FLASCO Cancer Care Disparities & Health Equity Summit

Cancer Disparities: A focus on Breast Cancer in the USA

Zeina Nahleh, MD, FACP
Regional Institute Chair for Cancer
Cleveland Clinic Florida

November 13, 2021

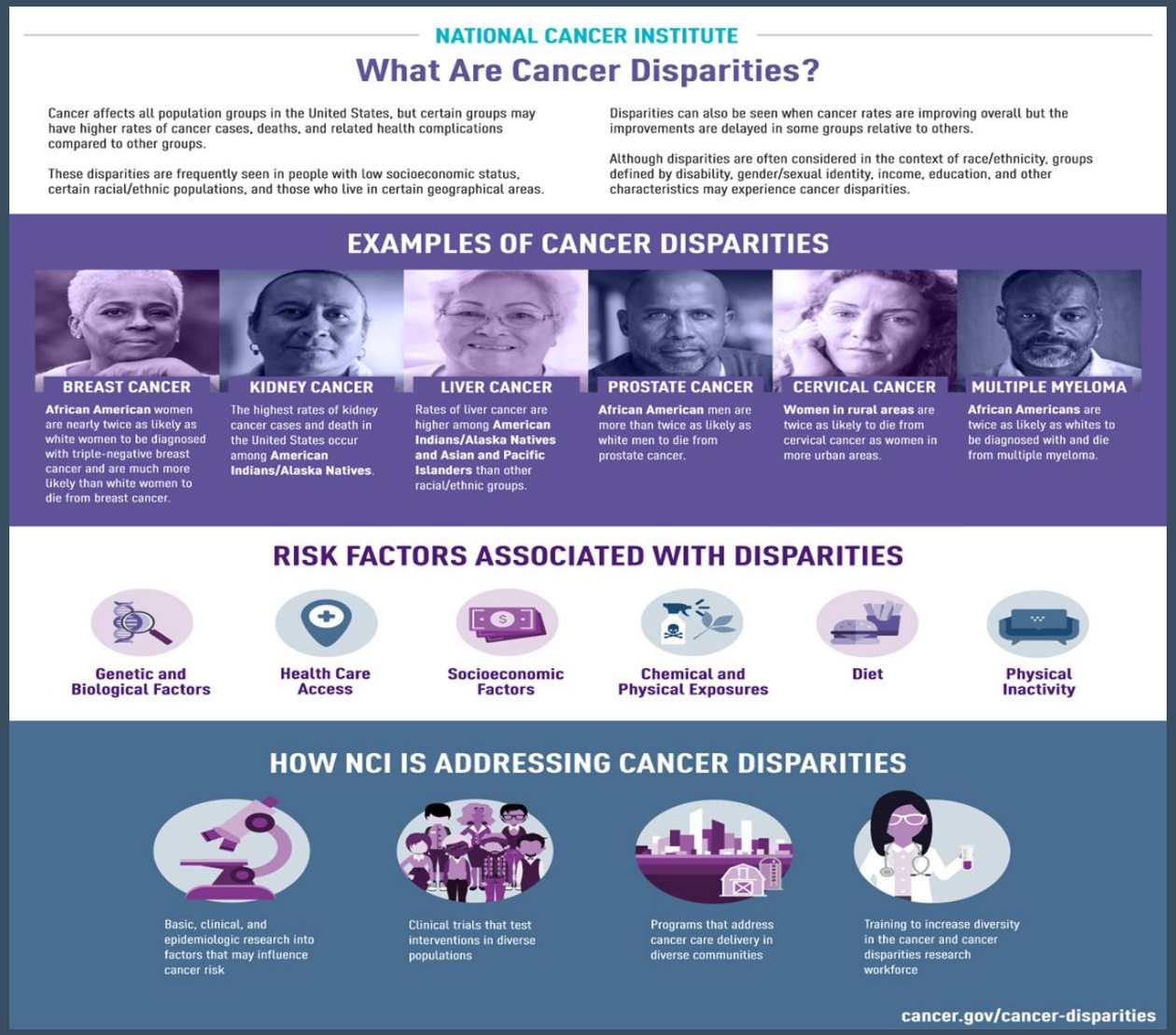
Objectives

- Describe the impact of cancer health disparity
- Review factors related to breast cancer disparities
- Discuss efforts to reduce cancer Care disparities

- **<u>Health disparity</u>**: refers to higher burden of illness, disability, mortality

- **<u>Health care disparity</u>: refers to** health coverage, access to care and quality of care

NIH NATIONAL CANCER INSTITUTE



ASCO AMERICAN SOCIETY OF CLINICAL ONCOLOGY

KNOWLEDGE CONQUERS CANCER

"Cancer health disparities describe the measurable differences in cancer outcomes in various population groups," *Cancer Disparities and Health Equity: A Policy Statement From the American Society of Clinical Oncology, Journal Clinical Oncology 2020*

American Cancer Society

20 YEARS Cancer Action Network American Cancer Society

"No one should be disadvantaged in their fight against cancer because of how much money the make, the color of their skin, their sexual orientation, their gender identity, their disability status, or where they live"

Cancer Health Disparities

The Impact

Cancer Health Disparities

- *Adverse differences in cancer measures such as incidence, prevalence, mortality, survivorship, QoL, burden of cancer, screening rates, stage at diagnosis..” between certain population groups*

National Cancer Institute http://crchd.cancer.gov/disparities/defined.html

Disparities - Population Groups

Race /Ethnic Groups*

- American Indian/Alaska Native (AI/AN)
- Asian American
- Black or African American
- Hispanic or Latino
- Native Hawaiian or other Pacific Islander
- White

Other Special Populations

- Socio economic status
- Geography (urban or rural)
- Gender/sexual identity
- Age
- Disability status
- Education

* Federal Register Notice "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity"

Causes of disparities: a complex interplay of factors

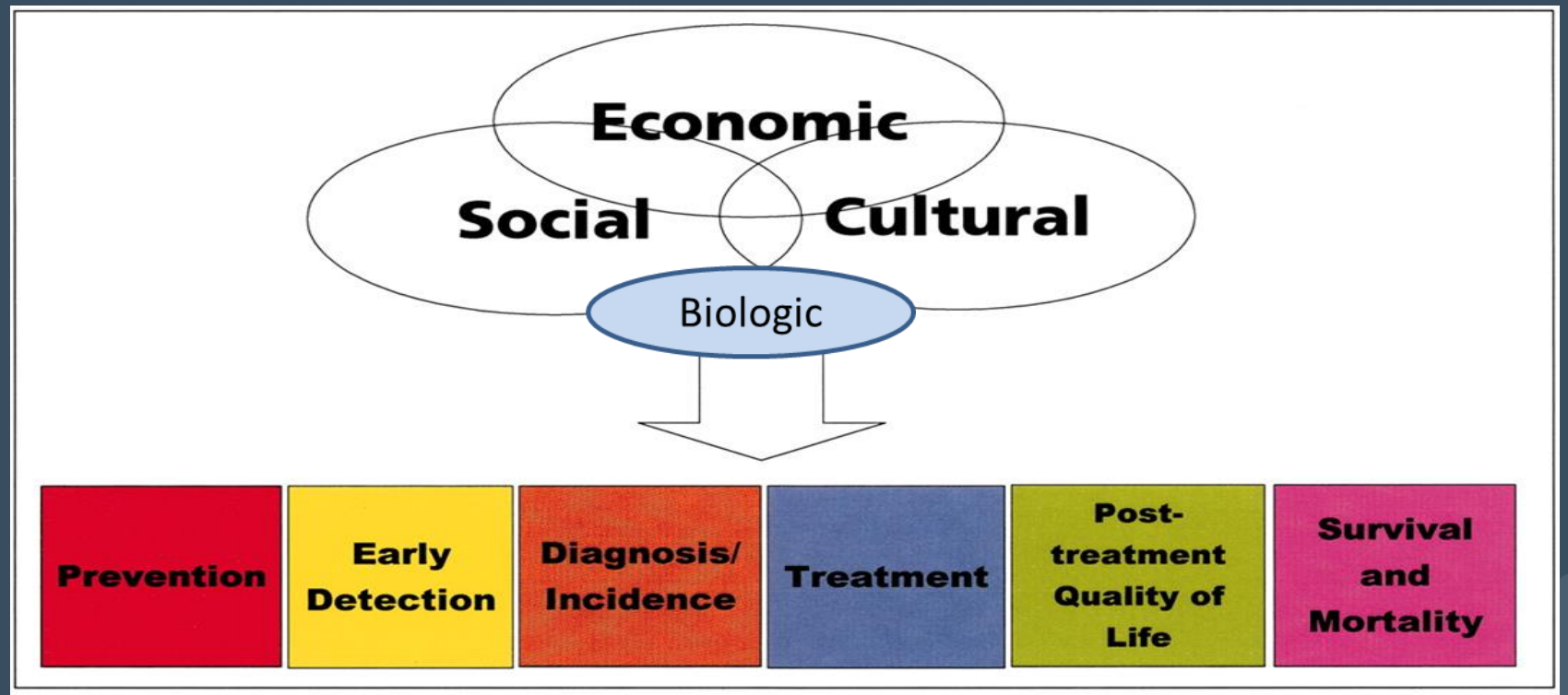


FIGURE 1 Factors That Influence Social Disparities.
Source: Adapted from Freeman, HP[3] and Institute of Medicine.[7]

Ward, E. et al. CA Cancer J Clin 2004;54:78-93

Why Do U.S. Cancer Health Disparities Exist?

Complex and interrelated factors contribute to cancer health disparities in the United States. **The factors include, but are not limited to, differences or inequalities in:**

ENVIRONMENTAL FACTORS

- Air and water quality
- Transportation
- Housing
- Community safety
- Access to healthy food sources and spaces for physical activity

SOCIAL FACTORS

- Education
- Income
- Employment
- Health literacy

CULTURAL FACTORS

- Cultural beliefs
- Cultural health beliefs

BEHAVIORAL FACTORS

- Tobacco use
- Diet
- Excess body weight
- Physical inactivity
- Adherence to cancer screening and vaccination recommendations

CLINICAL FACTORS

- Access to health care
- Quality of health care

PSYCHOLOGICAL FACTORS

- Stress
- Mental health

BIOLOGICAL AND GENETIC FACTORS

Adapted from American Association for Cancer Research (AACR) Cancer Disparities Progress Report 2020

“Generally, people who are from low socioeconomic backgrounds often bear a greater burden of disease than the general U.S. population”

http://crchd.cancer.gov/disparities/defined.html

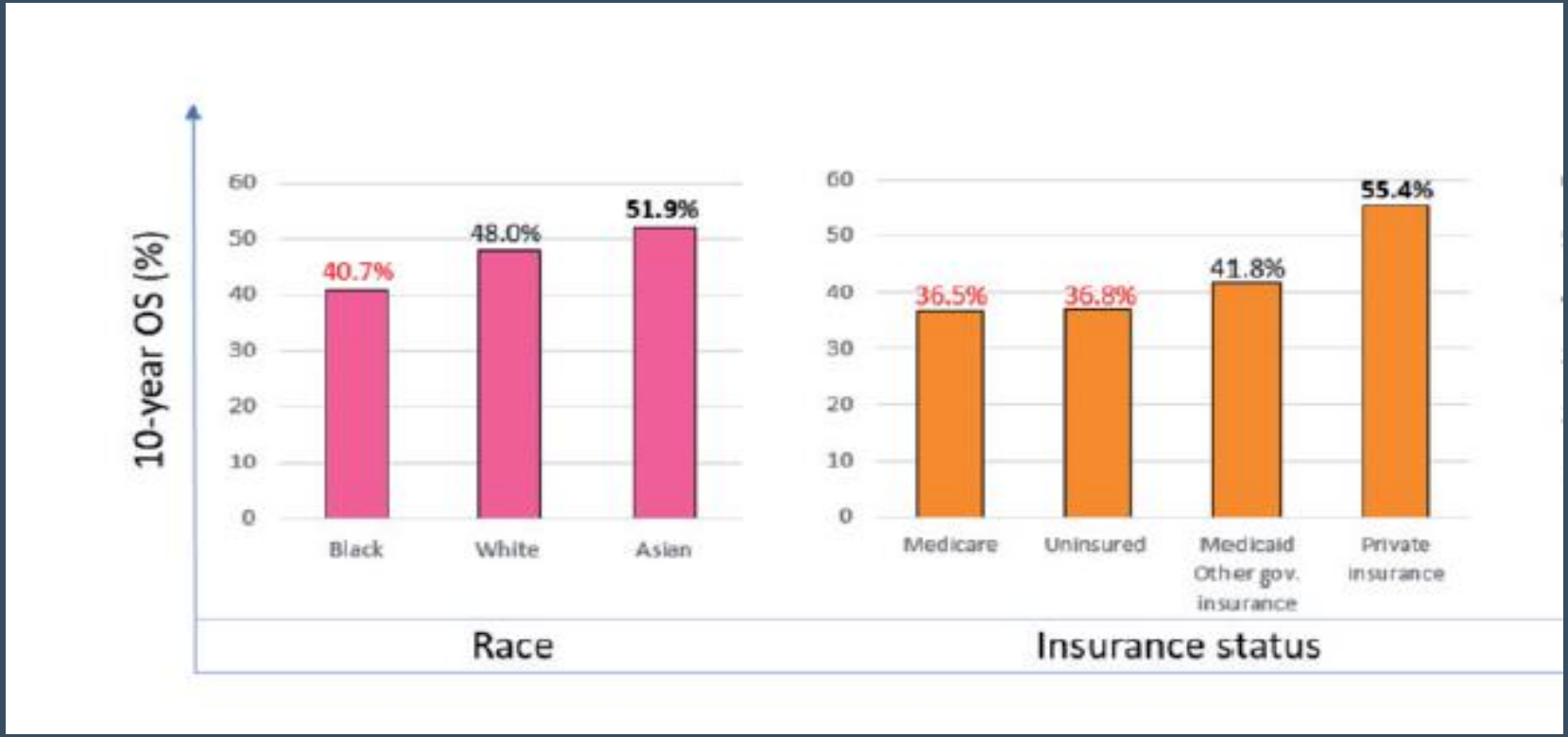
Impact of Cancer Disparities

- For the individual: earlier deaths, decreased quality of life, loss of economic opportunities, and perceptions of injustice..
- For society: less than optimal productivity, higher health-care costs, and social inequity (avoidable, unfair)

Cancer Disparities

Breast Cancer

Breast Cancer Determinants of overall survival , the United States National Cancer Database (NCDB), n= 515,610



Nadeem Bilani, Elizabeth Blessing Elimimian, Leah Elson, Hong Liang, Zeina Nahleh. *"Long-Term Survivors of Breast Cancer: A Growing Population" , Global Women Health, 2 DOI: ttp://dx.doi.org/10.5772/intechopen.95798, 2021*

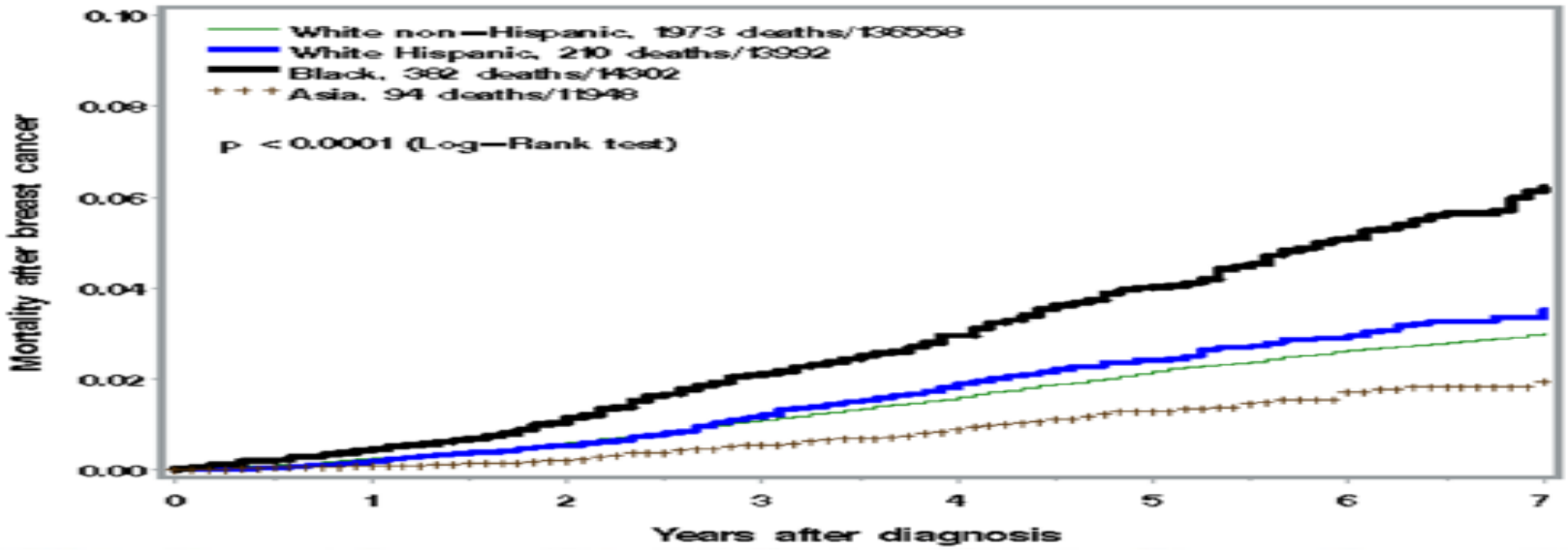
SEER N = 45, 2215

Iqbal et al, *JAMA.* 2015

eFigure 2. Seven year breast cancer-specific mortality with stage I breast cancer with additional information on white race/ethnicity

a) All breast cancers by ethnicity

Figure 2a: Seven year mortality after breast cancer in subjects with stage one, by ethnicity

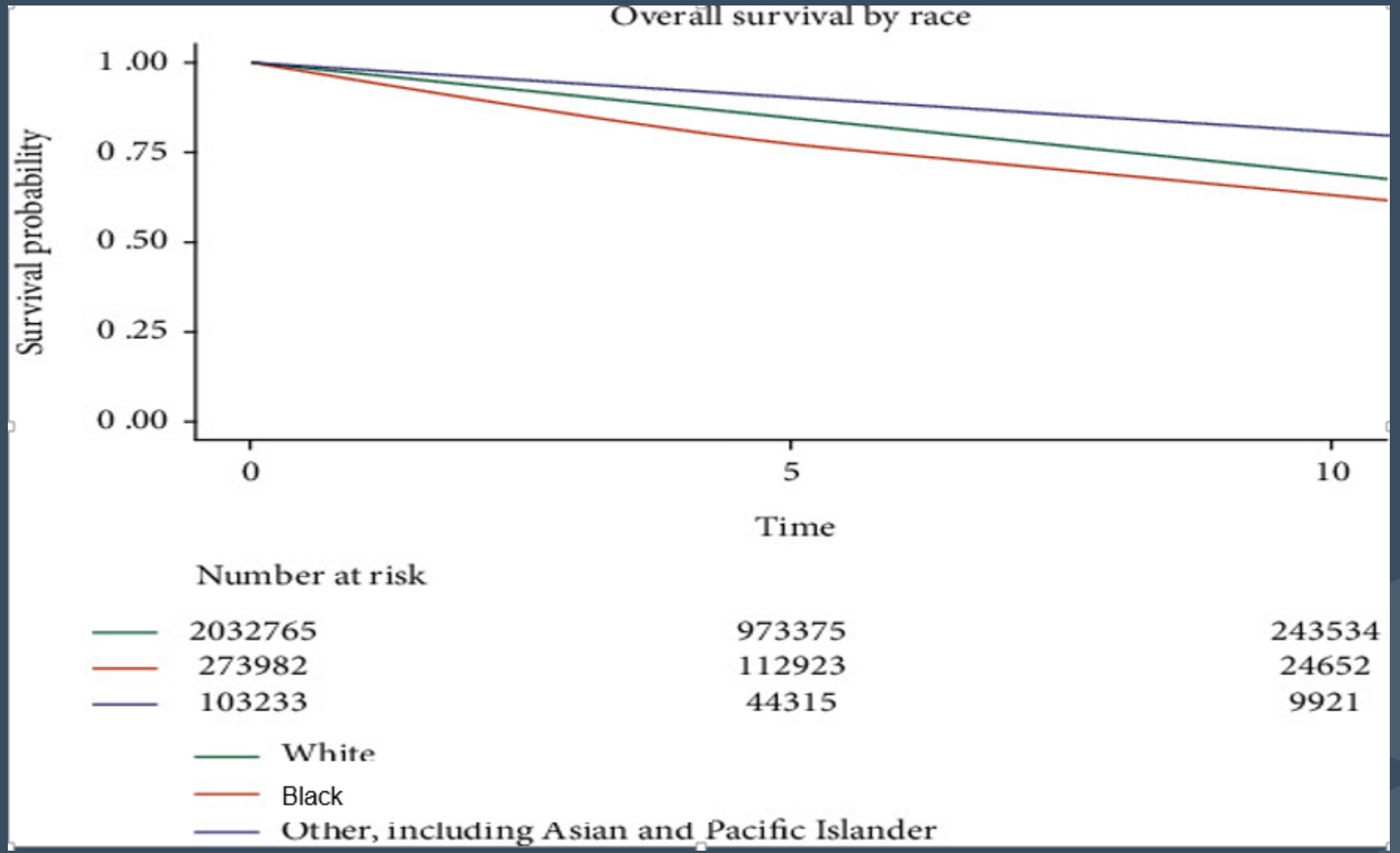


At risk	0	1	2	3	4	5	6	7
White, NH	136558	115836	96658	77191	59307	42335	26772	12618
White, H	13992	11343	9140	7302	6453	3697	2350	1038
Black	14302	11904	9707	7522	5499	3921	2450	1164
Asian	11948	9585	8089	6326	4794	3143	2108	965

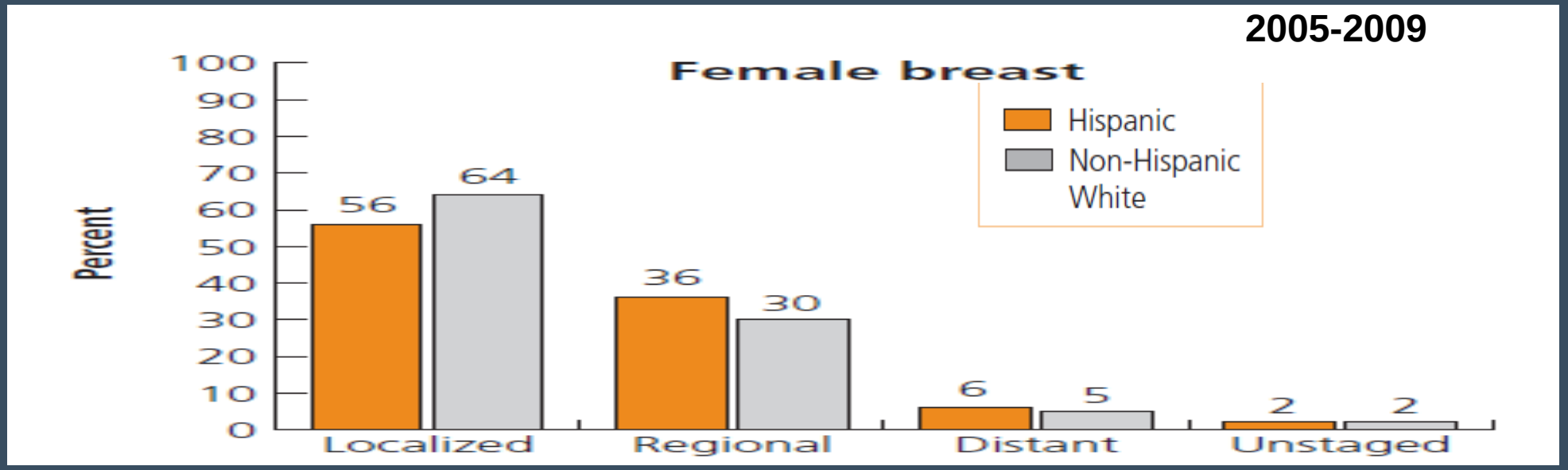
NH = non-Hispanic ; H = Hispanic

NCDB N = 2,671,549

Bilani et al, J Cancer Epidemiol, 2020



SEER: Hispanic women are diagnosed with larger tumors and more advanced stages



Data Source: Surveillance, Epidemiology, and End Results (SEER) Program, SEER registries, Division of Cancer Control and Population Sciences, National Cancer Institute, 2012.

Cancer Med. 2018 Jun;7(6):2710-2717. doi: 10.1002/cam4.1509. Epub 2018 May 7.

Disparities in breast cancer: a multi-institutional comparative analysis focusing on American Hispanics.

Nahleh Z[1], Otoukesh S[2], Mirshahidi HR[2], Nguyen AL[3], Nagaraj G[2], Botrus G[4], Badri N[4], Diab N[4], Alvarado A[5], Sanchez LA[5], Dwivedi AK[5].

- N= 3,441
- 42% non-Hispanic White
- 46% Hispanics
  - More advanced stages at presentation, Stage III and IV : 27% Vs. 13% ($P < 0.001$)
  - Younger age at diagnosis: 57 vs. 61 years
  - More Triple negative 17% Vs 9%
  - Less lobular Vs ductal ca

Biological factors

- Hispanics are more likely to have genetic mutations of the BRCA1 gene, than whites, African Americans or Asians[1,2]

- Hispanic and African American women are more likely to be diagnosed with tumors that are hormone receptor negative [3]

[1] *John E, et al. JAMA. 2007;* [2]*Nahleh Z et al . Am J Cancer Res, 2014;* [3] *Ooi SL, et al.. Am J Epidemiol.* 2002

Cancer Care Disparities

What can be done?

- *“The real challenge lies not in debating whether disparities exist, but in developing and implementing strategies to reduce and eliminate such disparities..” Institute of Medicine*

*Smedley BD, et al *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care”*, Washington, DC: Institute of Medicine, The National Academies Press; 2003.

How to reduce cancer care disparities?

US Health Indicators of Disparity
Poverty, Limited Education, and No Insurance

TABLE 1 Most Recent Available Data on Socioeconomic Characteristics and Medical Care Access, by Race and Ethnicity

Racial/Ethnic Group	% With Income Below Poverty Level*†	% Graduated High School ‡	% Under Age 65 With No Health Care Coverage§	With No Regular Source of Medical Care§
White (non-Hispanic)	8.0	85.5	11.9	13.9
African American	24.1	72.3	19.2	16.7
Hispanic-Latino	21.8	52.4	34.8	30.8
American Indian/Alaskan Native†	27.1	70.9	33.4	15.9
Pacific Islander	—	78.3	—	—
Asian	10.1	80.4	17.1	18.5
Asian/Pacific Islander	10.3	—	—	—

*Source: Poverty rate as of 2002 for White (non-Hispanic), African-American, Hispanic-Latino, Asian, and Asian/Pacific Islander populations. Poverty in the United States, 2002, US Census Bureau, September 2003.
†Source: Poverty rate as of 1999 to 2000 for American Indian/Alaskan Native population. Poverty in the United States, 2000. US Census Bureau, September 2001.
‡ Source: Educational Attainment, 2000. Census 2000 Brief, US Census Bureau, August 2000.
§ Source: Health, United States, 2003 With Chartbook on Trends in the Health of Americans, Hyattsville, Maryland, 2003.

Ward, E. et al. CA Cancer J Clin 2004;54:78-93

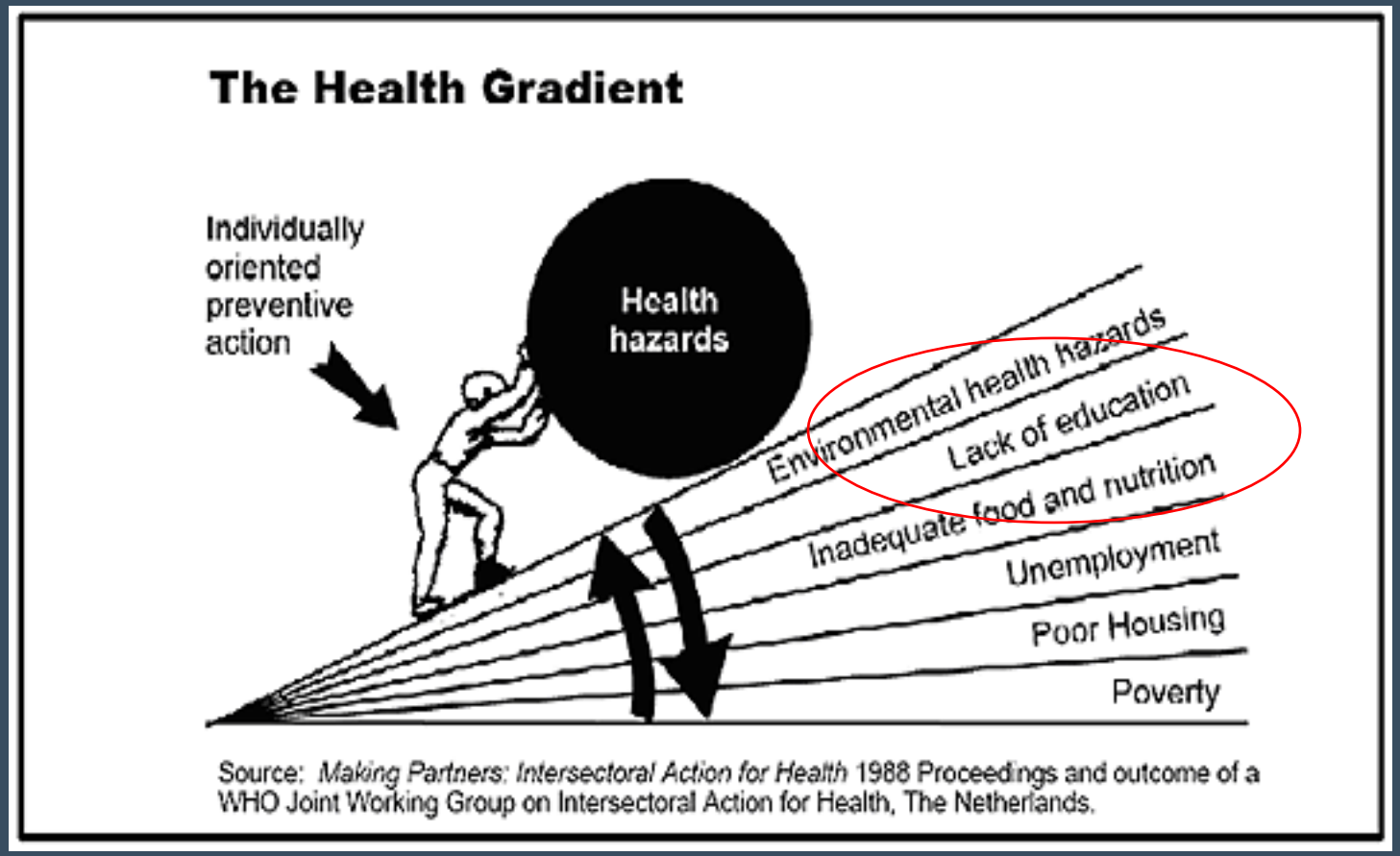
Address External Barriers to Good Health

"Poverty is a carcinogen."

Sam Broder, MD

National Cancer Institute Director

(1989-1995)



Source: Primer to Action: Social Determinants of Health, Toronto 2008

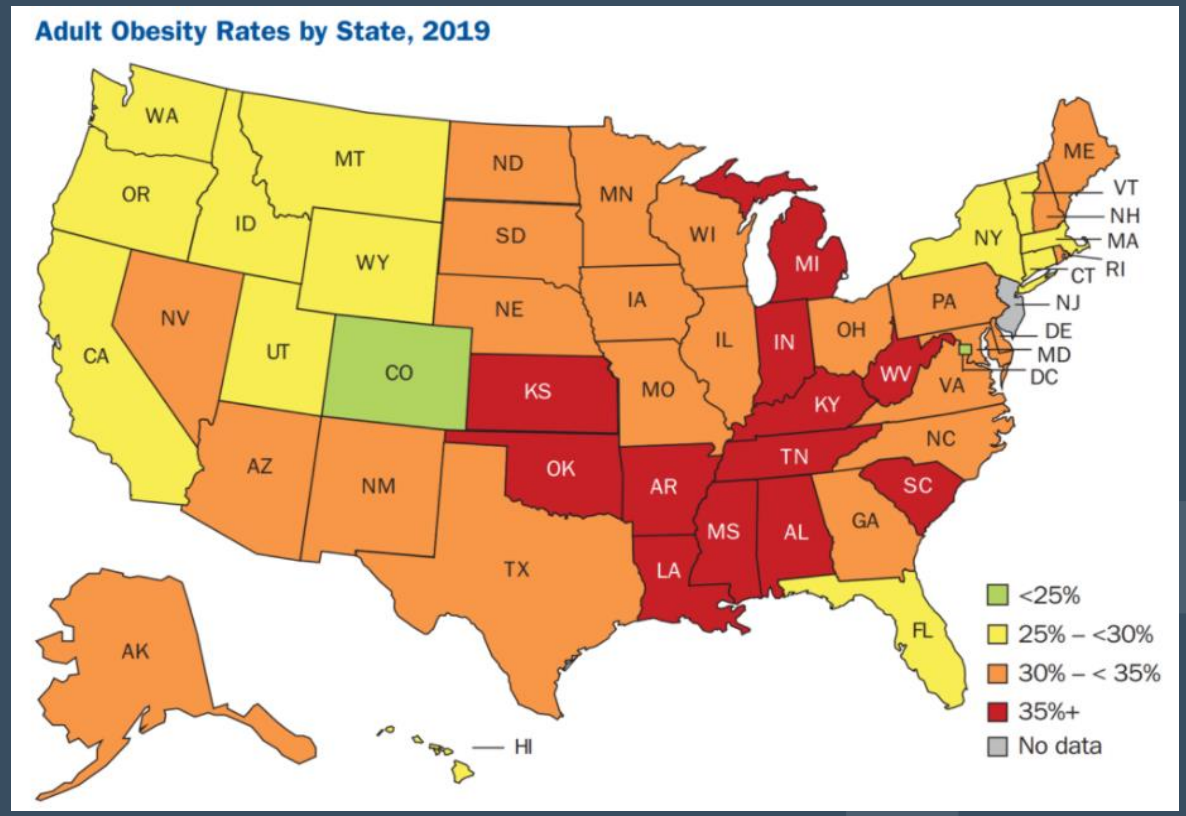
ASCO Recommendations for Promoting Health Equity

Patel et al, J Clin Oncol 2020

- Ensure equitable access to high quality care
- Increase awareness and action
- Address structural barriers
- Ensure equitable access to research

Primary Prevention

- Reduce Obesity
  - *Weight loss in postmenopausal women is associated with lower breast cancer risk**
  - 40% Hispanics BMI>30**
- Treat Diabetes, H pylori..
- Vaccinate Hep B, HpV..
- Genetic testing



*Cheblowski et al, Cancer 2019
**Nahleh Z et al .Am J cancer res 2014

Early Detection

- Lower rates of mammography utilization among minorities*
- Delayed follow up of abnormal screening results or self-discovered breast abnormalities **

***American Cancer Society. Cancer Prevention & Early Detection Facts & Figures 2012. Atlanta, GA: American Cancer Society;2012. **Press R, et al. Racial/ethnic disparities in time to follow-up after an abnormal mammogram. J Womens Health (Larchmt). Jul-Aug 2008;17(6):923-930.; Stuver SO, et al. Identifying women at risk of delayed breast cancer diagnosis. Jt Com J Qual Patient Saf. Dec 2011;37(12):568-575.*

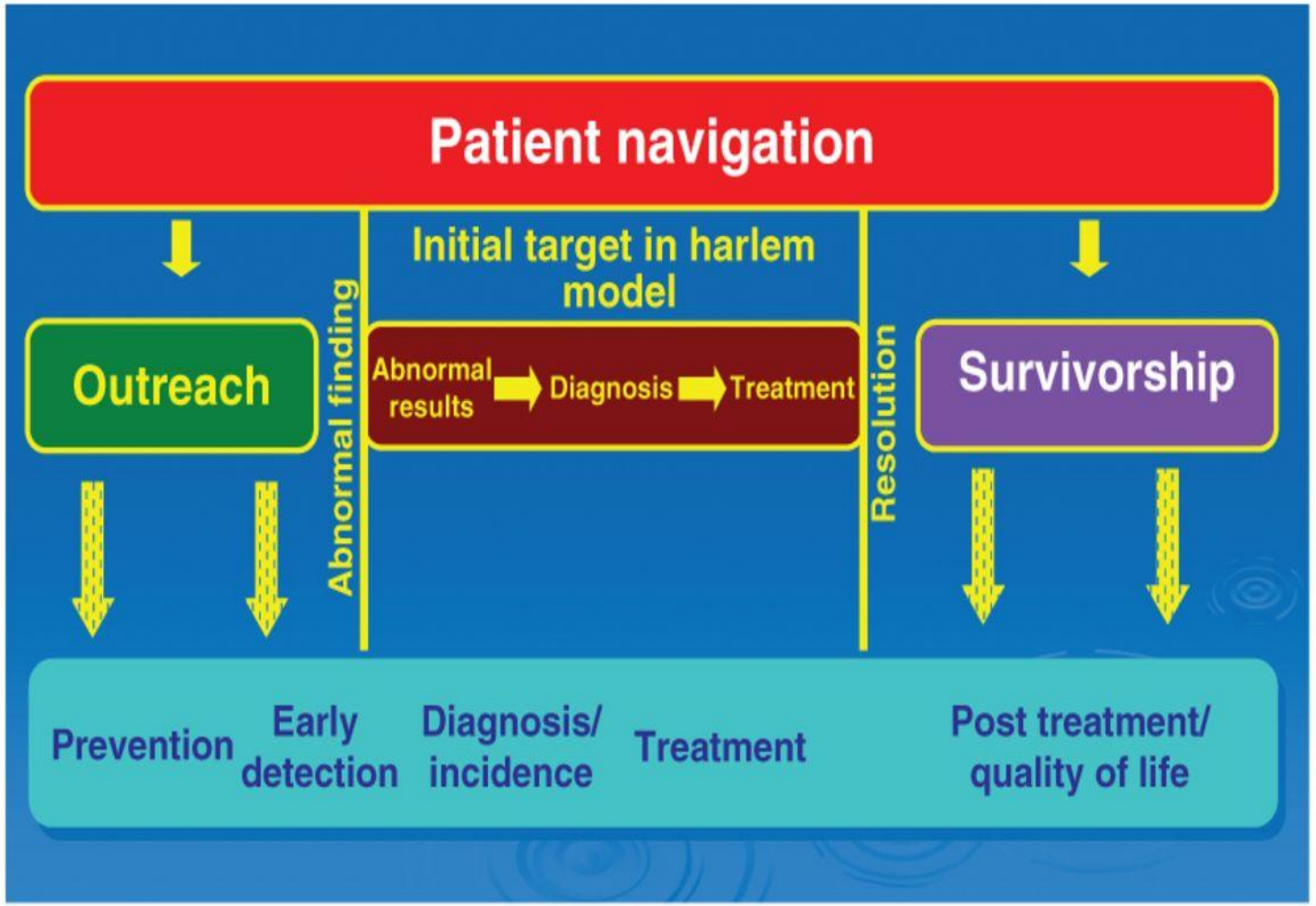
Efforts Beyond Screening

Navigation, Survivorship care, Provider-Patient factors

- AA and Hispanic Women are more likely to undergo treatment experience delay*
- Even when age, stage, and tumor characteristics are similar, AA and Hispanic women are more likely to die from breast cancer than non-Hispanic whites**
- Differences in access to care and treatment likely contribute to this disparity***

** Freedman RA, et al. Trends in racial and age disparities in definitive local therapy of early-stage breast cancer. Journal of clinical oncology. Feb 10 2009;27(5):713-719 ; **Ooi SL, et al. . Disparities in breast cancer characteristics and outcomes by race/ethnicity. Breast Cancer Res Treat. Jun 2011;127(3):729-738; *** Ward E, et al. Association of insurance with cancer care utilization and outcomes. CA Cancer J Clin. Jan-Feb 2008;58(1):9-31.*

"I was really raring to go out and do what I could, but this was somewhat of a shock to me—having been trained to do all this cancer work, and then I'm facing late-stage cancer that is too late for me to be effective technically." – Harold Freeman, M.D.



Survivorship Care

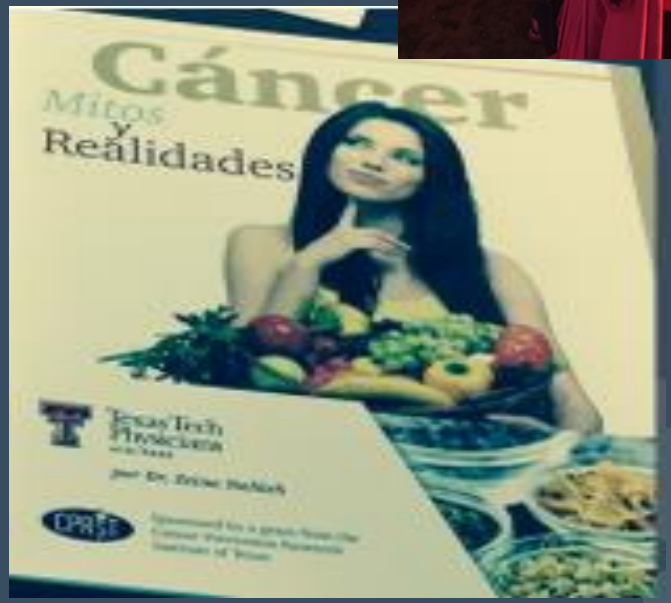
- Breast cancer survivors among ethnic minorities have higher rates of fatigue , depression [2], and poor quality of life [1-3]

- Hispanic survivors of Brest cancer experience disparities in BC knowledge and satisfaction with information received, compared to non-Hispanics*

*[1] Eversley, R. et al (2005) Post-treatment symptoms among ethnic minority breast cancer survivors. Oncology Nursing Forum,**32**(2): p. 250-254 ; [2] Nahleh ZA, et al (2016). Decreased Health Related Quality of Life among Hispanic Breast Cancer Survivors. MOJ Women's Health 1(3): 00015; [3]Yanez B, et al (2011) Quality of life among Latina breast cancer patients: a systematic review of the literature J Cancer Surviv 5:191–207,*

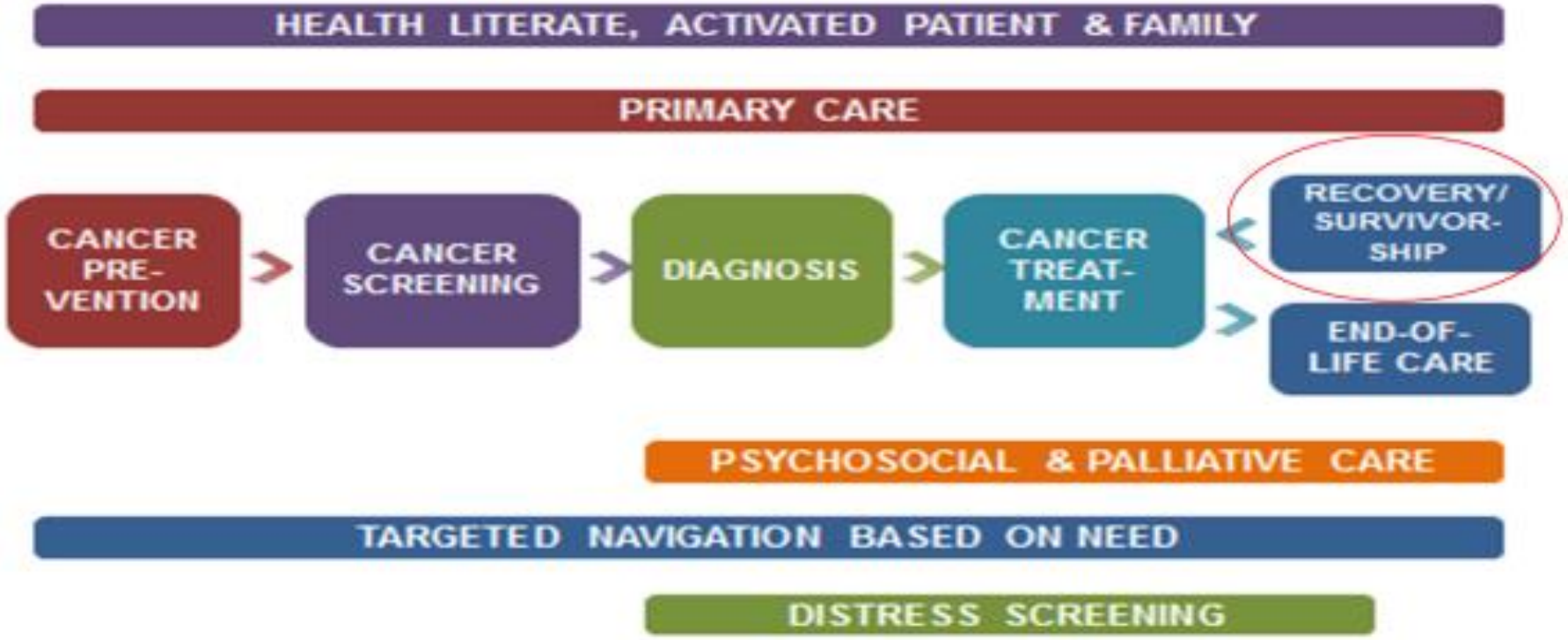
Survivorship Care

- Few survivorship care interventions have focused on minorities
- Digital / phone based survivorship programs to ensure compliance long term
- Focus on psychosocial and Mental health needed



*Olagunjo T et al *Disparities in the survivorship experience among Latina survivors of breast cancer. Cancer 2018;124:2373-80*

CoC Standards = Patient-Centered Care



Commission on Cancer

Provider and Patient Factors

- Providers may contribute to racial/ethnic disparities
  - Bias, stereotyping, prejudice, and clinical uncertainty on the part of health care providers *
  - Limited questioning, less dialogue, and fewer explanations for non-white patients**
- Cultural competence training, more representation and diversity among providers needed

*Johnson RL. Racial and Ethnic Differences in patient perceptions of bias and cultural competence in health care. J Gen Intern Med 2004;19:101-110

**Burgess DJ. Why do providers contribute to disparities and what can be done about it? J Gen Int Med 2004;19:1154-1159*

- Perceptions of physicians as uninterested and less engaging for non-white patients*
- Perceptions that physicians do not understand background and values of minority patient**
- Religious or cultural beliefs regarding decisions not to have care or treatment ***

*Johnson RL. Racial and Ethnic Differences in patient perceptions of bias and cultural competence in health care. J Gen Intern Med 2004;19:101-110;
**Mitchell et al. JOURNAL OF WOMEN'S HEALTH 2002;11:907-915. Religious Beliefs and Breast Cancer Screening.; ***Farmer D, Reddick B, D'Agostino R, Jackson SA. Psychosocial correlates of mammography screening in older African American women. Oncol Nurs Forum. 2007 Jan;34(1):117-23.

- The main reason that women (82%) had ever had a mammogram was that their doctor had recommended it*

- Physician's recommendation was the most important determinant of treatment selection in prostate cancer **

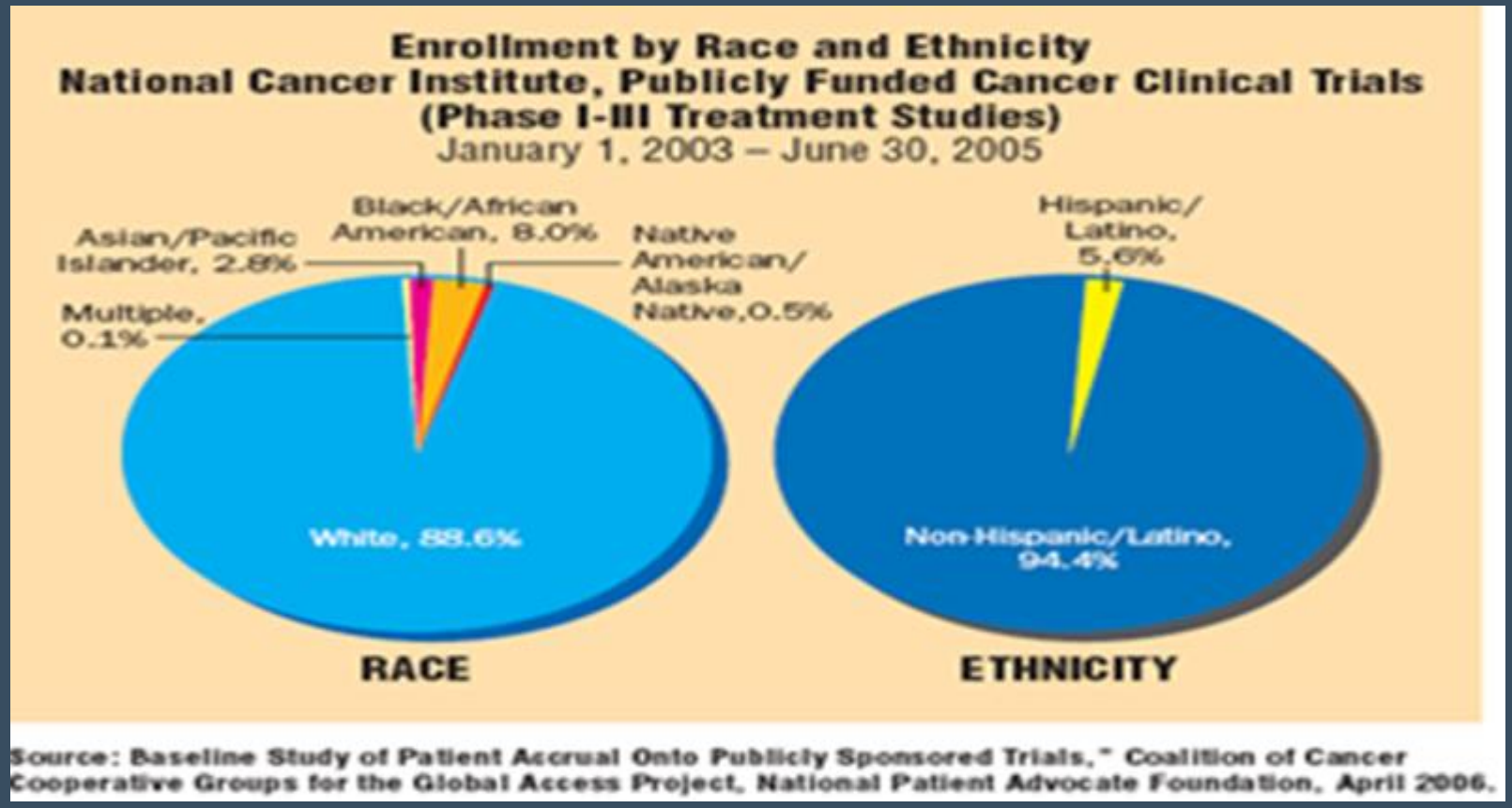
*Farmer et al. Psychosocial Correlates of Mammography Screening in Older African American Women**.** ONCOLOGY NURSING FORUM 2007; 34:117;
** Hoffman et al. Racial Differences in Initial Treatment for Clinically Localized Prostate CancerJ GEN INTERN MED 2003; 18:845–853.

Provider- Patient Communication

*The way that a clinician relates to and communicates with patients can have a profound impact on them and their family, including on their psychosocial adjustment, decision making, treatment compliance, and satisfaction with care **

*Rodin G, Mackay JA, Zimmermann C, Mayer C, Howell D, Katz M, Sussman J, Brouwers M. Clinician-patient communication: a systematic review. Support Care Cancer. 2009 Jun;17(6):627-44. Epub 2009 Mar 4. Review. PubMed PMID: 19259706.

Access to Clinical trials



Source: Baseline Study of Patient Accrual Onto Publicly Sponsored Trials," Coalition of Cancer Cooperative Groups for the Global Access Project, National Patient Advocate Foundation, April 2006.

Barriers to participation in clinical trials

- Lack of access to trials due to transportation,
  - leveraging telehealth an option when feasible
- Insurance challenges
- Lack of provider cultural competency, language
- Lack of relevant and inclusive trials

Practical Efforts to Reduce Cancer Disparities

Prevention /Early Detection	Patient Navigation	Access to treatment and research	Survivorship care
Physical inactivity/Obesity	SW, nurses, advocates	National effort	Breast Cancer Survivorship
Treat diabetes, Hep B/C. H. Pylori..	Guide patients after abnormal findings	Provider Cultural competency	Mental Health and rehabilitation
Early detection & awareness: e,g mammography , Pap Smear, lung cancer	Financial counseling	Tele- medicine	Public- private

Overall Summary

- Breast cancer disparities are multifactorial: Economic, Social, Cultural, and Biologic
- Disparities are unacceptable, can be addressed through concerted efforts and awareness
  - Education and Health literacy
  - Primary prevention
  - Beyond screening: full spectrum
  - Research
  - Providers (and patient) factors bias

Thank You

nahlehz@ccf.org