

Racial Disparities in the Surgical Management of Early Breast Cancer

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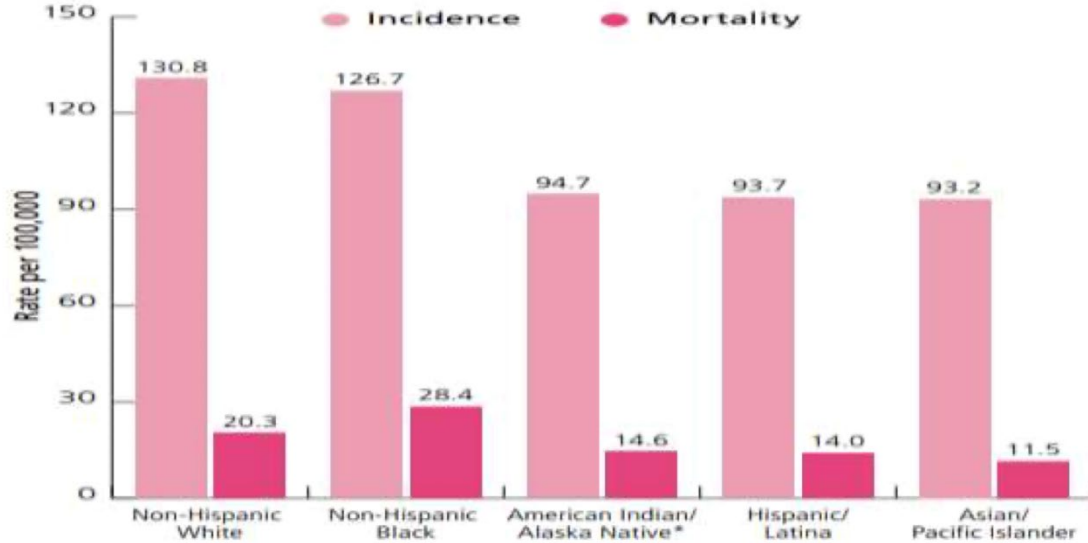
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- None

- Review current literature in the racial disparities in the surgical management of early breast cancer
- Review disparities in staging and treatment modalities including oncologic surgery and reconstructive options

- Breast cancer mortality highest among African Americans – 42% more likely to die
- More advanced stage distribution for African Americans
- Incidence rate higher for African Americans for those diagnosed under 45
- Triple negative breast cancers most prominent in African Americans

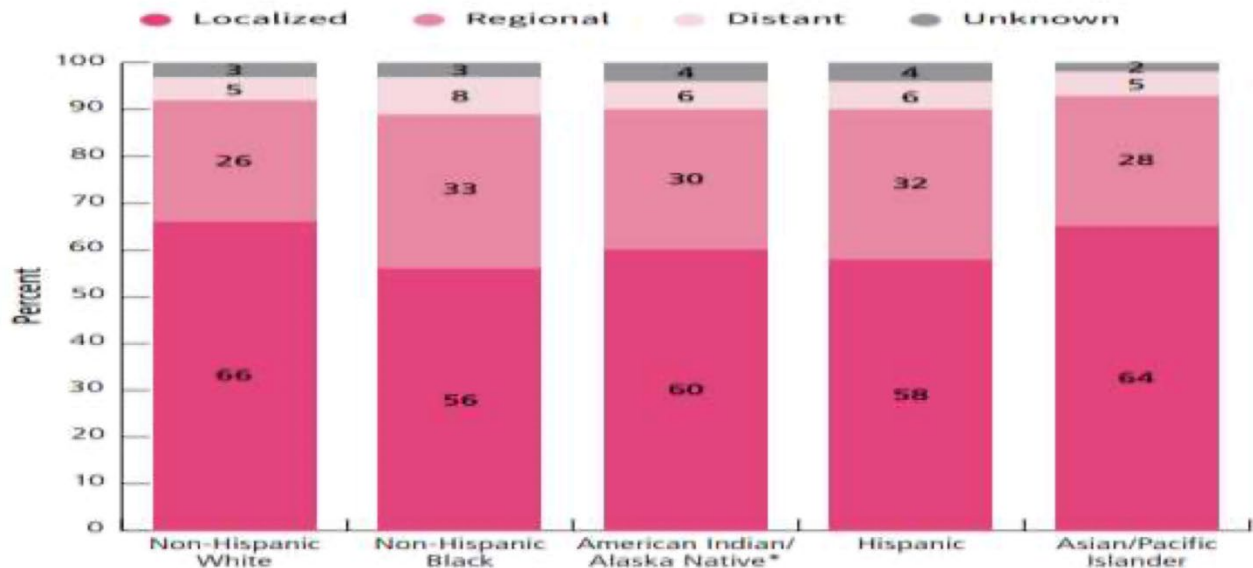
Figure 3. Female Breast Cancer Incidence (2012-2016) and Death (2013-2017) Rates by Race/Ethnicity, US



*Statistics based on data from PRCDA counties. Note: Rates are per 100,000 and age adjusted to the 2000 US standard population.

Sources: Incidence – NAACCR, 2019. Mortality – National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention, 2019.

Figure 5. Female Breast Cancer Stage Distribution, by Race/Ethnicity, Ages 20 and Older, US, 2012-2016



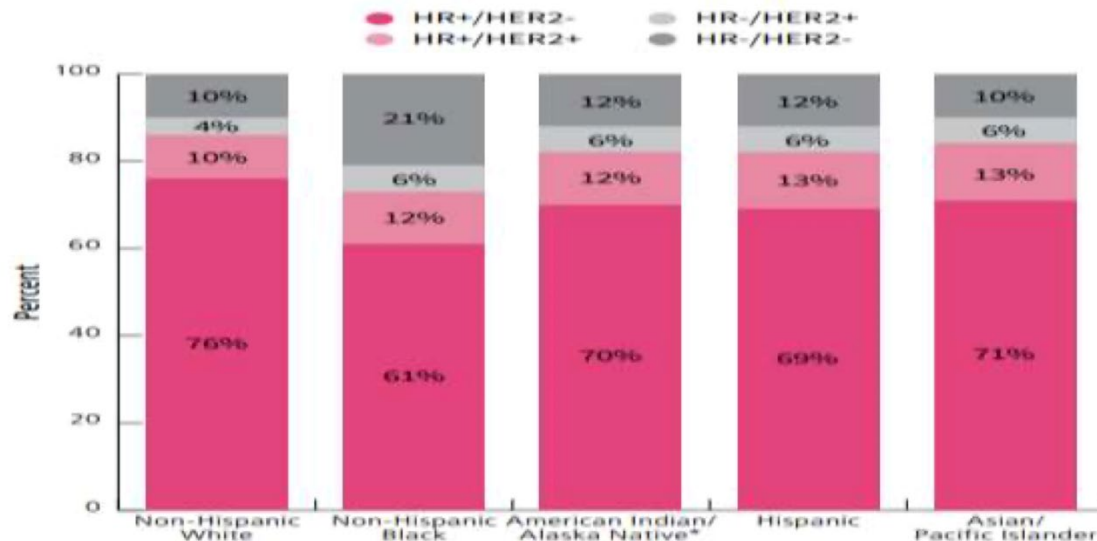
*Statistics based on data from PRCA counties.

Source: NAACCR, 2019.

Racial or ethnic variations in female breast cancer incidence and mortality per 100,000 people in the United States in 2014 [29]

	White	Black	Asian/Pacific Islander	Hispanic	American Indian/Alaska Native
Incidence rates	127.7	125.1	98.5	93.1	82.2
Death rates	20.6	29.2	11.3	14.4	10.8

Figure 4. Distribution of Breast Cancer Subtypes by Race/Ethnicity, Ages 20 and Older, US, 2012-2016



HR = hormone receptor, HER2 = human epidermal growth factor receptor 2. Statistics based on data from PRCA counties.

Source: NAACCR, 2019.

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Disparities in Time To Breast Cancer Treatment

- Selove et al, Women's Health Issues, 2016
- 2005-2008 Patients under Center for Medicare and Medicaid Services (white 65,463 vs black 5,268)
- Number of days from biopsy to treatment
 - 30.2 days vs 44.7 days ($p < 0.001$)

Disparities in Time to Breast Cancer Treatment

- Smith et al, JAMA Surgery, 2013
- California Cancer Registry Study of 8860 patients
- Non Hispanic Black women more likely to have more than 6 weeks after diagnosis and worse survival

What Contributes to this Delay?

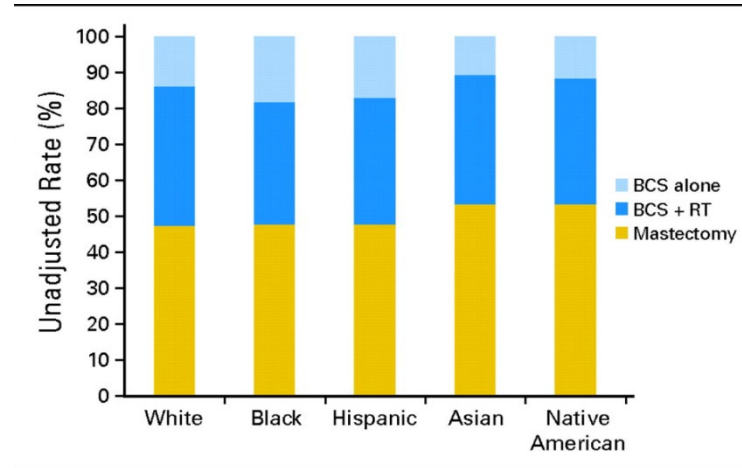
- Access to care and Insurance Coverage
 - Public/no insurance vs private insurance

Disparities in Time to Breast Cancer Treatment

- Eaglehouse et al, JAMA 2019
- Department of Defense Central Cancer Registry review of patients in 1998-2008
- 998 vs 3899 patients (NHB vs NHW)
- NHB had higher adjusted risk for death (HR 1.45) among patients undergoing BCT
- NHB had longer TTS than NHW by 3.6 days

- SEER data review 2010-2017
- African Americans were 112% more likely to refuse surgery than non-Hispanic white counterparts

- SEER database review of 1998-2004 patients with stage I or II breast cancer



- North Carolina Cancer Registry review of patients in 2003-2016
- The rate of mastectomy declined 2.5% per year overall
- Mastectomy declined across all groups over the years except for those aged 18-49
- Among Black women aged 18-49, breast conserving surgery remained most common type

Total North Carolina Population (n = 86,776)

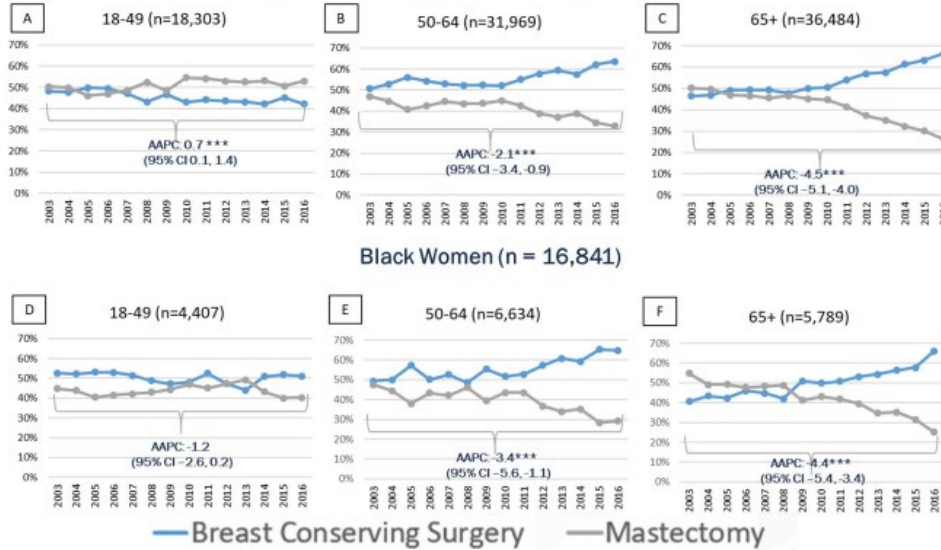


Fig. 3 Average Annual Percent Change (AAPC) for use of mastectomy in the treatment of early-stage breast cancer 2003–2016 stratified by age group. **A–C** Total North Carolina Population. **D–F** Among Black Women. AAPC is Average Annual Percent Change

which calculates the average annual percentage rate change in a model specified time interval over the entire time interval. AAPC is presented for mastectomy only

- Kim et al. NPJ Breast Cancer. 2017
- Survey of 2182 patients aged 41-64 in PA and FL in 2007-2009 with unilateral BC
- Whites were 132% more likely to undergo contralateral prophylactic mastectomy compared to African americans

- Butler et al. Am J Surg. 2017.
- A review of 48,564 women from National Surgery Quality Improvement Program Datasets in 2005-2011
- 35.2% of Caucasian women received IBR vs 24.6% of African Americans ($P < 0.001$)

- Sarver et al. J Am Coll Surg. 2022.
- Review of National Inpatient Sample database of the Healthcare Cost and Utilization Project from 2012-2016.
- Compared with White women (n = 19,730), Black women (n = 3,201) underwent autologous reconstruction more frequently (40.7% vs 28.3%), had more perioperative comorbidities (eg diabetes: 12.9% vs 5.8%), and longer LOS (median 3 vs 2 days, all p < 0.001).

- Smith et al, Cancer, 2010
- National medicare database review of 34,000 patients in 2003
- Whites were more likely to receive RT after BCT compared to blacks (OR 1.48, $p < 0.001$)

Impact of Covid-19 on Breast Cancer Disparities

- Covid-19 pandemic led to a hiatus in breast cancer screening
- National Cancer Institute estimates that cumulative effects will result in an excess 10,000 deaths from breast and colorectal cancers by 2030.
- Two-fold higher mortality rates for African Americans from Covid-19

- Literature shows that African Americans have:
 - Longer time to surgery
 - More likely to refuse surgery
 - Less likely to have radiation
 - Less likely to be offered reconstruction
 - Less likely to have contralateral mastectomy

- Deeper dive into the reasons behind all these points
- Implicit bias training for physicians
- Focus on racial, ethnic, cultural beliefs and how to mitigate negative impact on treatment

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9. Butler et al. Racial and age disparities persist in immediate breast reconstruction: an updated analysis of 48,564 patients from the 2005 to 2011 American College of Surgeons National Surgery Quality Improvement Program data sets. AM J Surg. 2016;212:96-101.
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13. Fwelo et al. Racial and Ethnic Disparities in the refusal of surgical treatment in women 40 years and older with breast cancer in the USA between 2010 and 2017. Br Ca Res and Treatment. 2022;194:643-661.