Breast Cancer Disparities

Female breast cancer is the most commonly diagnosed cancer among nearly every racial and ethnic group in the U.S. However, the past 25 years have seen much improvement in treatment and overall breast cancer care, which have greatly increased survival rates over the years. During this time, overall breast cancer rates have decreased, but have remained stable since 2004. Breast cancer deaths have decreased by as much as 34 percent and continue to decline [1]. These trends indicate real progress. Unfortunately, improvement has not occurred equally among all populations. Many populations within the U.S. continue to be disproportionately burdened by high incidence (new cases) and mortality rates of breast cancer.

These differences lead to, and are often referred to as disparities. They affect how different communities are impacted by breast cancer incidence, mortality and survival. Understanding these differences is critical to reducing breast cancer disparities.

What are disparities?

Disparities do not describe all health differences. Disparities are the result of health differences that may arise from inequities such as intentional or unintentional discrimination and/or social disadvantage. They may include, but are not limited to, health differences among populations according to race/ethnicity, ancestry, cultural factors, socioeconomic status, age, sexual orientation, geography, disability or other characteristics associated with social inequality or discrimination [2].

Why do breast cancer disparities exist?

There are many complex factors that contribute to breast cancer disparities. The most apparent factors are linked to medical care and a lack of health care coverage. However, a person’s health is not just a product of good medical care. Studies show it accounts for only a small percent of disparity related breast cancer deaths. Factors affected by social and racial inequalities such as education, income and the quality of neighborhood environments are thought to play a major role in health disparities [3, 4]. Breast cancer disparities can be affected by:

Socioeconomic and cultural factors

- Poverty, poor education and high unemployment have been linked to breast cancer disparities in all areas of care, from screening to diagnosis to treatment.
- Language and cultural barriers; discrimination related to class, race or religion; and mistrust of the medical field may prevent some women from getting screened, seeking out treatment in a timely manner or receiving the

Definitions:

**Cancer Disparities**: differences in cancer outcomes among different population groups, which may include, but are not limited to, those characterized by race/ethnicity, ancestry, cultural factors, socioeconomic status, age, sexual orientation, geography, disability or other characteristics associated with social inequality or discrimination.

**Social disadvantage/inequalities**: unfavorable social, economic, or political conditions that some groups of people experience based on their relative position in social hierarchies.

**Underserved**: disadvantaged populations such as low-income communities, under- or uninsured or rural populations.

Nearly 25% of women, and 30% of single moms in the U.S., are living in poverty [95].
standard of care when seen by a doctor [3, 4, 5].

**Biological Factors**

Even when access to health care services is equal, there are differences in the size, stage and grade of breast cancer for many minority women compared to white women. For example:

- African American and Hispanic women are more likely to develop triple negative breast cancer (TNBC), an aggressive subtype of breast cancer associated with shorter survival [6, 7].
- African American women younger than 40 are twice as likely to be diagnosed with breast cancer as Caucasian women of the same age [8, 9]. They also tend to have higher levels of hormones like estrogen, which may contribute to their increased risk of premenopausal breast cancer [10].

**Combined Factors**

While social and biological factors each have their own effects on breast cancer disparities, some social factors may help facilitate or contribute to biological differences or disparities. For example:

- Racial or social inequalities may influence factors such as being overweight or obese, and lifestyle choices such as lack of breastfeeding or poor diet and exercise, which can affect a woman’s biology and perhaps change her risk and survival of breast cancer [11].

---

**Biological and non-biological factors that contribute to breast cancer disparities**

Non-biological activities are thought to influence biological activities. Non-biological factors may also influence disparities directly. The non-biological factors are depicted in overlapping circles to indicate that they may interact with each other, and the non-biological factors may act alone or in combination to influence breast cancer disparities (adapted from Danforth, Breast Cancer Research 2013).
Differences in Breast Cancer Incidence Rates

Caucasian women have the highest incidence rates of breast cancer in the U.S. followed closely by African American/black women. Comparatively, Asian American (Asian/Pacific Islander as a group), Native American (American Indian/Alaska Native) and Hispanic/Latina women have much lower incidence rates (Figure 1).

![Breast Cancer Incidence by Race](chart.png)

**Figure 1. Female Breast Cancer Incidence by Race, 2006-2010**


However, rates can vary a lot even among individual ethnic or racial subgroups. For example, the racial category of Asian and Pacific Islander includes many smaller ethnic groups that are highly diverse in terms of lifestyles, health care practices, socioeconomic status and other factors that can affect breast cancer rates. In fact, research shows that Asian women do not have uniformly low rates of breast cancer. Filipinas have much higher incidence rates compared with other Asian groups; US-born Asian women have higher incidence rates compared with foreign-born Asian women; and some Pacific Islanders such as Japanese or Hawaiian women have been found to incidence rates higher than Caucasian women [12, 13, 14].

---

1 Although African American and black are often used interchangeably, it should be noted that not all blacks are of African descent and thus African American. The racial category of black includes not only African Americans, but also blacks from other origins or cultures.

2 Although Hispanic and Latina are often used interchangeably and frequently not distinguished from each other in research studies, it should be noted that the groups differ. Hispanic generally refers to language and people of Spanish origin (coming from Spain or speaking Spanish), Latino/a refers to geography, specifically Latin America, the Caribbean and Central America. While there is some overlap between the groups, not all Latinos are Hispanic and vice versa.
Why do some women have a higher incidence of breast cancer?

**Socioeconomic Status**

The incidence rates of most diseases are higher among poorer communities. However, the opposite is true of breast cancer. Breast cancer incidence is higher in communities with higher socioeconomic status. This may be because women of higher socioeconomic status get screening mammograms at a higher rate than women of lower socioeconomic status, resulting in more breast cancers being found. Increased incidence could also be due to the differences in risk factors found in women of different education and income levels. For example, compared to women with lower income and education levels, women with higher income and education levels are more likely to:

- Have their first child at a later age
- Have fewer children
- Use menopausal hormone therapy (postmenopausal hormones)
- Drink alcohol

All of these factors may increase the risk of breast cancer [15, 16, 17].

**Lifestyle choices**

Lifestyle choices influenced by social and racial inequalities can contribute to breast cancer disparities by affecting a women’s risk of breast cancer. Some risk factors for breast cancer are associated more often with some racial/ethnic groups than others, such as:

- **Having fewer children or having them later in life**: Hispanic and Caucasian women are more likely to have children at a later age and have fewer children, each of which can increase the risk of breast cancer [18].
- **Not breastfeeding**: Breastfeeding may lower breast cancer risk. Both African Americans and Hispanics tend to breastfeed less than Caucasians [19].
- **Being overweight or obese**: Both African American and Hispanic/Latina women have higher rates of obesity. Being overweight or obese is a known risk factor for postmenopausal breast cancer, contributes to poor survival and is believed to contribute not only to breast cancer disparities, but to other health disparities as well [20].
- **Alcohol**: Drinking alcohol increases a woman’s risk of breast cancer. Although alcohol consumption is lowest among Asian/Pacific Islanders overall, Japanese Americans consume more alcohol than Asian Americans of other national origins, which may contribute to the higher rates of breast cancer observed in this subpopulation [21, 22, 23].

**Sexual orientation**

Lesbians and bisexual women have a greater risk of breast cancer than other women, but this is not because of their sexual orientation. Rather, it is linked to risk factors for breast cancer that tend to be more common in these women (such as never having children or having them later in life). Lesbians also
tend to have higher rates of obesity and alcohol use, both of which can increase breast cancer risk [24, 25].

**BRCA mutations**

Having a mutation in the **BRCA1/2 gene** increases a woman’s risk of developing breast cancer. Though this mutation is rare in the general population, it can occur more commonly in some ethnic groups such as Ashkenazi Jews [26]. Genetic testing, counseling and risk lowering options are available for women with a BRCA mutation. However, some women lack the understanding or resources to seek out or receive such care. Many low-income or underinsured women, as well as underserved minorities, do not have easy access to or seek out BRCA testing or genetic counseling. This can put them at higher risk for being diagnosed with late stage cancer and dying from the disease [27, 28].

**Differences in screening rates**

Breast cancer screening rates are similar among all racial/ethnic groups, ranging from 69 percent-73 percent (Figure 2) [29]. However, large differences exist for screening rates among different socioeconomic classes, as well as other disparate populations, which may contribute to disparities in breast cancer incidence observed in those groups. Getting screened can detect cancer earlier when chances for survival are highest.

- **Income**: Compared to their middle-class and wealthy counterparts, low-income women have the lowest rates of breast cancer screening even when adjusted for race, ethnicity and insurance status [30].
- **Education**: Women with lower levels of education have much lower rates of breast cancer screening than women with more education (Table 1) [29].
- **Disabilities**: Women with disabilities tend to have mammograms less often than women without such limitations [31, 32].
- **Language barriers**: Non-English speakers have lower rates of screening mammography compared to English speakers, particularly among Hispanic and Asian women. This may be because they are unable to navigate the health care system or communicate effectively with their provider [33, 34].
- **Rural populations**: Women residing in rural areas of the U.S. are screened for breast cancer less often than women in urban areas. Screening disparities between rural and nonrural women are even more pronounced among minorities; rural ethnic groups such as African Americans and Native Americans receive less breast cancer screening than their nonrural counterparts. Many rural regions have longer distances between medical facilities and less availability of health services, limiting access to breast cancer screening. [35, 34].
- **Sexual orientation**: Studies show that while lesbians and bisexual women have similar screening rates as heterosexual women, they may not get regular mammograms. This may be due to a lack of health insurance, past experience of discrimination or insensitivity from a health care provider or a mistrust of providers [36, 37].
- **Health care provider differences:** Physicians’ recommendations for breast cancer screening vary. For example, racial/ethnic minorities, the elderly and low-income women are less likely to receive physician recommendations for mammography. The causes for this are unclear, but potential factors include poor communication, provider assumptions about financial resources and discrimination [38, 39].

![Bar chart showing mammogram prevalence by race/ethnicity](image)

**Figure 2. Percent Women who had a Mammogram with the past 2 years, by race/ethnicity, in 2020**

**Table 1. Self-Reported Mammogram Prevalence by Education Level**
Estimates are adjusted to the 2000 US standard population and reflect mammograms received in the past 2 years, in 2011.

<table>
<thead>
<tr>
<th>Education</th>
<th>Percent of Women with mammogram in past 2 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than high school</td>
<td>58.3</td>
</tr>
<tr>
<td>High school graduate</td>
<td>69.5</td>
</tr>
<tr>
<td>Some college</td>
<td>73.9</td>
</tr>
<tr>
<td>College graduate</td>
<td>80.0</td>
</tr>
</tbody>
</table>
Disparities in late-stage diagnosis

Breast cancer stage at diagnosis varies by racial/ethnic and socioeconomic groups. These differences are important because stage at diagnosis impacts a woman’s survival. Research shows that women from minority and medically underserved populations are more likely to be diagnosed with advanced or late-stage breast cancer (has spread beyond the breast). For example:

- African American and Hispanic/Latina women are more likely than white women to be diagnosed with more advanced stages of breast cancer [47, 48].
- Women with low income or education levels have a more advanced breast cancer stage at diagnosis compared to women at higher income and/or education levels [49].

Women who do not have health insurance are almost four times as likely to be diagnosed with advanced breast cancer compared to women with health insurance [50].

Disparities in follow-up care

Research has found that socioeconomic factors and certain attitudes or misconceptions about cancer are associated with delayed or incomplete follow-up of an abnormal screening mammogram. Such attitudes are common among low-income, minority and under- or uninsured populations and are thought to contribute to breast cancer disparities [40, 41, 42]. Waiting longer for follow-up care may lead to cancers that have spread beyond the breast and are harder to treat. For example:

- African American, Asian and Hispanic/Latina women have longer follow-up times after an abnormal mammogram than white women and are less likely to complete follow-up care and diagnostic services [43, 44].
- Women with lower income, as well as those living in rural areas, have longer times to follow-up after abnormal mammogram than women of higher income or those living in urban areas closer to medical facilities [45].
- Non-English speakers have longer follow-up times after an abnormal mammogram than English speakers [46].

Treatment Disparities

Factors such as race/ethnicity, socioeconomic factors, cultural beliefs, trust in the medical community or differences in medical care can affect the quality and type of breast cancer treatment a woman receives [51].

Time to treatment

- African American/black women are almost twice as likely to have a delay in starting chemotherapy or radiation than white women. [52].
- Women who have low income and/or education levels tend to wait longer than women who have high income

A disparate treatment is (1) a course of treatment that is not consistent with recommendations of the National Cancer Institute’s Physician Data Query (PDQ) and that could have a negative impact on outcome or (2) a recommended treatment associated with a poorer quality of life than another recommended alternative.
and/or education levels to begin treatment after diagnosis [53].

**Radiation, hormone therapy and chemotherapy**

- Black and Hispanic women receive radiation, hormone therapy and chemotherapy less often than Caucasian women [54, 55].
- African American/black patients are more likely than white patients to receive treatment that leads to poorer clinical outcomes, including nonstandard chemotherapy regimens, lower recommended dose (regardless of body mass index) and early termination of chemotherapy [56, 57].
- Women with disabilities are less likely to get radiation therapy after breast conserving therapy than other women. This may be due to a variety of reasons including disabilities that make a complete course of radiotherapy difficult to complete, such as transportation issues or an inability to lie flat or extend their arm [58].

**Survival**

Many of the same factors that impact whether a woman gets screened, or how and when she seeks treatment, also impact and contribute to disparities in breast cancer survival.

African American/black women have the highest breast cancer death rates of all racial and ethnic groups and are 41 percent more likely to die of breast cancer than Caucasian women [59]. This disparity is attributed to a number of factors, which include higher rates of early onset, more advanced stage at diagnosis and more aggressive cancer subtypes (TNBC) that occur within this population [60].

Hispanic/Latina, Asian and Native American women have much lower mortality rates than either African Americans/blacks or Caucasian (Figure 4). However, like breast cancer incidence, mortality rates can differ among individual racial or ethnic subgroups. For example, some Pacific Islander women, such as Hawaiian, not only have higher breast cancer mortality rates compared to other Asian subgroups, but also have higher mortality rate than either blacks or Caucasians.

![Bar chart showing the number of breast cancer deaths per 100,000 women by race/ethnicity.](chart.png)

March 21, 2014
Women with low income and/or education levels are more likely than women with higher income and/or education levels to die from breast cancer [61].

Some studies suggest women in a same sex-relationship may have a higher risk of breast cancer death compared to women in a heterosexual relationship [62].

Women with disabilities have a higher mortality rate than those without a disability. It is not clear whether this disparity is due to differences in treatment choices or because women with disabilities may be more susceptible to treatment-related complications, such as infections and toxicities [58].

**The Economic Impact of Breast Cancer Disparities**

The economic impact of breast cancer disparities is considerable. A report from the C-Change (Collaborating to Conquer Cancer) organization and Susan G. Komen® estimates we can save at least $674 million annually in direct medical costs alone by reducing the disparities in breast cancer access and treatment. This is money spent on the expensive, prolonged therapies that late-stage disease often requires. C-Change estimates at least another $116 million in indirect costs of these disparities in terms of lost wages and productivity [63].

**Tackling disparities**

**Health care access**

The Affordable Care Act (ACA) (healthcare reform) is increasing access to health care for many Americans. Since September 2012, all new health insurance plans have been required to cover mammography for women over the age of 40 every one to two years. Starting in 2014, ACA will give access to health coverage for many low-income women who do not currently have insurance through the Insurance Marketplaces and expansion of Medicaid eligibility.

Learn more about the Affordable Care Act.

**National Breast and Cervical Cancer Early Detection Program**

The Center for Disease Control and Prevention (CDC)’s National Breast and Cervical Cancer Early Detection Program allows each state to provide breast cancer screening to low-income, uninsured and underinsured women. For women who have an abnormal finding, the program also covers diagnostic testing and if breast cancer is diagnosed, referrals for treatment. Women diagnosed through this program can get treatment through expanded Medicaid benefits. (Medicaid is run by each state, so coverage varies state to state).

Learn more about the National Breast and Cervical Cancer Early Detection Program.
Learn more about Medicaid.

Summary

Breast cancer takes a disproportionate toll on women of color and those of low-income and education. While unknowns persist regarding the causes of breast cancer disparities and the best ways to reduce and eliminate them, there is much that is clear. According to breast cancer disparities researcher and Komen Scholar, Dr. Rena J. Pasick, “A societal commitment to access to high quality care and to appropriate education for all women stands to alleviate much of the excess burden of this disease. And while more research is needed, it should be based on the recognition that scientific advances can themselves exacerbate disparities in the context of differential availability.”

Komen’s Efforts to End Breast Cancer Disparities

Community Action

With 117 Affiliates in local communities and across the globe, Susan G. Komen® is the most progressive grassroots organization fighting breast cancer today. Each year, Komen Affiliates fund thousands of community-based programs that address barriers and needs related to breast cancer. Through community grant programs, education efforts and partnerships, Komen Affiliates are addressing disparities in risk factors that stem from cultural and language differences and societal inequities related to discrimination, provider bias, patient mistrust, poor patient-provider communication, poor adherence and low quality care. These local programs aim to change behaviors and increase access to early detection and quality treatment for disparate populations.

In 2012 alone, Komen Affiliates funded over 1900 grants totaling more than $92 million to local community organizations. These organizations provided millions of services, including mammograms, diagnostic services, educational programs, support services and treatment assistance, to address needs and barriers related to breast cancer disparities.

Komen has also invested approximately $13 million in large-scale vulnerable community grants and national programs that seek to improve quality of care, enhance care coordination, offer financial assistance to breast cancer patients and address unique barriers to breast care for vulnerable populations.

Advocacy

Public policy continues to be a key area of focus at Komen, with sustained advocacy efforts in state capitals across the U.S. and in Washington, D.C. These efforts are focused on protecting breast cancer screening and treatment services, as well as research funding, to advance breast health and cancer care policy at the federal and state levels. It is critical that all women have access to needed breast cancer screenings, life-saving treatment and quality breast cancer care if we are to work to end breast cancer disparities.

Learn more about Komen’s advocacy priorities for 2014

March 21, 2014
Research

Susan G Komen® has long committed resources and efforts aimed at reducing mortality from breast cancer disparities. Among these efforts, Komen funds hundreds of research grants working to eliminate the burden of breast cancer experienced by all women, including the unequal burden imposed upon women from many minority and medically underserved populations. Since it was founded in 1982, Komen has invested more than $89 million in over 250 research grants that focus on issues related to breast cancer disparities. These grants represent more than 10 percent of Komen’s total research portfolio (over $800 million). More than two-thirds of these grants support clinical trials focused on breast cancer disparities. Komen’s disparities grants also include a dedicated grant mechanism that supports the training of graduate students who are pursuing a research career focused on breast cancer disparities, called the Graduate Training in Disparities Research Grant (GTDR).

To learn more about Komen-funded research, as well as Komen’s overall investment in breast cancer disparities go to:  
http://www5.komen.org/uploadedFiles/Content/ResearchGrants/GrantPrograms/Mission%20Disparities%20FF%20final%201-22-14%20+hyperlinks%20small.pdf

Bibliography


12, 2013.


