Addressing Lung Cancer Disparities in Blacks and Hispanics

Luis E. Raez, MD FACP FCCP

Chief Scientific Officer & Medical Director

Memorial Cancer Institute/Memorial Health Care System

Research Professor of Medicine/I-Health Institute

Florida Atlantic University

Past-President Florida Society of Clinical Oncology (FLASCO)

Memorial Cancer Institute

CANCER CENTER of EXCELLENCE Florida HEALTH

FAU I-HEALTH Florida Atlantic University

Disclosures

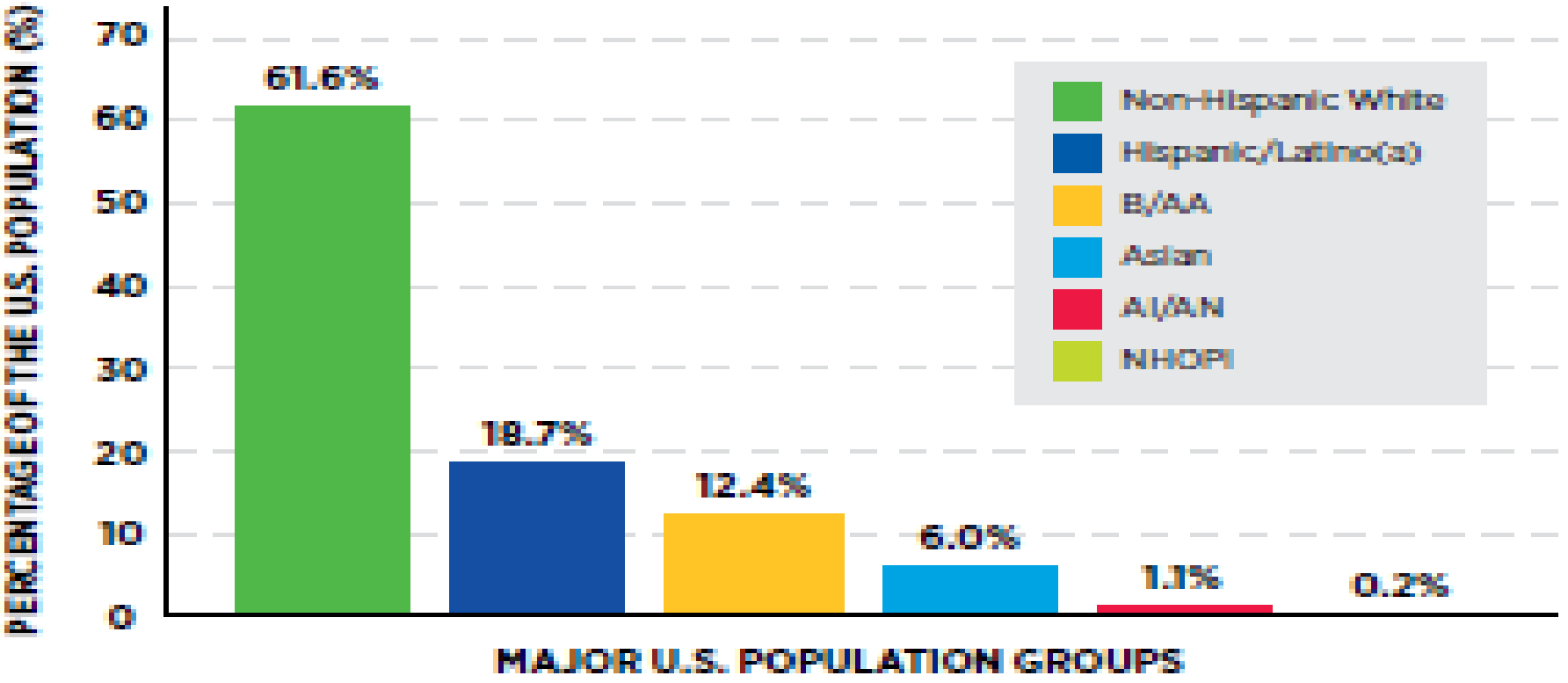
Research Support:

BMS
Genentech/Roche
Nanthealth
Merck Serono
Boheringer-Ingelheim
Novartis
Astra-Zeneca
Liquid Genomics
Pfizer
MSD
Lilly Oncology
Syndax
Heat Biologics
Exosomes DX
Loxo Oncology

Speakers Bureau/Stocks: *None*

Memorial Cancer Institute
CANCER CENTER of EXCELLENCE Florida HEALTH
FAU I-HEALTH Florida Atlantic University

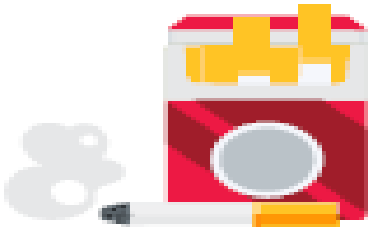
AACR CANCER DISPARITIES PROGRESS REPORT 2022



AACR CANCER DISPARITIES PROGRESS REPORT 2022

Percentage of adults age 18 and older who reported cigarette use in 2020:

- **27.1%** American Indian or Alaska Native
  14.4% Black
  13.3% White
  8.0% Asian
  8.0% Hispanic
- **19.0%** Rural residents
  11.4% Urban residents
- **20.2%** Annual household income of <$35,000
  6.2% Annual household income of >$100,000
- **16.1%** Sexual and gender minority
  12.3% Heterosexual/straight



>70%
vs
<3%

Between 2009 and 2019, 81 oral chemotherapeutic agents were approved by the U.S. Food and Drug Administration based on data from 142 clinical trials. **Only 52 percent of these trials reported on race/ethnicity.** Among the participants, **greater than 70 percent were White** while only **2.5 percent and 2.3 percent were Black and Hispanic**, respectively (505).

Tobacco Use and Lung Cancer Mortality by Race

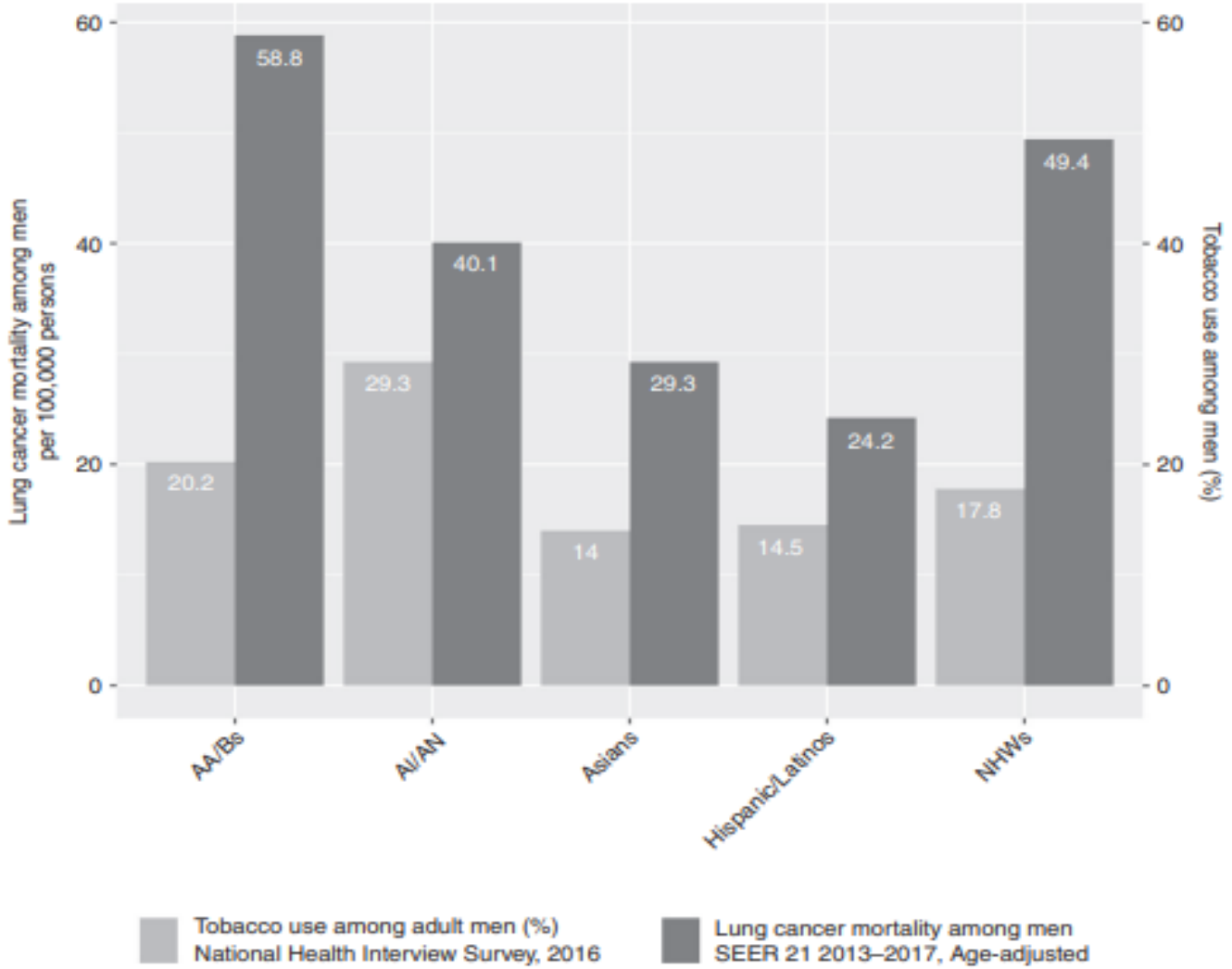


Fig. 1 Lung cancer mortality rates and tobacco use among adult men in the United States by racial/ethnic category. Bars in light gray represent age-adjusted lung cancer mortality rates in the USA for the period 2013–2017[216] and bars in dark gray represent tobacco use among adult men as reported by the 2016 National Health Interview Survey,[365] stratified by racial/ethnic category.

Zavala V, et al. British Journal of Cancer (2021) 124:315–332; https://doi.org/10.1038/s41416-020-01038-6

Disparities and Surgery

Adjusting for demographic, clinical, and treatment characteristics, blacks experienced worse OS compared with NHW ([aHR], 1.05; 95% CI, 1.02-1.08) whereas Hispanics and Asians experienced better (aHR, 0.93; 95% CI, 0.89-0.98; and aHR, 0.82; 95% CI, 0.79-0.86).

Worse survival from competing causes of death, such as cardiovascular disease and other cancers—rather than from lung cancer itself—led to the disparity in OS among Blacks (aRR, 1.07; 95% CI, 1.02-1.12)

TABLE 2] Receipt of Surgical Treatment

Variable	Hispanic % (95% CI)	Non-Hispanic Asian % (95% CI)	Non-Hispanic Black % (95% CI)	Non-Hispanic White % (95% CI)
Type of surgical resection				
None	38.1 (35.7-40.4)	33.5 (31.2-35.8)	46.8 (45.3-48.2)	38.3 (37.8-38.8)
< 1 lobe	11.4 (8.6-14.1)	10.1 (7.4-12.8)	11.0 (9.2-12.9)	12.8 (12.2-13.5)
≥ 1 lobe	50.6 (48.5-52.7)	56.4 (54.5-58.3)	42.2 (40.7-43.7)	48.9 (48.4-49.3)
Reason no surgery performed				
Surgery performed	62.8 (61.0-64.6)	67.0 (65.3-68.6)	53.7 (52.4-55.1)	62.5 (62.1-62.9)
Surgery not recommended	29.0 (26.5-31.5)	24.1 (21.6-26.5)	34.5 (32.9-36.0)	27.7 (27.2-28.3)
Contraindicated due to other conditions	3.4 (0.5-6.3)	4.0 (1.2-6.7)	5.7 (3.8-7.6)	5.5 (4.9-6.2)
Patient died before recommended surgery	0.1 (0.0-3.0)	0.1 (0.0-2.9)	0.1 (0.0-2.1)	0.1 (0.0-0.8)
Unknown reason for no surgery	2.3 (0.0-5.2)	1.4 (0.0-4.2)	2.3 (0.4-4.2)	1.6 (1.0-2.3)
Patient refused	1.9 (0.0-4.8)	2.8 (0.1-5.6)	2.8 (0.8-4.7)	1.9 (1.3-2.6)
Recommended, unknown if performed	0.5 (0.0-3.4)	0.6 (0.0-3.4)	0.6 (0.0-2.5)	0.3 (0.0-0.9)
Unknown if surgery performed	0.1 (0.0-3.0)	0.1 (0.0-2.9)	0.3 (0.0-2.3)	0.4 (0.0-1.0)

Soneji S et al. CHEST 2017; 152(3):587-597

Negative Surgical believes
Fatalism
Mistrust

can explain 1/3 of lung cancer disparities in Blacks

ORIGINAL RESEARCH

Cultural Factors Associated with Racial Disparities in Lung Cancer Care

Jenny J. Lin[1], Grace Mhango[1], Melanie M. Wall[4], Linda Lurslurchachai[1], Keosha T. Bond[5], Judith E. Nelson[2,3], Andrew R. Berman[7], John Salazar-Schicchi[6], Charles Powell[2], Steven M. Keller[9], Ethan A. Halm[10], Howard Leventhal[8], and Juan P. Wisnivesky[1,2]

[1]Division of General Internal Medicine, [2]Division of Pulmonary, Critical Care and Sleep Medicine, and [3]Hertzberg Palliative Care Institute, Icahn School of Medicine at Mount Sinai, New York, New York; [4]Department of Biostatistics, Mailman School of Public Health; [5]Department of Health and Behavior Studies, Teachers College, and [6]Division of Pulmonary and Critical Care Medicine, Columbia University, New York, New York; [7]Division of Pulmonary and Critical Care Medicine, Rutgers University, Newark, New Jersey, and [8]Department of Psychology, Rutgers University, Piscataway, New Jersey; [9]Department of Thoracic Surgery, Montefiore Medical Center, Bronx, New York; and [10]Departments of Internal Medicine and Clinical Sciences, University of Texas Southwestern Medical Center, Dallas, Texas

Abstract

Rationale: Minority patients with lung cancer are less likely to receive stage-appropriate treatment. Along with access to care and provider-related factors, cultural factors such as patients' lung cancer beliefs, fatalism, and medical mistrust may help explain this disparity.

Objectives: To determine cultural factors associated with disparities in lung cancer treatment.

Methods: Patients with newly diagnosed lung cancer were recruited from four medical centers in New York City from 2008 to 2011. Using validated tools, we surveyed participants about their beliefs regarding lung cancer, fatalism, and medical mistrust. We compared rates of stage-appropriate treatment among blacks, Hispanics, and nonminority patients. Multiple regression analyses and structural equation modeling were used to assess whether cultural factors are associated with and/or mediate disparities in care.

Measurements and Main Results: Of the 352 patients with lung cancer in the study, 21% were black and 20% were Hispanic. Blacks were less likely to receive stage-appropriate treatment (odds ratio [OR], 0.50; 95% confidence interval [CI], 0.27–0.93) compared with whites, even after adjusting for age, sex, marital status, insurance, income, comorbidities, and performance status. No differences in treatment rates were observed among Hispanics (OR, 1.05; 95% CI, 0.53–2.07). Structural equation modeling showed that cultural factors (negative surgical beliefs, fatalism, and medical mistrust) partially mediated the relationship between black race and lower rates of stage-appropriate treatment (total effect: −0.43, indirect effect: −0.13; 30% of total effect explained by cultural factors).

Conclusions: Negative surgical beliefs, fatalism, and mistrust are more prevalent among minorities and appear to explain almost one-third of the observed disparities in lung cancer treatment among black patients. Interventions targeting cultural factors may help reduce undertreatment of minorities.

Keywords: lung neoplasms; therapeutics; healthcare disparities; culture; beliefs

Lung Cancer in Hispanics

- We will have 130,000 deaths in the US in 2022, and more than 60,000 deaths per year in Latin America (LATAM).

- Hispanics are the largest minority group in the US (18% of the population), and there are more than 20 countries with Hispanic populations in LATAM.

- Disparities in the diagnosis and clinical outcomes of Hispanic patients with lung cancer compared with Non-Hispanic White (NHW) patients are well documented.
  - ❖ Hispanics have disadvantages in social determinants of health: access to care, health insurance, cultural differences, and immigration status.
  - ❖ There are also genetic and other biological differences (like EGFR frequency)
  - ❖ Hispanics in LATAM have some extra hardships; most of them live in countries classified as low- and middle-income countries.

- Compared with the NHW population in the US:
  - **Hispanics tend to have more social problems
  - **24% live below the poverty line
  - **35% have less than high school education
  - **One third had no health insurance and reported not having a consistent doctor.
- Although Hispanics in the US have an overall lower incidence for all cancers, they generally experience greater health disparities because of structural, sociodemographic, psychosocial factors however, they have a better overall survival (OS) than other minorities: the so-called **Hispanic Health Paradox (HHP).**

Aizer AA, et al. Cancer 120:1532-1539, 2014
Lin JJ, et al. Ann Am Thorac Soc 11:489-495, 2014

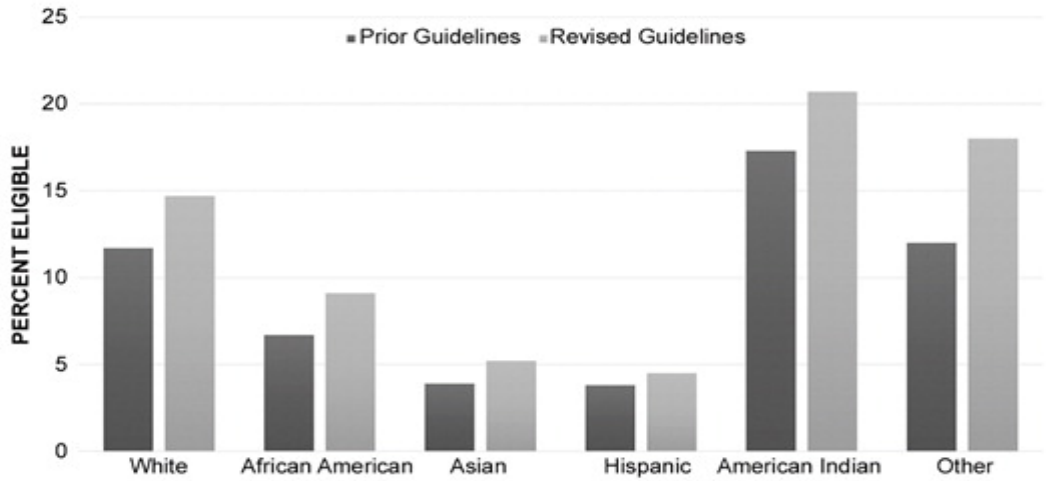
Hispanic Paradox

- It has been reported that for several diseases (*e.g.* cardiovascular disease, breast cancer and prostate cancer) H/L patients have improved survival compared with WNH patients and AA.
- This finding, termed the "Hispanic paradox," was first proposed in 1986 to describe the lower mortality rate that H/Ls in the USA tend to have in spite of having less access to care and fewer resources than WNH, and having a poverty rate similar to that of AAs.
- Several explanations for the "Hispanic Paradox" have been proposed; including increased family support, lower smoking rates, an increased propensity for healthy individuals to migrate to the USA, and a tendency for sick immigrants to return to their country of birth.

[Markides KS, Coreil J. Public Health Rep. 1986; 101(3):253–65]

[Pinheiro PS et al. Cancer Causes Control. 2011; 22(4):553–61]

Racial and Ethnic Disparities in Lung Cancer Screening Eligibility



Bar graph shows proportion of survey participants eligible for LCS, stratified according to race and ethnicity under previous and revised U.S. Preventive Services Task Force guidelines.

- Using cross-sectional survey data from the United States, African American participants (adjusted odds ratio [OR] = 0.39) and Hispanic participants (adjusted OR = 0.15) were less likely to be eligible for lung cancer screening (LCS).
- Higher percentages of all racial and ethnic groups were eligible for LCS under the newly adopted LCS guidelines.
- Among participants eligible for LCS, there were no differences between White participants and African American participants (adjusted OR = 1.17; *P* = .66) and between White participants and Hispanic participants (adjusted OR = 1.05; *P* = .93) in their likelihood to report LCS use.

Narayan AK and Chowdhry DN et al. Published Online: September 21, 2021
https://doi.org/10.1148/radiol.2021204691

Radiology

Lung Cancer Screening

RESULTS

	NCCN Eligible		P-value	USPSTF Eligible		P-value
	Yes (%)	No (%)		Yes (%)	No (%)	
Race						
African American	56.9	43.1	0.206	38.5	61.5	0.496
White, Asian, other	65.6	34.4		43.8	56.2	
Ethnicity						
Hispanic/LatinX	52.0	48.0		20.0	80.0	**0.027**
Non-Hispanic/LatinX	65.0	35.0	0.201	44.4	55.6	

Table 2: NCCN and USPSTF screening eligibility criteria in difference races and ethnicities

	Screening Eligible		P-value
	NCCN (%)	USPSTF (%)	
African American	56.9	38.5	**0.0029**
Hispanic/LatinX	52.0	20.0	**0.0001**

Table 3: NCCN and USPSTF screening eligibility rates amongst AA and H/L

Biomarker Testing Impacts NSCLC Outcomes

Lung cancer mortality

- Leading cause of cancer-related deaths in the U.S. and worldwide[1,2]
- Non-small cell lung cancer (NSCLC) accounts for 85% of all cases[3]
- 57% of patients with stage IV upon presentation[5]
- 5-yr OS of stage IV disease: 6%[2]

Biomarker-driven therapies improve overall survival

- Immunotherapy and kinase inhibitors lead to higher 5-yr OS in stage IV NSCLC subpopulations: 15-60%[5-7]
- Biomarker testing is fundamental in advanced NSCLC

1. Siegel RL, Cancer J Clin 2021
2. WHO. https://www.who.int/news-room/fact-sheets/detail/cancer
3. Tan and Huq. NSCLC. Mescape. March 2021
4. Howlader N, SEER Cancer Statistics Review 1975-2017
5. Lin JJ, J Thorac Oncol 2016
6. Pacheco JM, J Thorac Oncol 2019
7. Garon EB, J Clin Oncol 2019

Biomarker Testing

All patients with NSCLC				
	NSCLC overall N=14,768	White N=9,793	Black/AA N=1,288	P-value, White vs Black/AA
Ever tested	11,297 (76.5%)	**7477 (76.4%)**	**948 (73.6%)**	**0.03**
Tested prior to first line therapy		6,064 (61.9%)	784 (60.9%)	0.47
Ever NGS tested	7,185 (48.7%)	**4,904 (50.1%)**	**513 (39.8%)**	**<0.0001**
NGS tested prior to first line therapy		**3,081 (31.5%)**	**332 (25.8%)**	**<0.0001**
Patients with non-squamous NSCLC				
	Non-squamous N=10,333	White N=6,705	Black/AA N=922	P-value, White vs Black/AA
Ever tested	8,786 (85.0%)	5,699 (85.0%)	764 (82.9%)	0.09
Tested prior to first line therapy		4,881 (72.8%)	662 (71.8%)	0.52
Ever NGS tested	5,494 (53.2%)	**3,668 (54.7%)**	**404 (43.8%)**	**<0.0001**
NGS tested prior to first line therapy		**2,452 (36.6%)**	**274 (29.7%)**	**<0.0001**

AA = African American; NGS = next-generation sequencing

Use of Targeted Therapy

All patients with NSCLC				
	NSCLC overall N=14,768	White N=9,793	Black/AA N=1,288	P-value, White vs Black
Targeted therapy during first-line therapy	1,784 (12.1%)	999 (10.2%)	118 (9.2%)	0.24
Targeted therapy during second-line therapy	796 (5.4%)	456 (4.7%)	69 (5.4%)	0.36
Targeted therapy in any line of therapy	2,328 (15.8%)	1,323 (13.5%)	170 (13.2%)	0.76
Patients with non-squamous NSCLC				
	Non-squamous N=10,333	White N=6,705	Black/AA N=922	P-value, White vs Black
Targeted therapy during first-line therapy	1,703 (16.5%)	959 (14.3%)	113 (12.3%)	0.09
Targeted therapy during second-line therapy	719 (7.0%)	416 (6.2%)	62 (6.7%)	0.56
Targeted therapy in any line of therapy	2,153 (20.8%)	1,229 (18.3%)	156 (16.9%)	0.30

NGS Testing and Clinical Trial Participation*

All patients with NSCLC				
	NSCLC overall N=14,768	Ever NGS tested (n=7,185)	Never NGS tested (n=7,583)	P-value, tested vs not
Evidence of trial participation	484 (3.3%)	**318 (4.4%)**	**166 (2.2%)**	**<0.0001**
No evidence of participation	14,284 (96.7%)	6,867 (95.5%)	7,417 (97.8%)	
Patients with non-squamous NSCLC				
	Non-squamous N=10,333	Ever NGS tested (n=5,494)	Never NGS tested (n=4,839)	P-value, tested x not
Evidence of trial participation	343 (3.3%)	**236 (4.3%)**	**107 (2.2%)**	**<0.0001**
No evidence of participation	9,990 (96.7%)	5,258 (95.7%)	4,732 (97.8%)	

*Evidence of clinical trial participation = yes if one or more drugs received by the patient at any time after diagnosis indicated “clinical trial drug.” There is no specific variable for clinical trial participation in the EHR database.

Barriers to next-generation sequencing despite increased utilization: U.S. physician survey results.

Barrier	Total (N= 201)	Oncology/Hematology (N=100)	Pathology (N=51)	Surgery (N=50)
Reimbursement Challenges	87.5	85.0	90.2	90.0
Knowledge/Awareness	81.0	75.0	82.4	92.0
Evidence of clinical utility	80.1	79.0	78.4	84.0
Availability of Supportive Resources	79.6	73.0	82.4	90.0
Logistical Barriers	77.2	73.0	72.6	90.0

Kaminski A, DOI: 10.1200/JCO.2021.39.15_suppl.e18754 *Journal of Clinical Oncology* 39, no. 15_suppl

Lung Cancer Genomic Profile in the US Hispanics

A genomic analysis of 492 patients with NSCLC found that Hispanics living in the US have a higher rate of EGFR mutations (25%) than NHW patient's historic rates (15%) while the frequencies of other genetic aberrations (ALK, ROS-1, and KRAS) were similar.

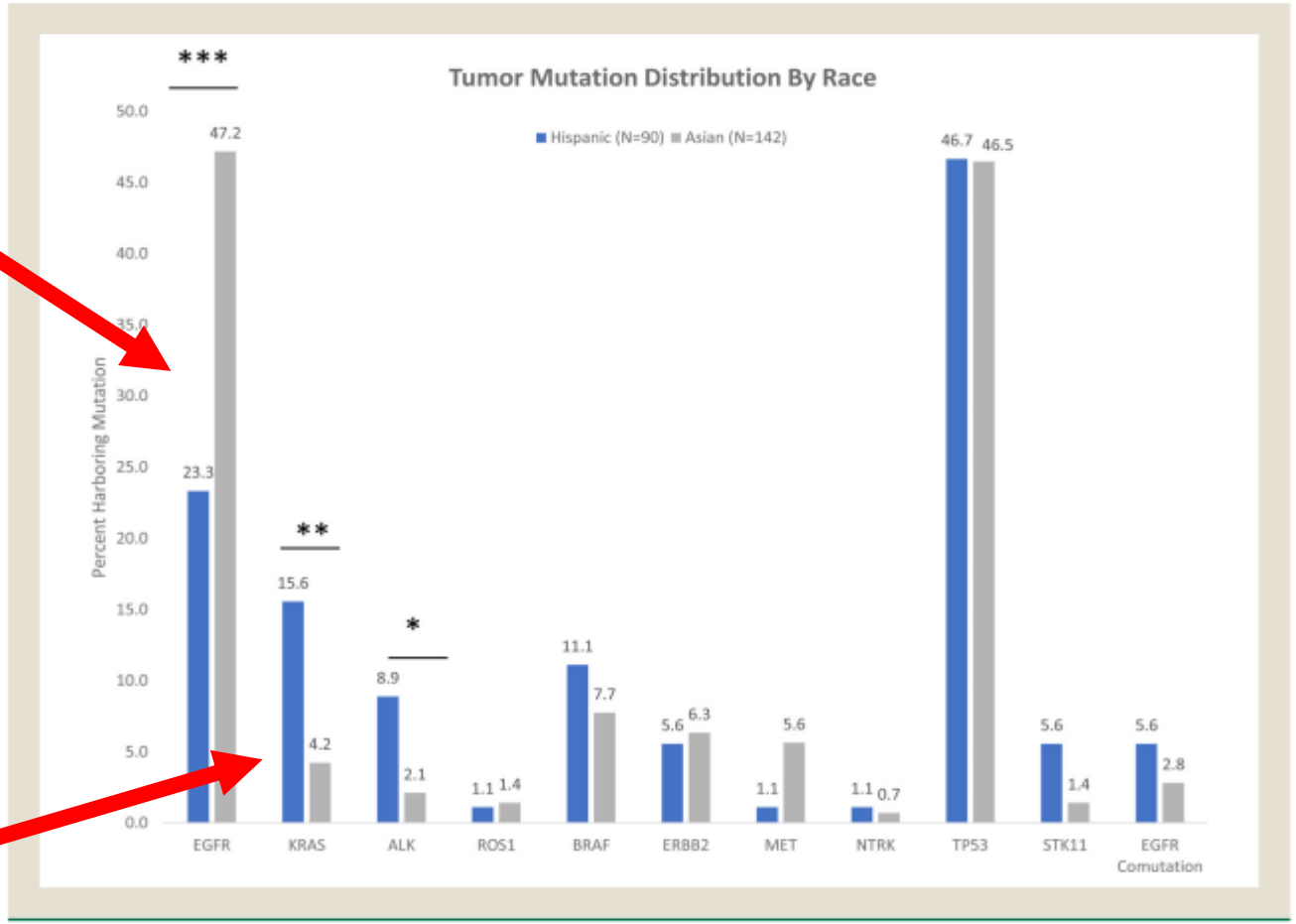
Genes Evaluated by GEP	# Tumors Tested	Frequency %	Hispanics %
EGFR	380	22%	25%
ALK	339	5%	5%
ROS-1	180	8%	3%
KRAS	258	30%	27%
c-MET	165	31%	27%
BRAF	156	5%	10%
RET	122	4%	0%

This genomic disparity favors Hispanics who have a better chance of survival than NHW patients; maybe, this can help to explain the Hispanic Paradox?

Raez LE et al. J Thorac Oncol 11:S176, 2016

Evaluating Real World Mutational Differences Between Hispanics and Asians in NSCLC at a Large Academic Institution in Los Angeles

Figure 1 Mutations between Hispanics and Asians. *P-value < .05, ** < .01, *** < .001.



Robert Hsu et al, Clinical Lung Cancer, https://doi.org/10.1016/j.cllc.2022.06.007

Molecular Biomarker Testing and Initiation of Targeted Therapy in Minority Patients with Metastatic Non-Small Cell Lung Cancer

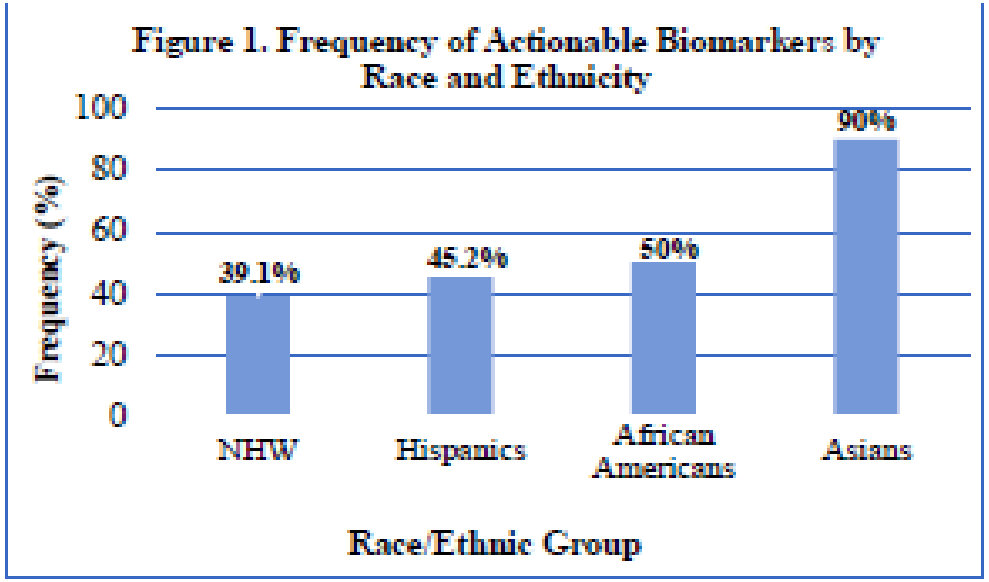
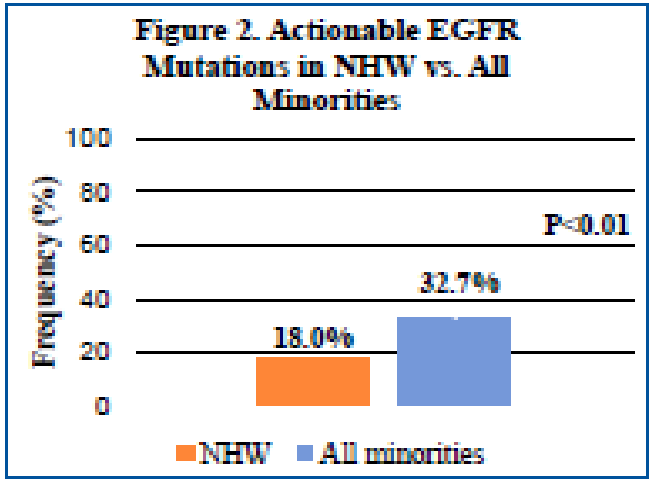
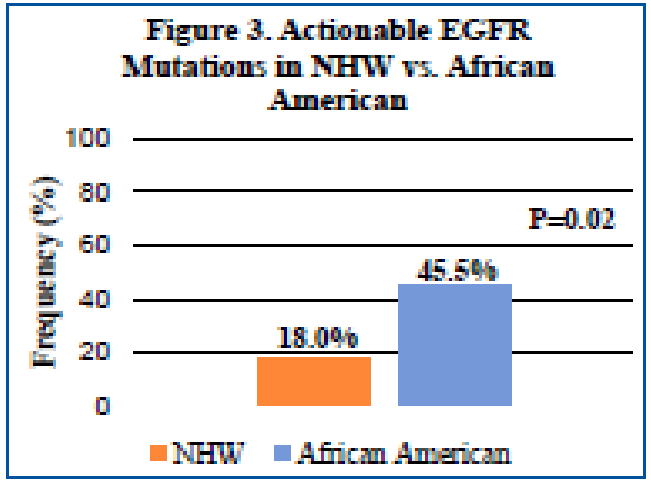
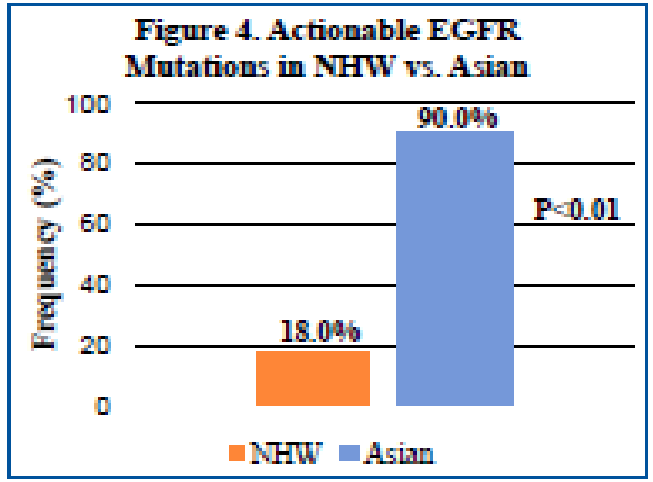


Table 2. Distribution of Actionable Biomarkers

Actionable Biomarkers n (%)	NHW (n=133)	Hispanic (n=84)	African American (n=22)	Asian (n=10)
EGFR	24 (18)	19 (22.6)	10 (45.5)	9 (90)
KRAS	12 (9)	7 (8.3)	1 (4.5)	0 (0)
BRAF	4 (3)	2 (2.4)	0 (0)	0 (0)
ROS-1	3 (2.3)	2 (2.4)	0 (0)	0 (0)
ALK	1 (0.8)	4 (4.8)	0 (0)	0 (0)
MET	5 (3.8)	3 (3.6)	0 (0)	0 (0)
NTRK1-3	3 (2.3)	1 (1.2)	0 (0)	0 (0)

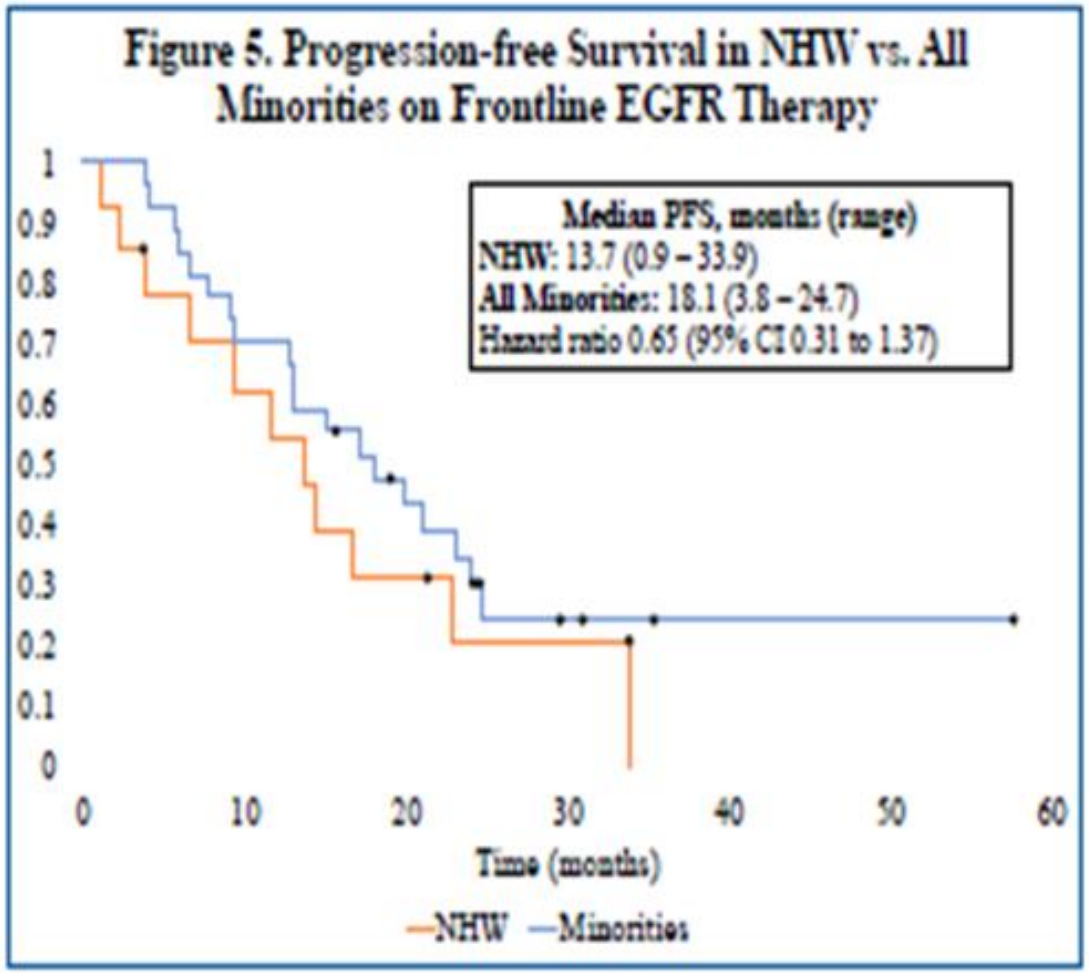


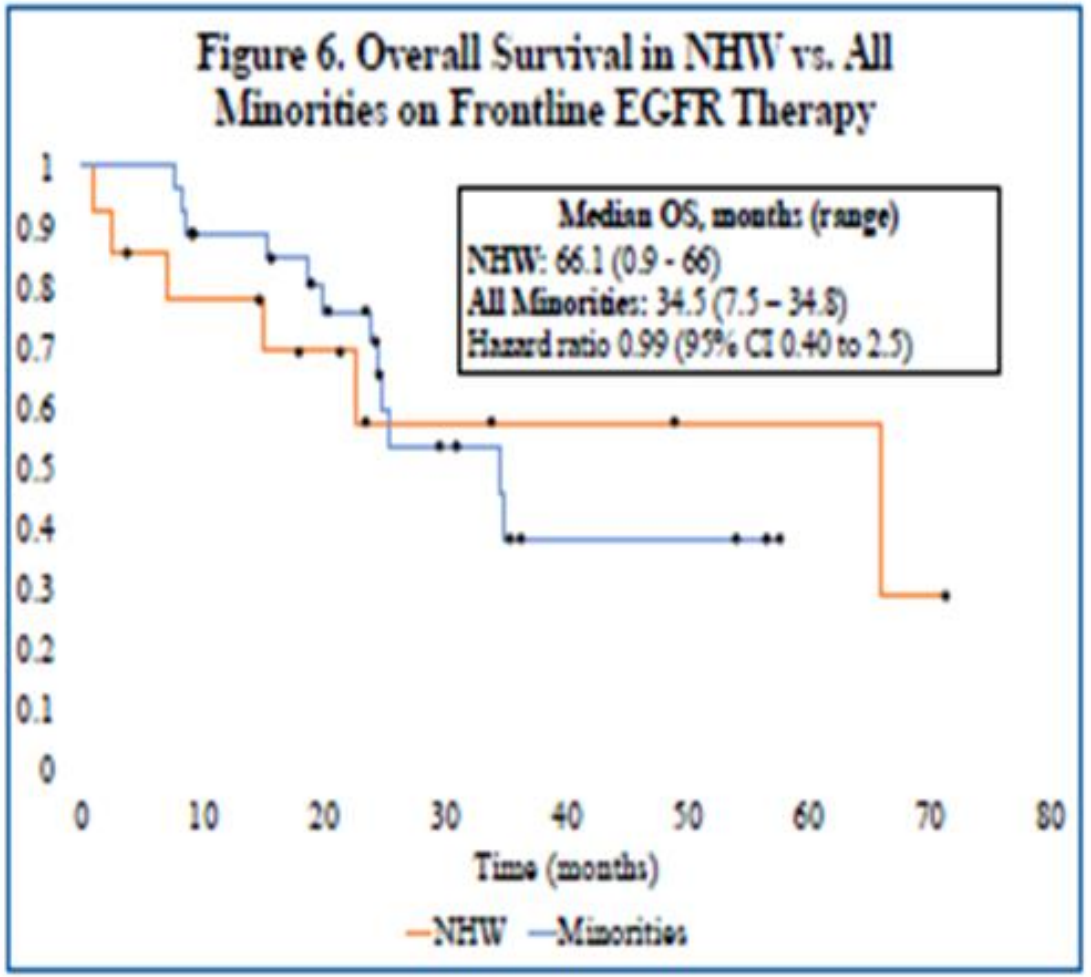




Villanueva M (Raez LE) et al. 2022 World Lung Ca Congress

Molecular Biomarker Testing and Initiation of Targeted Therapy in Minority Patients with Metastatic Non-Small Cell Lung Cancer





Villanueva M (Raez LE) et al. 2022 World Lung Ca Congress

Disparity in initiation of checkpoint inhibitors among metastatic melanoma and lung cancer

- Retrospective cohort study using Optum data on commercially insured patients newly diagnosed with metastatic lung cancer diagnosed between January 2015 and December 2020.
- Percentage of metastatic lung cancer patients on checkpoint inhibitors (ICI) increased from 23% to 52% from 2015 to 2020.
- Counties with greater % of blacks and Hispanics were high urban with greater density of medical oncologists and NCI-designated cancer centers. However, greater % of Hispanic population was associated with significantly slower initiation of ICI for lung cancer ([HR]: 0.937; p-values < 0.001).

Li, M et al. J Clin Oncol 40, 2022 (suppl 16; abstr 1583)

Immunotherapy

- Most of the IO registration trials were done in the US/Europe, and they did not include anybody or enrolled a minimal number of Hispanics.
- Raez et al; reported data from 256 Hispanics with NSCLC treated with IO as 2nd line in LATAM and US compared with 180 NHW controls, finding no difference in outcomes (PFS and OS).
- Cardona et al; included 296 Hispanic patients from the US and LATAM with NSCLC treated IO in 1st, 2nd or 3rd line; median OS was 19.9 months, compared with historical data from NHW patients; IO proved to be superior in terms of OS but not PFS.
- Even tough that biological speaking, the outcomes of Hispanics seem to be better or similar to NHW patients; other factors, mainly in Hispanics in LATAM, do not allow them to have these benefits because of lack of access, creating substantial disparities in outcomes.

Raez LE et al. J Clin Oncol 37, 2019 (suppl; abstr e18109)

Cardona AF et al. J Thorac Oncol 14:S984-S985, 2019

Disparities in Immunotherapy Outcomes

Durvalumab After Chemoradiation for Unresectable Stage III Non-Small Cell Lung Cancer: Inferior Outcomes and Lack of Health Equity in Hispanic Patients Treated With PACIFIC Protocol (LA1-CLICaP)

Luis E. Raez[1†], Oscar Arrieta[2†], Diego F. Chamorro[3,4†], Pamela Soberanis[2†], Luis Corrales[5], Claudio Martin[6], Mauricio Cuello[7], Suraj Samtani[8], Gonzalo Recondo[9], Luis Mas[10], Lucia Zatarain-Barrón[2], Alejandro Ruiz-Patiño[3,4], Juan Esteban Garcia-Robledo[11], Camila Ordoñez[3,4], Elvira Jaller[3,4], Franco Dickson[1], Leonardo Rojas[12], Christian Rolfo[13], Rafael Rosell[14], Andrés F. Cardona[3,4,15*†] and on behalf of CLICaP

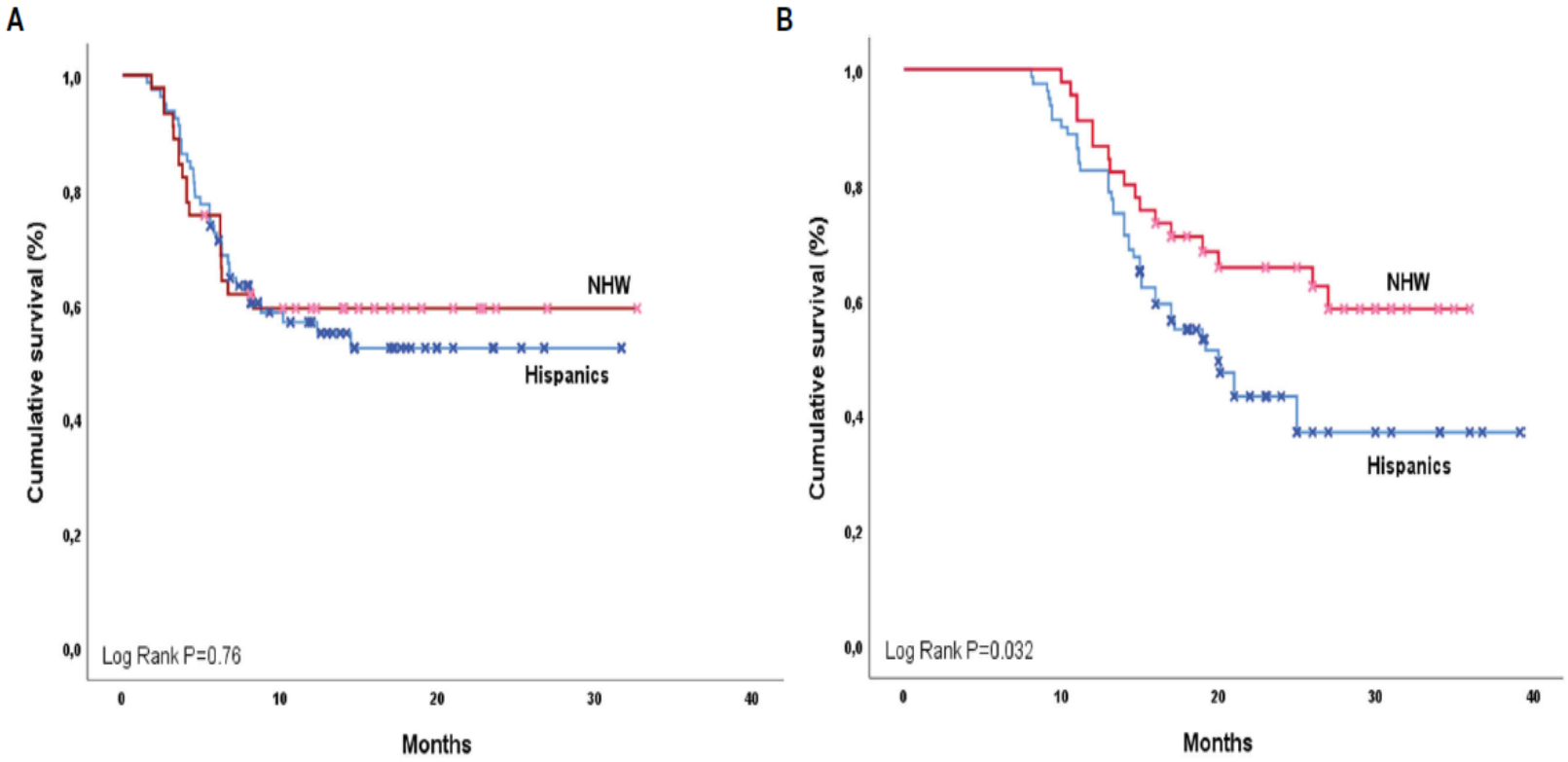


FIGURE 1 | Progression-free survival **(A)** and overall survival by ethnicity (Hispanic and NHW).

Raez et al. Frontiers in Oncology 12904800. doi.org/10.3389/fonc.2022.904800

Review Social Determinants

Social Determinants of Health

Expand All Collapse All

Social Connections
Dec 13 2021: Socially Isolated

Tobacco Use
Jan 12 2022: Medium Risk

Depression
Jan 12 2022: At risk

Physical Activity
Dec 13 2021: Insufficiently Active

Transportation Needs
Dec 13 2021: No Transportation Needs

Caregiver Education and Work
Not on file

Violence
Not on file

Alcohol Use
Dec 13 2021: Not At Risk

Financial Resource Strain
Dec 13 2021: Low Risk

Stress
Dec 13 2021: Stress Concern Present

Food Insecurity
Dec 13 2021: No Food Insecurity

Housing Stability
Dec 13 2021: Low Risk

Caregiver Health
Not on file

Find community resources

Memorial Cancer Institute

CANCER CENTER of EXCELLENCE Florida HEALTH

USING Z CODES:

The **Social Determinants of Health (SDOH)** Data Journey to Better Outcomes

What are Z codes

SDOH-related Z codes ranging from Z55-Z65 are the ICD-10-CM encounter reason codes used to document SDOH data (e.g., housing, food insecurity, transportation, etc.).

SDOH are the conditions in the environments where people are born, live, learn, work, play, and age.

Step 1 Collect SDOH Data

Any member of a person's care team can collect SDOH data during any encounter.

- Includes providers, social workers, community health workers, case managers, patient navigators, and nurses.
- Can be collected at intake through health risk assessments, screening tools, person-provider interaction, and individual self-reporting.

Step 2 Document SDOH Data

Data are recorded in a person's paper or electronic health record (EHR).

- SDOH data may be documented in the problem or diagnosis list, patient or client history, or provider notes.
- Care teams may collect more detailed SDOH data than current Z codes allow. These data should be retained.
- Efforts are ongoing to close Z code gaps and standardize SDOH data.

Step 3 Map SDOH Data to Z Codes

Assistance is available from the ICD-10-CM Official Guidelines for Coding and Reporting.[1]

- Coding, billing, and EHR systems help coders assign standardized codes (e.g., Z codes).
- Coders can assign SDOH Z codes based on self-reported data and/or information documented in an individual's health care record by any member of the care team.[2]

Step 4 Use SDOH Z Code Data

Data analysis can help improve quality, care coordination, and experience of care.

- Identify individuals' social risk factors and unmet needs.
- Inform health care and services, follow-up, and discharge planning.
- Trigger referrals to social services that meet individuals' needs.
- Track referrals between providers and social service organizations.

Step 5 Report SDOH Z Code Data Findings

SDOH data can be added to key reports for executive leadership and Boards of Directors to inform value-based care opportunities.

- Findings can be shared with social service organizations, providers, health plans, and consumer/patient advisory boards to identify unmet needs.
- A Disparities Impact Statement can be used to identify opportunities for advancing health equity.

CMS

For Questions: Contact the CMS Health Equity Technical Assistance Program

[1] cms.gov/medicare/icd-10/2021-icd-10-cm

ASCO special articles

Increasing Racial and Ethnic Diversity in Cancer Clinical Trials: An American Society of Clinical Oncology and Association of Community Cancer Centers Joint Research Statement

Randall A. Oyer, MD[1]; Patricia Hurley, MSc[2]; Leigh Boehmer, PharmD[3]; Suanna Steeby Bruinooge, MPH[2]; Kathryn Levit, PhD[2]; Nadine Barrett, PhD[4]; Al Benson, MD[5]; Lea Ann Bernick, MHA[6]; Leslie Byatt[7]; Marjory Charlot, MD, MPH, MSc[8]; Jennie Crews, MD[9]; Kyle DeLeon[10]; Lola Fashoyin-Aje, MD, MPH[11]; Elizabeth Garrett-Mayer, PhD[2]; Julie R. Gralow, MD[2]; Sybil Green, JD, RPh, MHA[2]; Carmen E. Guerra, MD, MSCE[12]; Leila Hamroun[13]; Claudia M. Hardy, MPA[14]; Bridgette Hempstead[15]; Sanford Jeames, DHA[16]; Mel Mann, MBA, MEd[17]; Khalid Matin, MD[18]; Worta McCaskill-Stevens, MD, MS[19]; Janette Merrill, MSEd[2]; Grzegorz S. Nowakowski, MD[20]; Manali I. Patel, MD, MPH, MS[21]; Alice Pressman, PhD, MS[22]; Amelie G. Ramirez, DrPH, MPH[23]; Juanita Segura, BSc[24]; Barbara Segarra-Vasquez, DHSc[25]; Jen Hanley Williams, MA[2]; James E. Williams Jr, MS[26]; Karen M. Winkfield, MD, PhD[27]; Eddy S. Yang, MD, PhD[28]; Victoria Zwicker, MPH[3]; and Lori J. Pierce, MD[29]

J Clin Oncol 40:2163-2171.

1. Clinical trials are an integral component of high-quality cancer care, and every person with cancer should have the opportunity to participate

a. Organizations that sponsor, fund, and administer cancer clinical trials should demonstrate clear commitment to improving EDI in clinical trials

b. Clinical practices and research sites should screen every patient for clinical trials

c. Clinical practices and research sites should routinely collect and analyze data by patient demographic characteristics (including race and ethnicity) regarding clinical trial screening, participation, reasons for not qualifying or participating, and retention on trials

2. Clinical trial sponsors and investigators should design and implement trials with a focus on reducing barriers and enhancing EDI, and work with sites to conduct clinical trials in ways that increase participation of under-represented populations

a. Partnership with patients and community leaders and groups to design and conduct clinical trials with eligibility, recruitment, and participation requirements that enable equitable and inclusive enrollment of diverse patient populations

b. Clinical research sites should have access to a diverse portfolio of clinical trials that foster equitable and inclusive enrollment of patients from underrepresented racial and ethnic populations

c. Trial sponsors should develop policies to broaden their selection of sites, taking into consideration the diversity of people treated by sites

3. Clinical trial sponsors, researchers, and sites should form long-standing partnerships with patients, patient advocacy groups, and community leaders and groups

4. Anyone designing or conducting trials should complete recurring education, training, and evaluation to demonstrate and maintain cross-cultural competencies, mitigation of bias, effective communication to build trust, and a commitment to achieving EDI in clinical trials.

5. Research stakeholders should invest in programs and policies that increase EDI in clinical trials and in the research workforce.

6. Research stakeholders should collect and publish aggregate data on racial and ethnic diversity of trial participants when reporting the results of trials, programs, and interventions used to increase EDI

Conclusions

- Significant disparities in Hispanics and Blacks with lung cancer care exist in the US
- Hispanics might have some biological advantages not well understood yet that created the Hispanic paradox, and they tend to smoke less.
- Higher frequency of EGFR mutations gives Hispanics and Asians an advantage in the genomic profile that can be easily erased because of the lack of adequate biomarker testing in the US and the lack of targeted therapy access overseas
- More data are needed regarding molecular testing in Hispanics and Blacks, access to target therapy, and immunotherapy in the US and abroad. This situation will not improve unless more minorities get enrolled in clinical trials, and these are performed in areas where they live.
- All cancer patients should have access to trial trials, and these must be diverse, including minorities and opening trials where they live
- Cancer researchers and Sponsors need to be trained in EDI and promote that in research with publications and reviewing of data and results.

Thanks

Memorial Cancer Institute

CANCER CENTER of EXCELLENCE Florida HEALTH

FAU I-HEALTH Florida Atlantic University