

NCCN 2021 Virtual Congress: Breast Cancer
with Updates from the 2020 San Antonio Breast Cancer Symposium

Friday, February 12, 2021
10:35 AM – 11:20 AM EST

Understanding/Addressing Health Disparities to Improve Breast Cancer Care

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NCCN.org – For Clinicians | **NCCN.org/patients** – For Patients

"Sweeping, honest and brave... You will finish this arresting book reluctantly, with a new appreciation of what American medicine could be."
—HARRIET A. WASHINGTON, author of *Deadly Monopolies: The Shocking Corporate Takeover of Life Itself and the Consequences for Your Health and Our Medical Future*

HOW WE DO HARM

A DOCTOR BREAKS RANKS

ABOUT BEING SICK

IN AMERICA



OTIS WEBB BRAWLEY, M.D.

with Paul Goldberg



BREAST CANCER EPIDEMIOLOGY



The Most Common Causes of Cancer Death in Women

- Lung
- Breast
- Colorectal
- Pancreatic

Siegel et al. CA Cancer J Clin. 2021



Breast Cancer

In 2021,

281,550 Women Diagnosed

43,600 Deaths

There has been a >40% decline in age-adjusted female mortality from 1990 to 2018.

The 2020 AMA Statement on Race

- Race is not a biologic categorization.
- Race is a sociopolitical construct.
- Area of geographic origin can be a biologic categorization, but *Ancestry.com* has demonstrated this can be very complicated.



Population Categorization

- Race is broad. Black is not one biology; White is not one biology.
- We must be careful not to allow our use of race to propagate institutional racism.



Population Categorization

- Area of geographic origin is more specific and scientific, although still broad.
- Admixture complicates this dramatically.



Median Age at BCa Diagnosis

- Black 58 years
- White 62 years



Breast Cancer Lifetime Probability

- Of Developing
 - Black 11.1% (1 in 9)
 - White 13.1% (1 in 8)
- Of Dying
 - Black 3.3% (1 in 31)
 - White 2.7% (1 in 37)



Overemphasis on Screening

(and not enough emphasis on provision of adequate care)

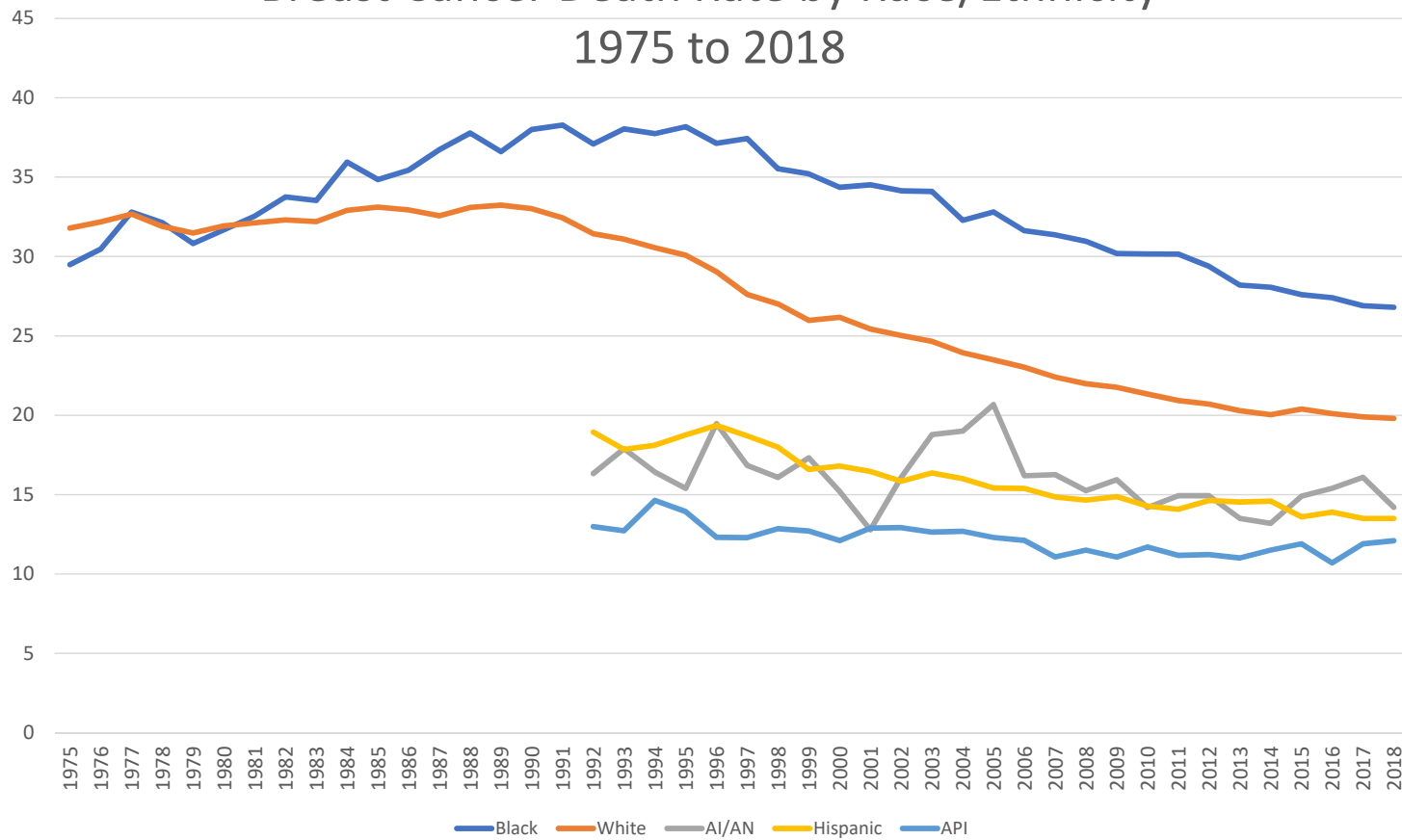
CISNET Breast Cancer Modeling Estimates

- Failure to follow accepted screening guidelines accounts for about 10% of all breast cancer deaths.
- Failure of the diagnosed to receive appropriate treatment accounts for 20 to 27% all of breast cancer deaths.



Mandelblatt et al, Cancer 2013

Breast Cancer Death Rate by Race/Ethnicity 1975 to 2018



NCI SEER Cancer Statistics Review, 1975-2018

Black – White Death Rate Difference

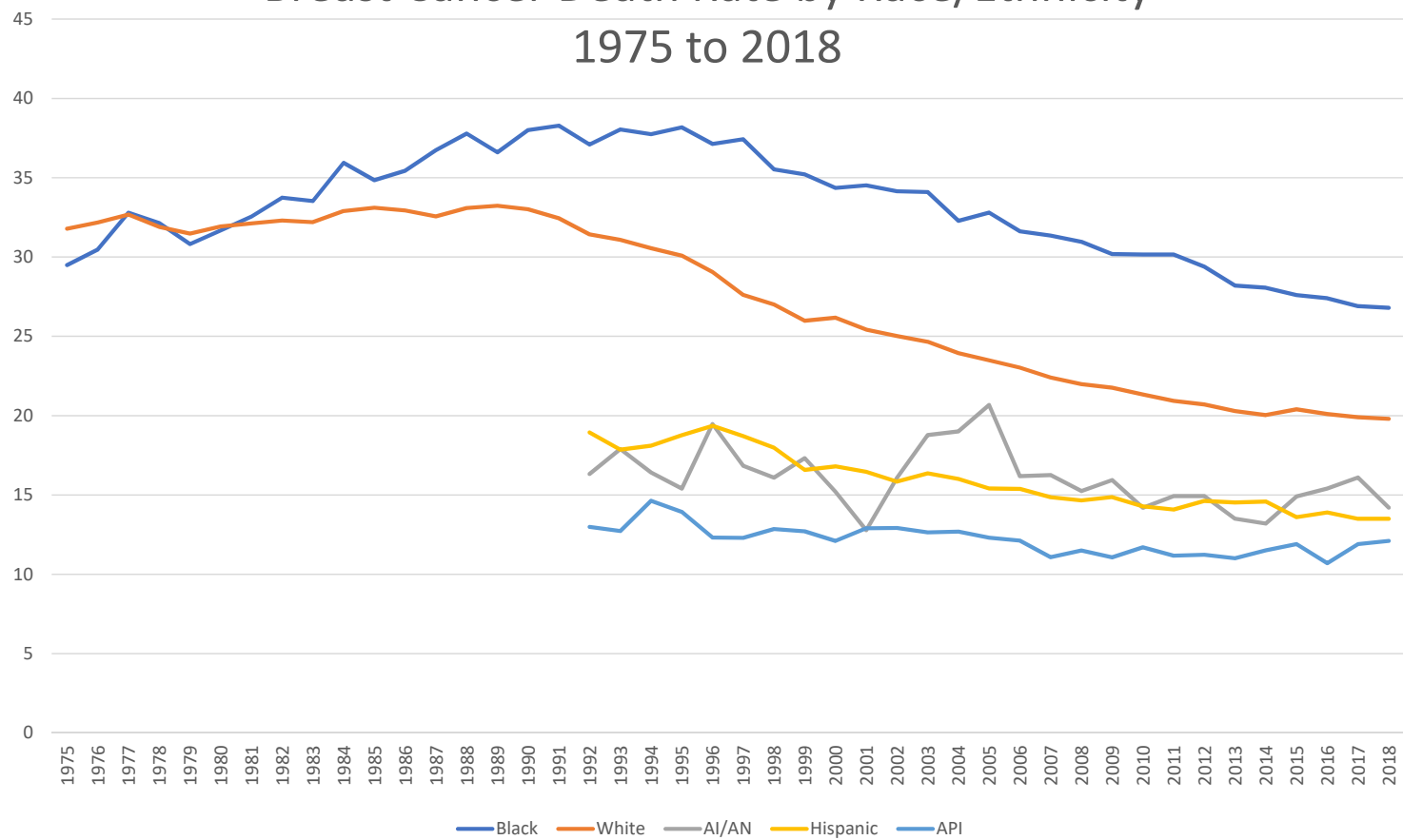
- Since 1990, breast cancer death rates dropped 23% in Black women
- Since 1990, breast cancer death rates dropped 42% in white women



Black – White Breast Cancer Mortality

- From 1981 to 2010 the Black – White Disparity in death rate increased
- From 2011 to 2018, the Black - White mortality disparity remained stable with Black death rates 39% higher than Whites

Breast Cancer Death Rate by Race/Ethnicity 1975 to 2018



NCI SEER Cancer Statistics Review, 1975-2018

Breast Cancer The Reality

There is a B-W breast cancer mortality disparity in the U.S. military retiree databases but it is 1/3 of the B-W disparity in the U.S. as a whole

Socioeconomic status (availability of care and ability to use that care) leads to a significant lowering of risk of death.

Wojcik et al, Cancer 1998



Breast Cancer Mortality

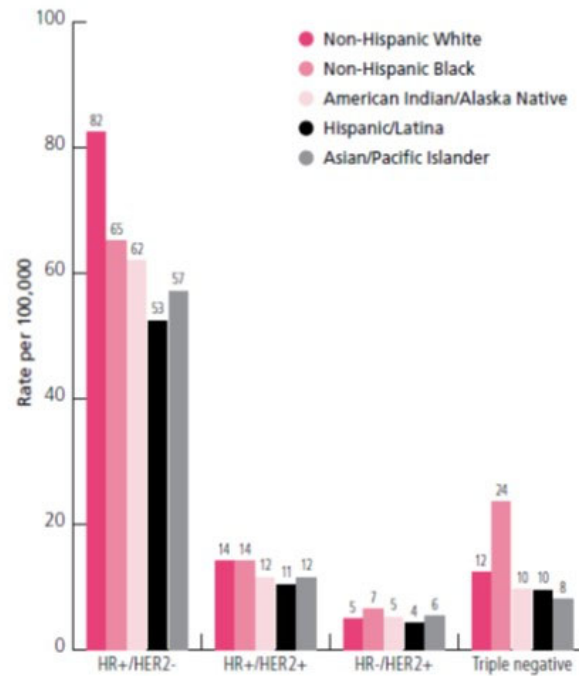
- The B-W death rate is essentially equal in six states. These states have among the lowest mortality rates in the US.
- The B-W rate is essentially equal in a seventh state (W. Va.). It is among the highest mortality in the US.
- The White mortality rate in 11 states is higher than the death rate for Black women in Massachusetts.

Triple Negative Breast Cancer

- Cancer that does not express the estrogen, progesterone, or Her-2-Neu receptor.
- Drug treatment options are more limited for triple negative breast cancer.
- Approximately 24% of Black women and 12% of White women with breast cancer have triple negative disease.



Figure 3. Female Breast Cancer Incidence Rates by Subtype and Race/Ethnicity, 2010-2014, US



HR = hormone receptor, HER2 = human epidermal growth factor receptor 2.
 Note: Rates are age adjusted to the 2000 US standard population.

Source: NAACCR, 2017.

©2017, American Cancer Society, Inc., Surveillance Research



Risk Factors for Triple Negative

Factors with strong correlation

- Obesity
- Dietary Differences (high carbohydrate diet)
- Reproductive patterns
 - Multiparity
 - Early age at first pregnancy
 - **Lower rates of breast feeding!!!!**

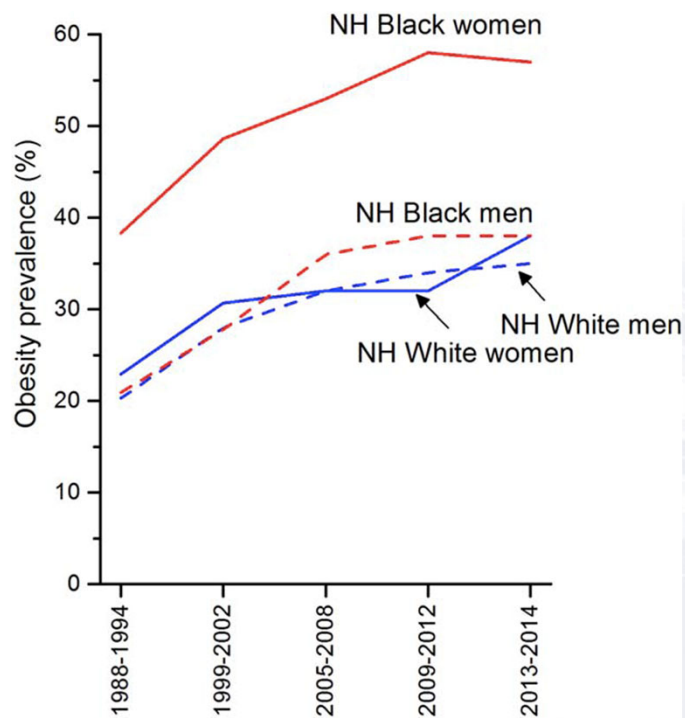
Dietze et al Nat Rev Cancer 2015;15:248-254
Millikan et al Cancer Res Treat 2008;109:123-139
Palmer et al. JNCI 2014; 106:dju237



Trends in Adult Obesity (Body Mass Index ≥ 30 kg/m²) Prevalence (%) by Sex and Race/Ethnicity, United States, 1988 to 2014.

NH indicates non-Hispanic.

Sources: 1988-2012: Health, United States, 2014: With Special Feature on Adults Ages 55-64. 2013-2014: Centers for Disease Control and Prevention. National Health and Nutrition Examination Survey, 2014. Public use data file.



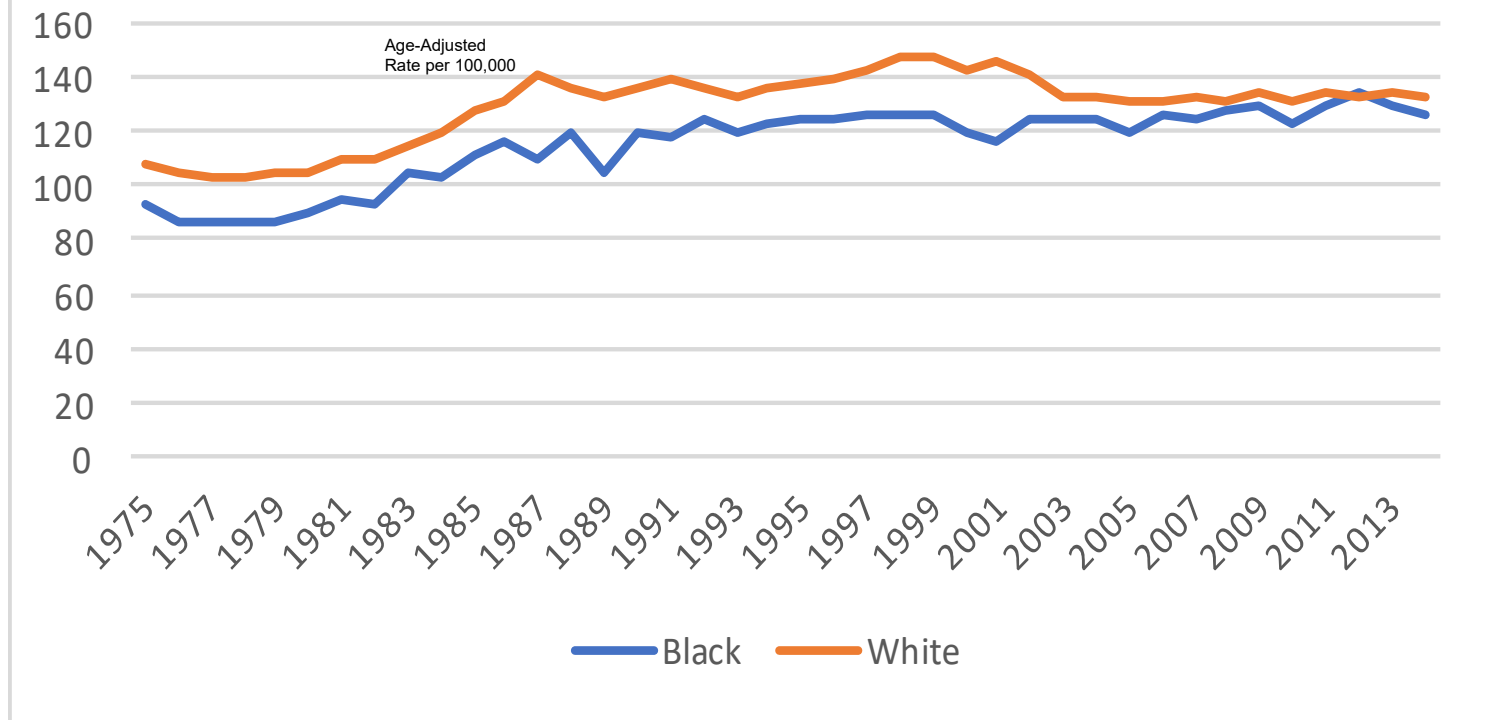
Breast Cancer Gene-Environment Interaction

- Social deprivation studies in Europe and U.S. suggest more virulent tumors in the poor.
- Several studies suggest a correlation between higher body mass index and higher stage at presentation.

Thomson et al, Journal of Epidemiology and Community Health, 2001
Gordon Am.J.Epidemiol., 1995



Breast Cancer Incidence 1975-2014



Desantis et al. CA 2017

Breast Cancer Incidence by Race

- The incidence increases in both Black and White women involves estrogen receptor positive disease.
- Rates of triple negative disease are relatively stable over the past several decades.

Breast Cancer The Reality

Among women with triple negative disease. Equal treatment yields equal outcome and race is not a factor in outcome.

Among women with HR positive disease, Black women have worse clinical outcomes despite comparable systemic therapy.

Albain et al, JNCI 2009
Albain et al, JNCI 2020



Breast Cancer The Reality

- The standard treatments are still appropriate for AA women with HR positive breast cancer.
- Patterns of care studies show that AA women are less likely to receive them.



Breast Cancer The Reality

There is lots of talk about triple negative disease, but few appreciate that the largest portion of the B-W breast cancer mortality treatment disparity is due to disparities in the quality of treatment of black women with estrogen receptor positive disease.

Mandelblatt et al. Cancer. 2013



Breast Cancer The Reality

There is increasing data on discontinuation of adjuvant hormonal therapy by those who are poor and underinsured.

Sadigh et al, Cancer 2021



Breast Cancer and Quality of Care

- In 2000, 7.5% of Black Women in Atlanta diagnosed with localized highly curable breast cancer did not receive a surgical removal of the tumor in the first year after diagnosis.
- Provision of adequate care is a logistical issue and not new medical science.

Lund et al. Breast Cancer Res Treat, 2008



Breast Cancer and Quality of Care

- A substantial number of women of all races and incomes get less than optimal breast cancer care!
 - No screening or poor quality screening
 - No diagnostics or poor quality diagnostics
 - No surgery or poor quality care
 - No radiation therapy or poor quality radiation therapy
 - No chemotherapy or inappropriate dosing of chemotherapy
- Racial minorities and the poor are more likely to get less than optimal breast cancer care.



Equal Treatment Yields Equal Outcome

There is not Equal Treatment

Studies suggest that disparities in treatment may be due to:

- Cultural differences in acceptance of therapy.
- Disparities in comorbid diseases making aggressive therapy inappropriate.
- Lack of convenient access to quality treatment (insurance and transportation are major issues).
- Racism and SES discrimination.



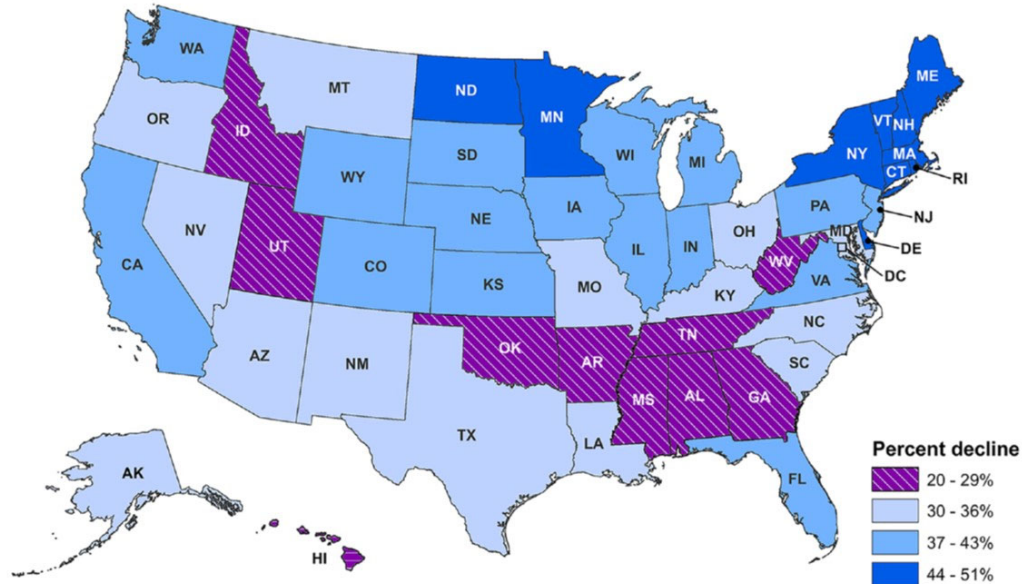
US Breast Cancer Mortality

- There has been a >40% decline in US age-adjusted mortality from 1990 to 2018.
- The decline has varied by state from 20% to 51%.
- The majority of the disparate population is white!!!

Siegel et al, CA 2018



Breast Cancer Mortality Decline from 1988-90 to 2013-2015 by State



Siegel et al, CA 2018





**WHAT IF WE APPLIED WHAT WE ALREADY KNOW
ABOUT CANCER TO ALL AMERICANS?**



The Johns Hopkins Medical Institutions



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National Comprehensive Cancer Network®

NCCN Member Institutions

- **Who We Are**

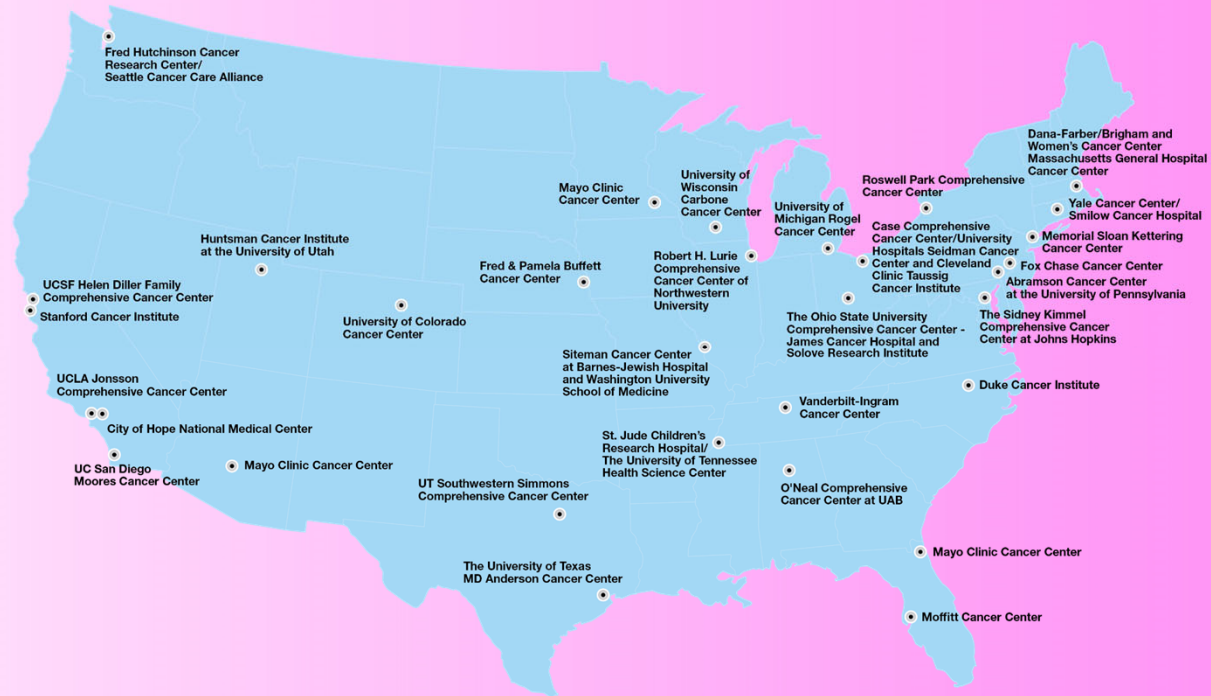
An alliance of leading cancer centers devoted to patient care, research, and education

- **Our Mission**

To improve and facilitate quality, effective, efficient, and accessible cancer care so patients can live better lives

- **Our Vision**

To define and advance high-quality, high-value, patient-centered cancer care globally



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