BETTER HEALTH THROUGH BETTER UNDERSTANDING:

CANCER DISPARITIES IN SAN DIEGO

April 26th, 2023
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
Please make sure your line is muted throughout the duration of the summit.

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

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, including the health system
• 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

• 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)
Zip Code Better Predictor of Health than Genetic Code

"Your ZNA is as important as your DNA"
Robert Winn, MD
SAN DIEGO COUNTY
• 3.3 Million Residents
• 5th Most Populous in US
• 4206 Square Miles

SAN DIEGO COUNTY DEMOGRAPHIC CHARACTERISTICS
MAJORITY-MINORITY BORDER REGION

Source: 2021 US Census
Social Determinants of Health in San Diego County

Health Insurance and Usual Source of Care

<table>
<thead>
<tr>
<th>Percentage of Population by Health Insurance Status and Race and Ethnicity*, San Diego County, 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>With Health Insurance</td>
</tr>
<tr>
<td>-----------------------</td>
</tr>
<tr>
<td>Hispanic</td>
</tr>
<tr>
<td>White</td>
</tr>
<tr>
<td>Black</td>
</tr>
<tr>
<td>Asian</td>
</tr>
<tr>
<td>NHPi</td>
</tr>
<tr>
<td>AIAN</td>
</tr>
<tr>
<td>Other Race</td>
</tr>
<tr>
<td>Multiple Race</td>
</tr>
</tbody>
</table>

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 ethnicities.
If blank, data is statistically unstable or unavailable.

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

<table>
<thead>
<tr>
<th>Have a usual source of care</th>
<th>Did not have a usual source of care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>93.8%</td>
</tr>
<tr>
<td>NH White</td>
<td>91.8%</td>
</tr>
<tr>
<td>NH Black</td>
<td>92.8%</td>
</tr>
<tr>
<td>NH Asian</td>
<td>91.3%</td>
</tr>
<tr>
<td>NH Multiple Race</td>
<td>10.2%</td>
</tr>
</tbody>
</table>

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

| Hispanic | 76.9 |
| NH White | 81.9 |
| NH Black | 75.1 |
| NH Asian | 84.9 |

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

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Hispanic</th>
<th>White</th>
<th>Black</th>
<th>Asian</th>
<th>NHP</th>
<th>AIN</th>
<th>Other Race</th>
<th>Multiple Race</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than High School Diploma</td>
<td>28.9%</td>
<td>24.3%</td>
<td>19.6%</td>
<td>17.7%</td>
<td>25.1%</td>
<td>15.1%</td>
<td>34.6%</td>
<td>29.9%</td>
</tr>
<tr>
<td>High School Graduate Degree</td>
<td>24.4%</td>
<td>17.7%</td>
<td>13.4%</td>
<td>15.7%</td>
<td>23.7%</td>
<td>16.1%</td>
<td>26.6%</td>
<td>26.6%</td>
</tr>
<tr>
<td>Some College or Associate’s Degree</td>
<td>28.9%</td>
<td>22.1%</td>
<td>27.8%</td>
<td>31.9%</td>
<td>26.6%</td>
<td>18.6%</td>
<td>18.4%</td>
<td>28.2%</td>
</tr>
<tr>
<td>Bachelor’s or Higher Degree</td>
<td>19.6%</td>
<td>18.0%</td>
<td>18.0%</td>
<td>24.6%</td>
<td>16.7%</td>
<td>17.7%</td>
<td>26.6%</td>
<td>14.2%</td>
</tr>
</tbody>
</table>

**Poverty Status (2021) by Race and Ethnicity**, San Diego County

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Below poverty level</th>
<th>At or above poverty level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>19.8%</td>
<td>80.2%</td>
</tr>
<tr>
<td>White</td>
<td>15.1%</td>
<td>84.9%</td>
</tr>
<tr>
<td>Black</td>
<td>11.8%</td>
<td>88.2%</td>
</tr>
<tr>
<td>Asian</td>
<td>11.8%</td>
<td>88.2%</td>
</tr>
<tr>
<td>NHP</td>
<td>11.8%</td>
<td>88.2%</td>
</tr>
<tr>
<td>AIN</td>
<td>11.8%</td>
<td>88.2%</td>
</tr>
<tr>
<td>Other Race</td>
<td>11.8%</td>
<td>88.2%</td>
</tr>
<tr>
<td>Multiple Race</td>
<td>11.8%</td>
<td>88.2%</td>
</tr>
</tbody>
</table>

**Average Median Household Income by Race and Ethnicity**, San Diego County, 2021

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Average Median Household Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>$60,724</td>
</tr>
<tr>
<td>Black</td>
<td>$57,347</td>
</tr>
<tr>
<td>Asian</td>
<td>$63,960</td>
</tr>
<tr>
<td>NHP</td>
<td>$53,300</td>
</tr>
<tr>
<td>AIN</td>
<td>$49,900</td>
</tr>
<tr>
<td>Other Race</td>
<td>$48,630</td>
</tr>
<tr>
<td>Multiple Race</td>
<td>$40,507</td>
</tr>
</tbody>
</table>

**Geography**

- **San Diego County**: $92,914

*Note: 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 ethnicities.*

*Sources: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates, Tables C150025b-E (C15010A-G); B14007A-G. 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

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Did not have problems paying medical bills</th>
<th>Had problems paying medical bills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>99.1%</td>
<td>99.3%</td>
</tr>
<tr>
<td>NH White</td>
<td>91.6%</td>
<td>91.6%</td>
</tr>
<tr>
<td>NH Black</td>
<td>99.4%</td>
<td>99.4%</td>
</tr>
<tr>
<td>NH Asian</td>
<td>95.6%</td>
<td>95.6%</td>
</tr>
<tr>
<td>NH Other Race</td>
<td>10.3%</td>
<td>10.3%</td>
</tr>
<tr>
<td>NH Multiple Race</td>
<td>8.4%</td>
<td>8.4%</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Able to afford enough food</th>
<th>Not able to afford enough food</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>65.4%</td>
<td>65.4%</td>
</tr>
<tr>
<td>NH White</td>
<td>69.9%</td>
<td>69.9%</td>
</tr>
<tr>
<td>NH Black</td>
<td>53.4%</td>
<td>53.4%</td>
</tr>
<tr>
<td>NH Asian</td>
<td>67.6%</td>
<td>67.6%</td>
</tr>
<tr>
<td>NH Other Race</td>
<td>67.8%</td>
<td>67.8%</td>
</tr>
<tr>
<td>NH Multiple Race</td>
<td>46.6%</td>
<td>46.6%</td>
</tr>
</tbody>
</table>

Note: NH indicates Non-Hispanic; AIAN: American Indian/Alaska Native.


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 LGBTQ Population in San Diego County

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

Mental Health Outcomes Among the Adult LGBTQ 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 with no health insurance

Percent of households receiving food stamps

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 MEHTSUN, MD, MPH
Surgical Oncologist and Assistant Professor at UC San Diego School of Medicine
Gastric Cancer: Examining Incidence, Survival, and Molecular Disparities

Winta T. Mehtsun MD MPH
Assistant Professor
Department of Surgery
University of California San Diego
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
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
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. Gomez4,9

There are several-fold differences in the incidence of gastric adenocarcinoma in specific anatomic sites among different race and ethnic groups in individuals age ≥50 years old.

These findings may inform risk reduction and early detection programs for gastric adenocarcinoma.
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>
<thead>
<tr>
<th>TABLE 3</th>
<th>Surgery-related comparisons for stage 0 to III patients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hispanics</td>
</tr>
<tr>
<td>Gastric</td>
<td>2716 (63.5%)</td>
</tr>
<tr>
<td>otomy performed</td>
<td></td>
</tr>
<tr>
<td>Partial</td>
<td>1807 (67.7%)</td>
</tr>
<tr>
<td>gastrectomy</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>862 (32.3%)</td>
</tr>
<tr>
<td>Gastric</td>
<td>1747 (71.8%)</td>
</tr>
<tr>
<td>otomy upfront</td>
<td></td>
</tr>
<tr>
<td>Staging</td>
<td>239 (5.6%)</td>
</tr>
<tr>
<td>laparoscopy</td>
<td></td>
</tr>
<tr>
<td>Minimally</td>
<td>397 (25.6%)</td>
</tr>
<tr>
<td>invasive</td>
<td></td>
</tr>
<tr>
<td>gastrectomy</td>
<td></td>
</tr>
<tr>
<td>Greater than</td>
<td>1457 (57.3%)</td>
</tr>
<tr>
<td>15 LN's</td>
<td></td>
</tr>
<tr>
<td>examined</td>
<td></td>
</tr>
<tr>
<td>R0</td>
<td>2262 (91.2%)</td>
</tr>
<tr>
<td>Resection</td>
<td></td>
</tr>
<tr>
<td>30-d Unplanned</td>
<td>168 (6.3%)</td>
</tr>
<tr>
<td>readmission</td>
<td></td>
</tr>
<tr>
<td>30-d Mortality</td>
<td>62 (2.7%)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>90-d Mortality</td>
<td>128 (5.6%)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TABLE 4</th>
<th>Adjuvant therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hispanics</td>
</tr>
<tr>
<td></td>
<td>(stage 0-I)</td>
</tr>
<tr>
<td>Neoadjuvant</td>
<td>157 (16%)</td>
</tr>
<tr>
<td>therapy</td>
<td></td>
</tr>
<tr>
<td>Neoadjuvant</td>
<td>560 (31.7%)</td>
</tr>
<tr>
<td>therapy</td>
<td></td>
</tr>
<tr>
<td>Multimodal</td>
<td>438 (24.8%)</td>
</tr>
<tr>
<td>therapy (stage 0-I)</td>
<td></td>
</tr>
<tr>
<td>Multimodal</td>
<td>1171 (48.9%)</td>
</tr>
<tr>
<td>therapy (stage II-III)</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>NHB vs. NHW HR (95% CI)</th>
<th>Hispanic vs. NHW HR (95% CI)</th>
<th>API vs. NHW HR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>1.06 (0.98, 1.15)</td>
<td>0.94 (0.90, 0.99)</td>
<td>0.83 (0.79, 0.88)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subgroup</th>
<th>Latinos (n = 3879)</th>
<th>NLW (n = 4612)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>2166 (56%)</td>
<td>3048 (66%)</td>
</tr>
<tr>
<td>Women</td>
<td>1713 (44%)</td>
<td>1564 (34%)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early onset (≤50 years)</td>
<td>880 (23%)</td>
<td>363 (8%)</td>
</tr>
<tr>
<td>Late onset (&gt;50 years)</td>
<td>2999 (77%)</td>
<td>4249 (92%)</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest</td>
<td>1285 (37%)</td>
<td>435 (14%)</td>
</tr>
<tr>
<td>Medium/high</td>
<td>2145 (63%)</td>
<td>2736 (86%)</td>
</tr>
<tr>
<td>Histology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intestinal</td>
<td>1929 (62%)</td>
<td>2739 (77%)</td>
</tr>
<tr>
<td>Diffuse</td>
<td>1187 (38%)</td>
<td>828 (23%)</td>
</tr>
<tr>
<td>Stage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Localized</td>
<td>887 (23%)</td>
<td>1282 (38%)</td>
</tr>
<tr>
<td>Regional/remote</td>
<td>2580 (77%)</td>
<td>2895 (62%)</td>
</tr>
</tbody>
</table>
## 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 Hwang¹

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

<table>
<thead>
<tr>
<th>County-level Factor</th>
<th>All Stages (N = 107,562)</th>
<th>Localized Stage (n = 27,078)</th>
<th>Advanced Stage (n = 80,484)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HR (95% CI)</td>
<td>P</td>
<td>HR (95% CI)</td>
</tr>
<tr>
<td>Rurality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural (vs urban)</td>
<td>1.06 (1.03–1.10)</td>
<td>&lt;.001</td>
<td>1.27 (1.16–1.39)</td>
</tr>
<tr>
<td>Educational attainment (% of population aged ≥ 25 years with at least a high-school degree)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest tertile (&lt;80.0%)</td>
<td>1.00</td>
<td>Ref.</td>
<td>1.00</td>
</tr>
<tr>
<td>Middle (80.0%–88.2%)</td>
<td>0.99 (0.97–1.02)</td>
<td>.6</td>
<td>1.11 (1.05–1.20)</td>
</tr>
<tr>
<td>Highest (&gt;88.2%)</td>
<td>0.91 (0.89–0.93)</td>
<td>&lt;.001</td>
<td>0.91 (0.85–0.98)</td>
</tr>
<tr>
<td>P for trend</td>
<td>&lt;.001</td>
<td></td>
<td>.006</td>
</tr>
<tr>
<td>Poverty (% of households below the federal poverty limit)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lowest tertile (&lt;10.3%)</td>
<td>1.00</td>
<td>Ref.</td>
<td>1.00</td>
</tr>
<tr>
<td>Middle (10.3%–16.5%)</td>
<td>1.06 (1.04–1.08)</td>
<td>&lt;.001</td>
<td>1.07 (1.00–1.13)</td>
</tr>
<tr>
<td>Highest (&gt;16.5%)</td>
<td>1.15 (1.11–1.18)</td>
<td>&lt;.001</td>
<td>1.30 (1.20–1.42)</td>
</tr>
<tr>
<td>P for trend</td>
<td>&lt;.001</td>
<td></td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
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; Wooljin Jeong; Jae Yong Cho; Joohee Kim; Jungsoo Chae; Jeeyun Lee; Won Ki Kang; Sung Kim; Sung Hoon Noh; Jaffer A. Ajani; Ju-Soog Lee

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 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
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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%

(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%)

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

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

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

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, non-Hispanics-related cancers, and particularly liver
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

BRONX

CHICAGO

MIAMI

SAN DIEGO
Population Characteristics: Age
Population Characteristics: Nativity and Years in the US

BRONX
US-born: 31
Foreign-born: 17
Foreign-born: <10y: 52
Foreign-born: ≥10y: 23

CHICAGO
US-born: 23
Foreign-born: 22
Foreign-born: <10y: 54
Foreign-born: ≥10y: 8

MIAMI
US-born: 46
Foreign-born: 46
Foreign-born: <10y: 46
Foreign-born: ≥10y: 8

SAN DIEGO
US-born: 31
Foreign-born: 21
Foreign-born: <10y: 47
Foreign-born: ≥10y: 8
Population Characteristics: Cigarette Smoking

BRONX  CHICAGO  MIAMI  SAN DIEGO
Population Characteristics: Body Mass Index

BRONX  CHICAGO  MIAMI  SAN DIEGO
Population Characteristics: Cancer History

BRONX  CHICAGO  MIAMI  SAN DIEGO
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
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HCHS/SOL Study
Greg Talavera, MD, MPH
Linda Gallo, PhD
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
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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