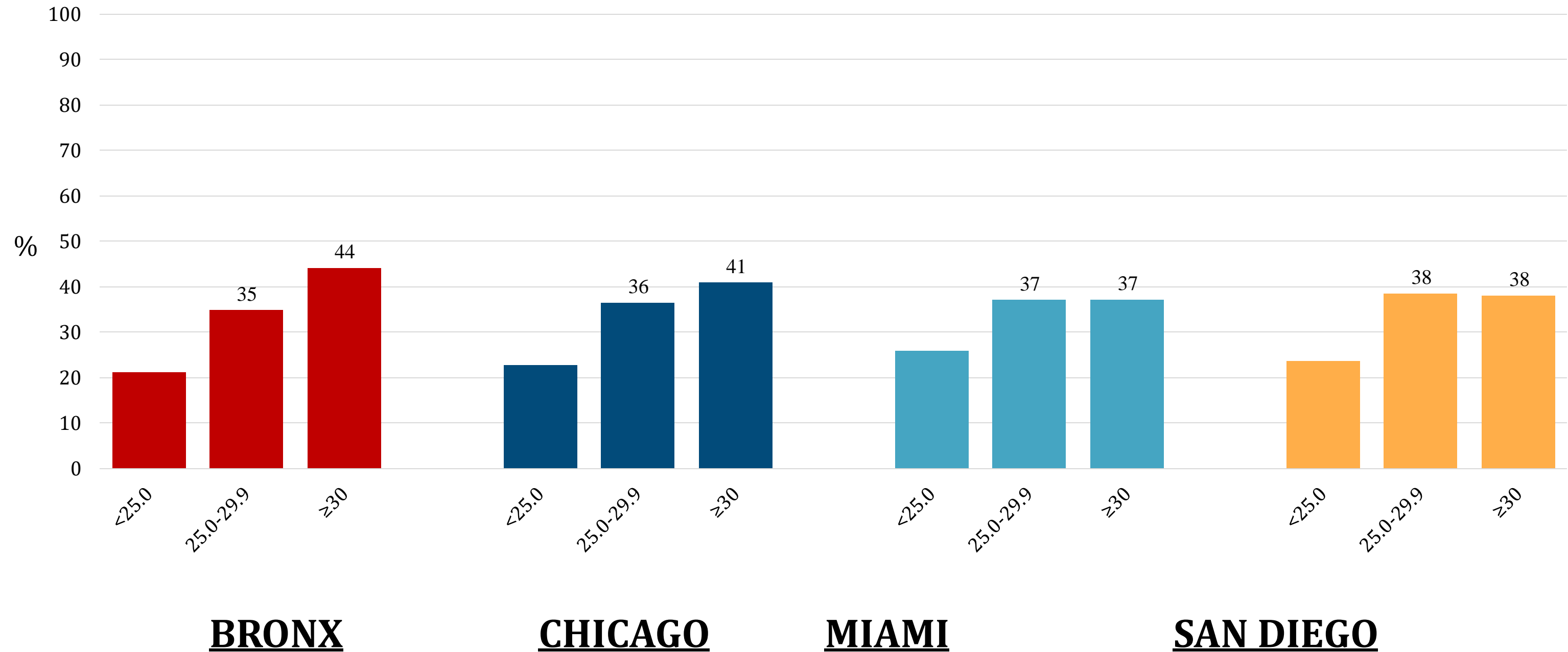Population Characteristics: Hispanic Heritage
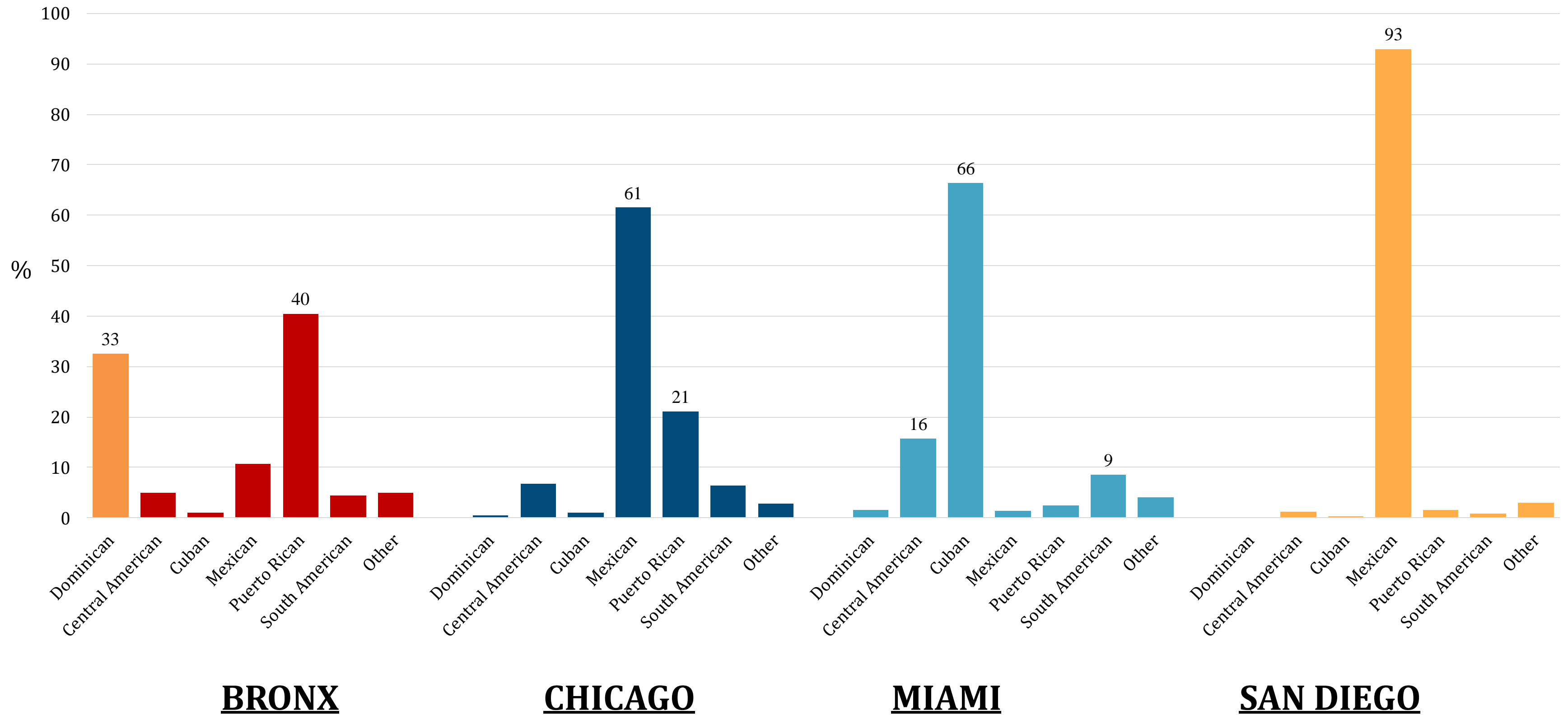
Population Characteristics: Age
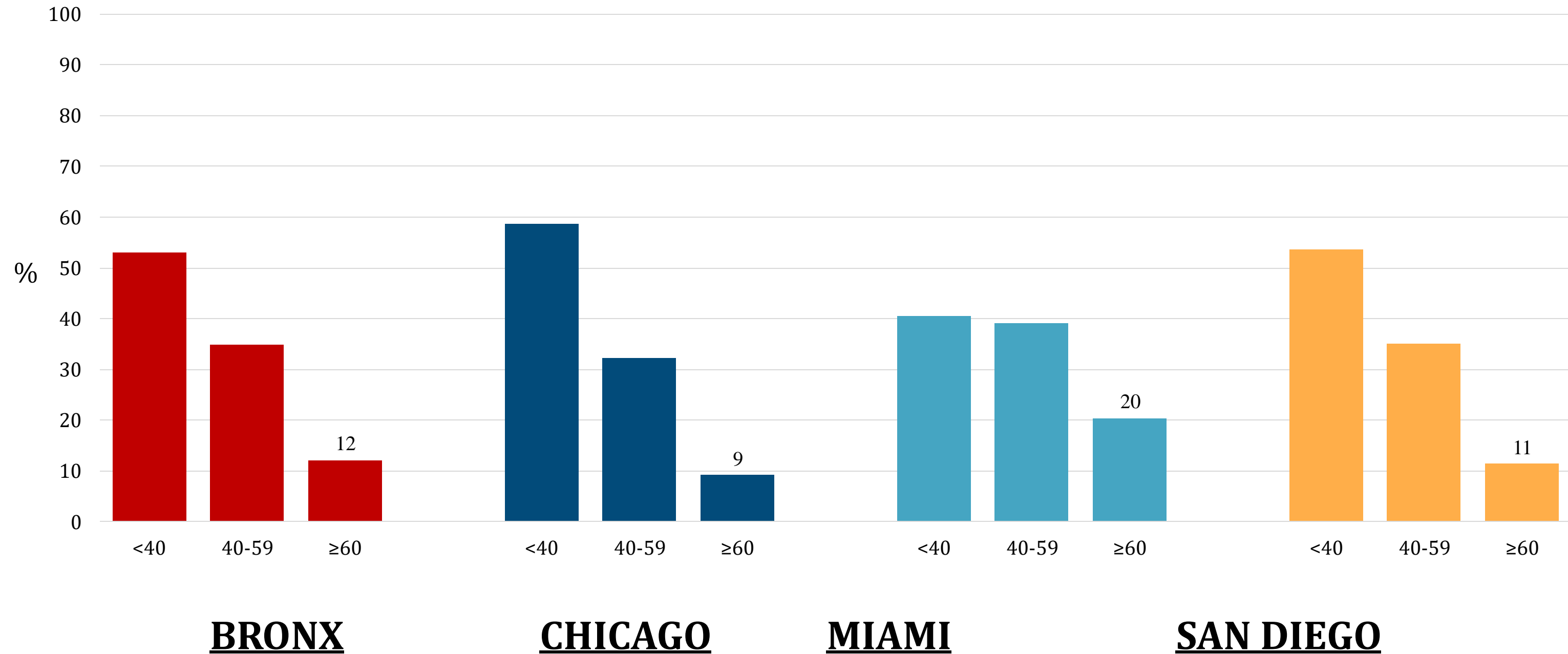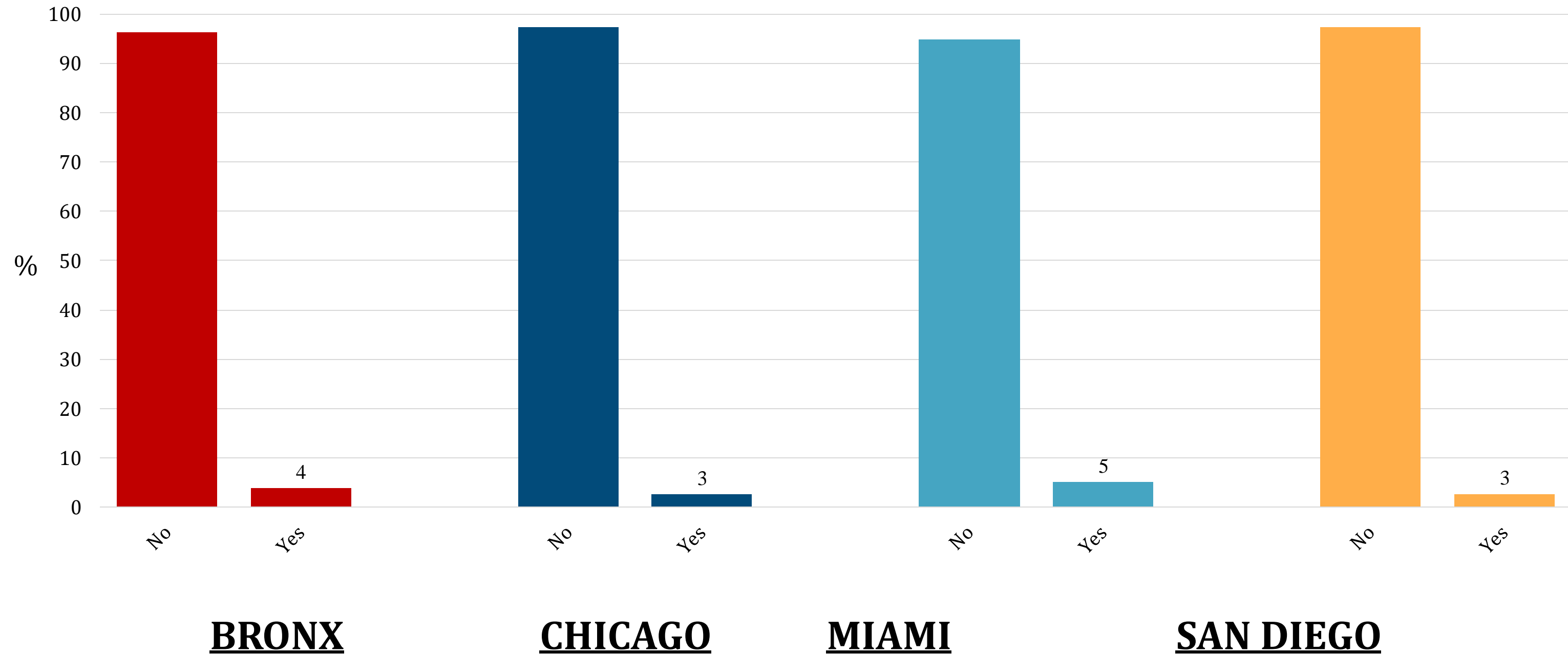
Population Characteristics: Nativity and Years in the US
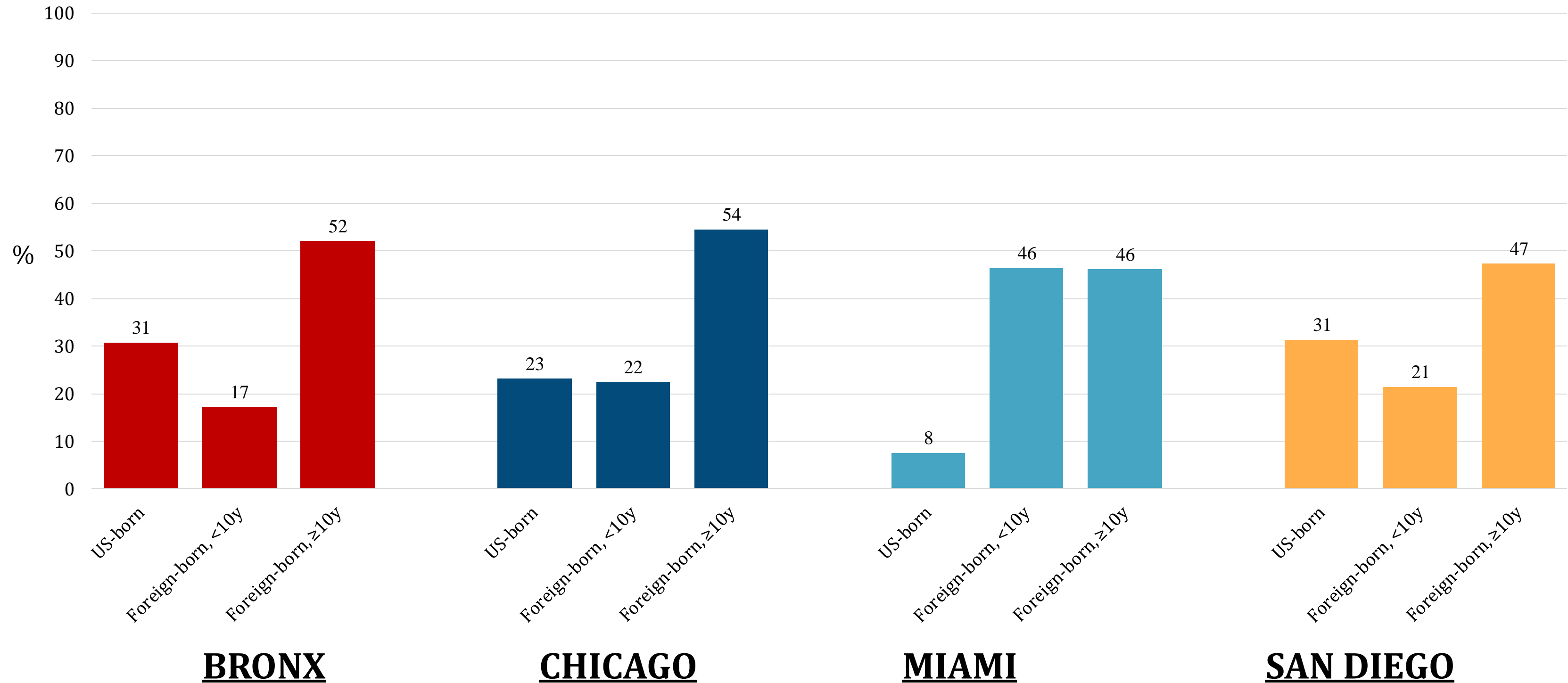
Population Characteristics: Cigarette Smoking
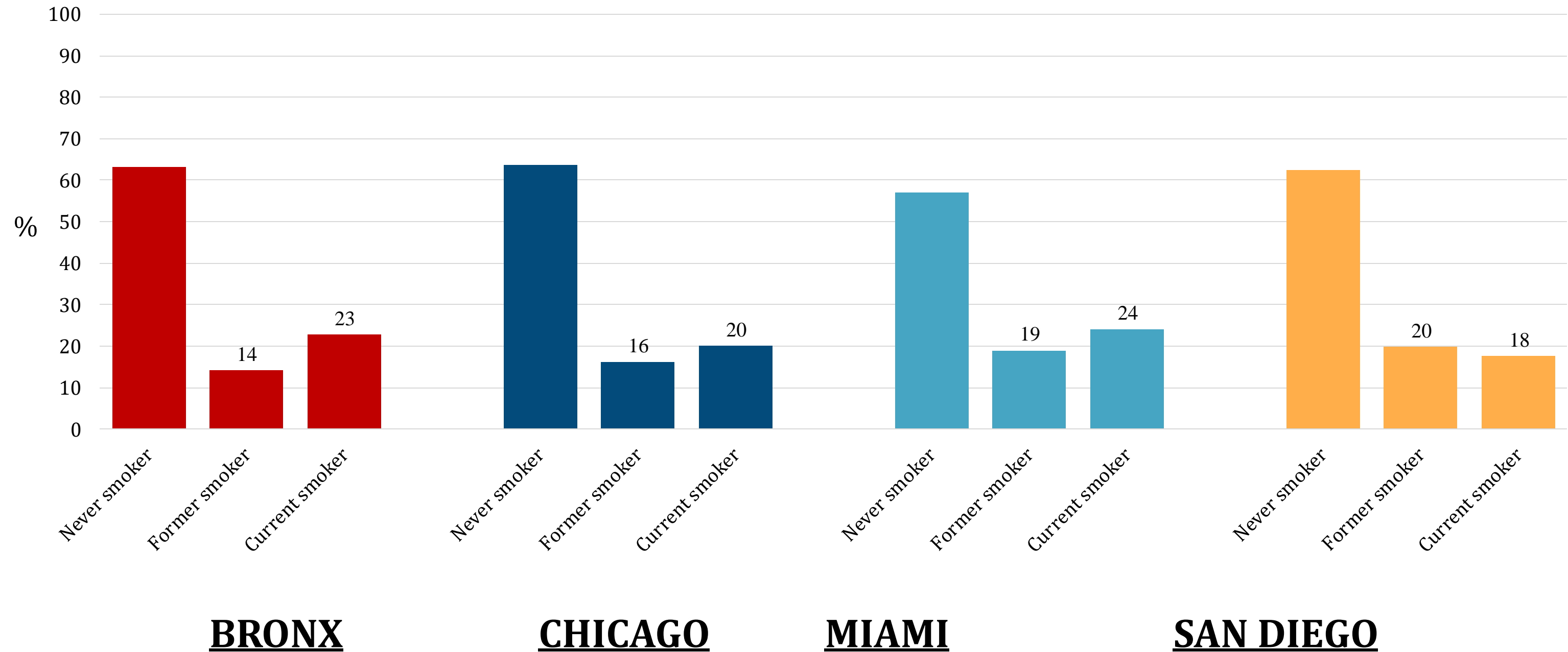
Population Characteristics: Body Mass Index

Future Directions

- Examine known risk factors in association with cancer risk among Hispanic/Latino heritage groups.

- Propose new ancillary studies focused on cancer risk, capitalizing on existing HCHS/SOL data

- Continue to expand cancer outcome ascertainment in HCHS/SOL
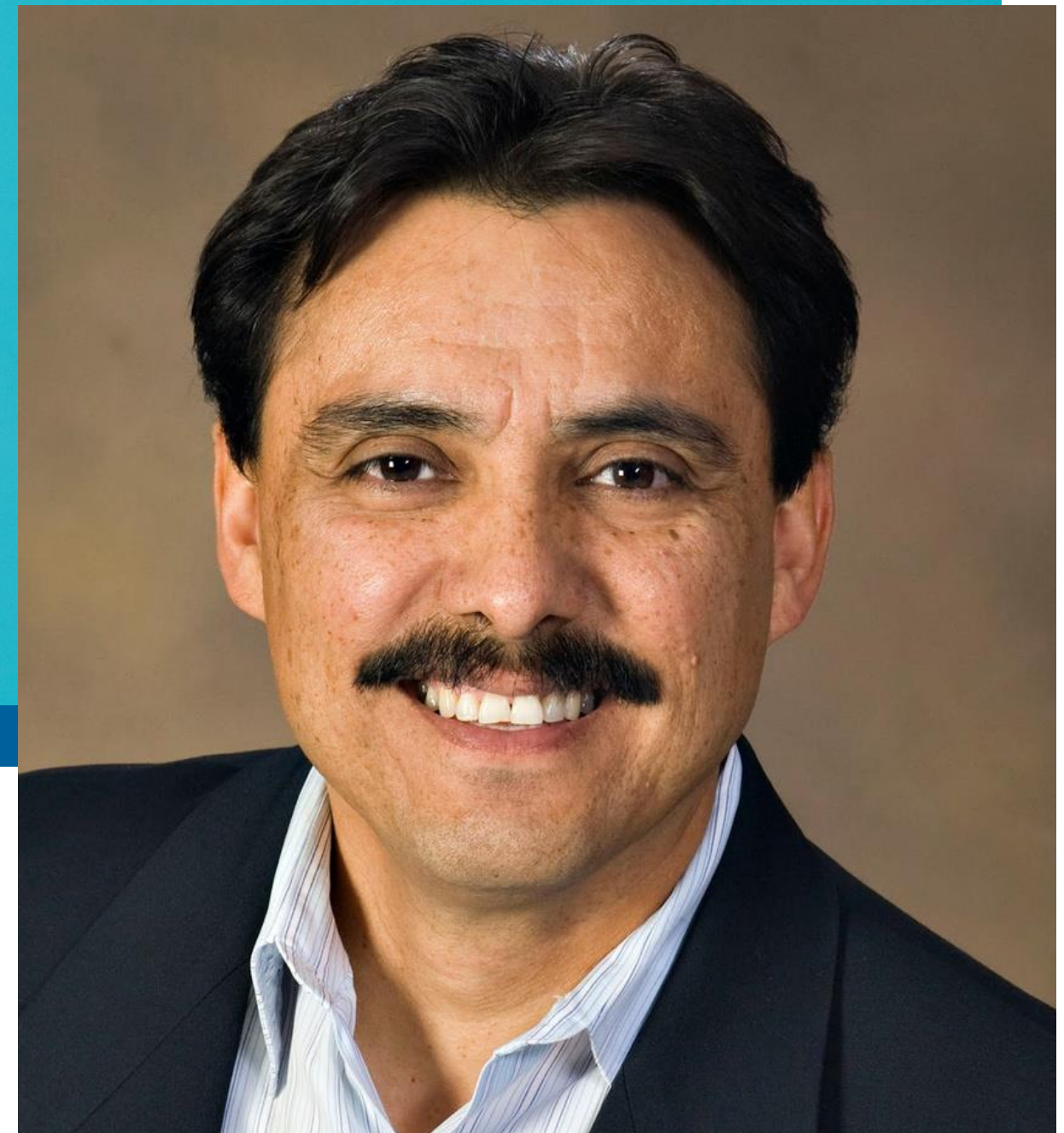
Acknowledgements

SDSU HealthLINK Center

QUESTION & ANSWER SESSION

*Use the zoom chat to write in a question for our guest speakers!*

MODERATOR:

JESSE NODORA, DRPH
Associate Professor, Radiation Medicine and Applied Sciences | Community Outreach
UC San Diego Moores Cancer Center

Community Outreach & Engagement

NEXT STEPS

✓ Have comments for us? We would appreciate your feedback on today's event - link in the chat!

✓ Sign up for our Community Outreach & Engagement newsletter (link in the chat) and follow us on Twitter @UCSDCancer_COE for the latest updates!
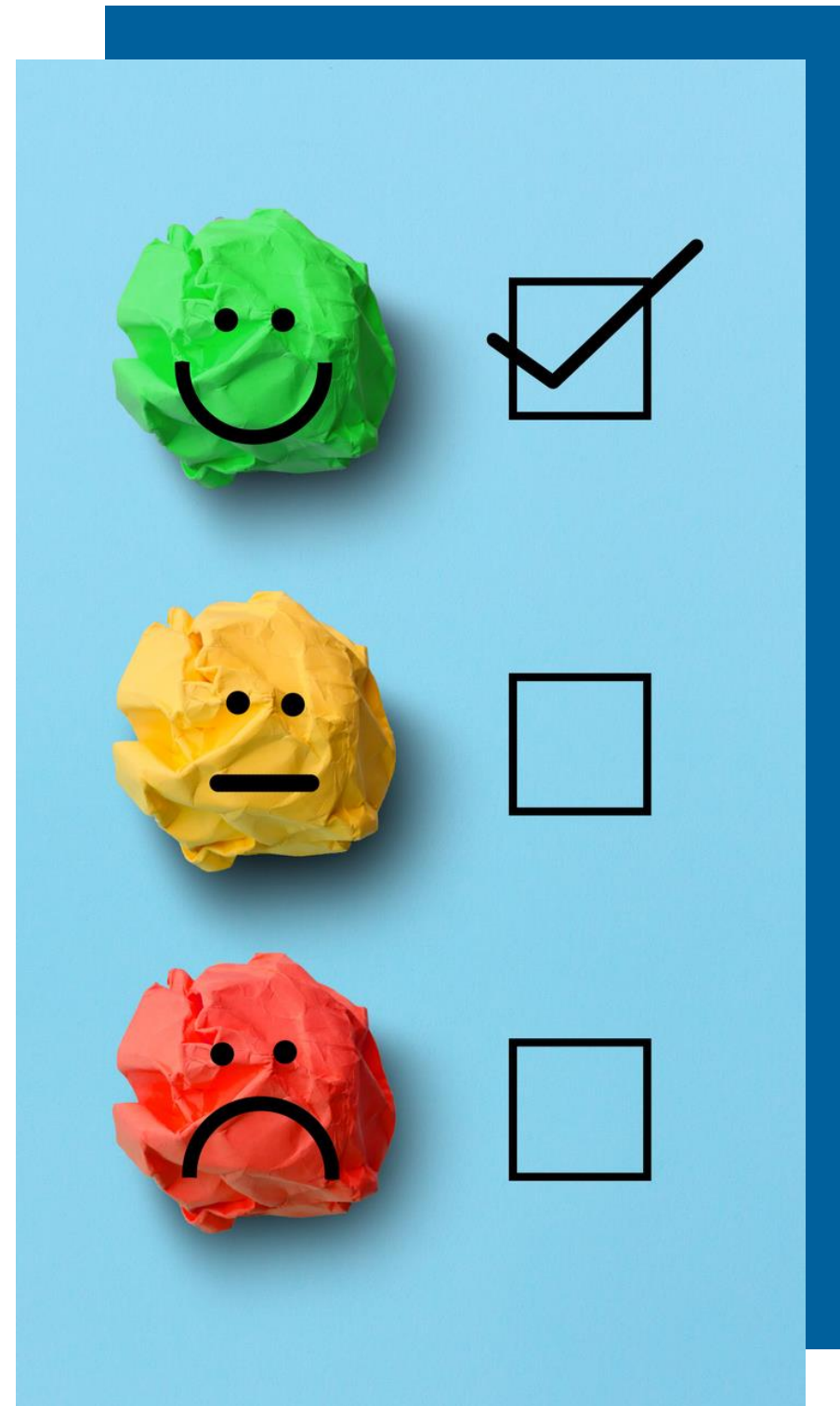
THANK YOU!

Meeting recording, slides and resources coming soon

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