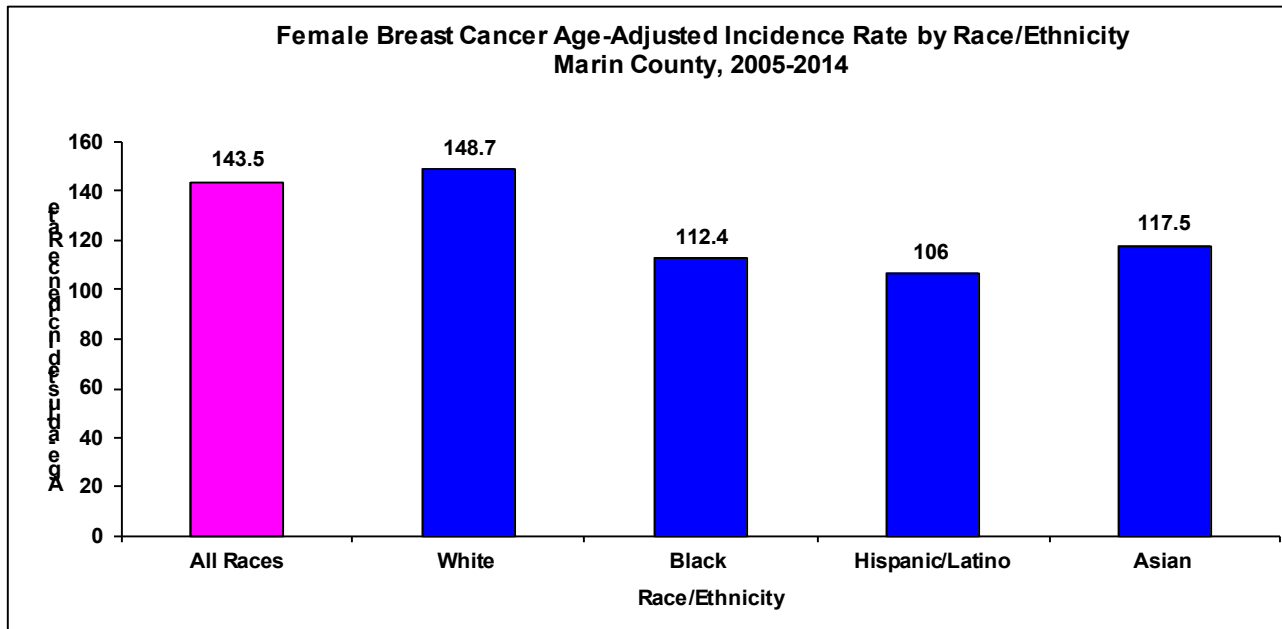
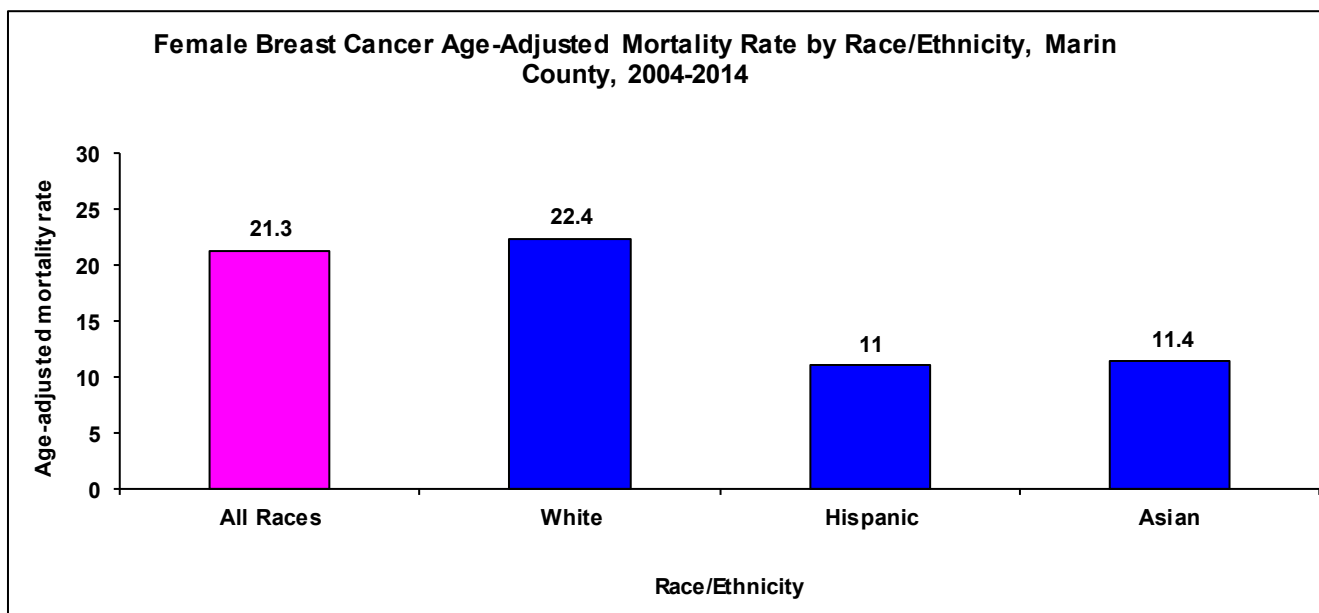


2017 Marin County Data Summary: Breast Cancer Trends and Risk Factors

Incidence and Mortality Rates by Race/Ethnicity



- The breast cancer incidence rate in Marin County is highest among Non-Hispanic White females and is lowest among Hispanic/Latina women.¹
- Rates of breast cancer vary by race in other places as well. Because of this, and because the racial distributions of populations vary, it is inappropriate to compare rates of breast cancer in all races combined in Marin to rates of all races combined elsewhere.[^]

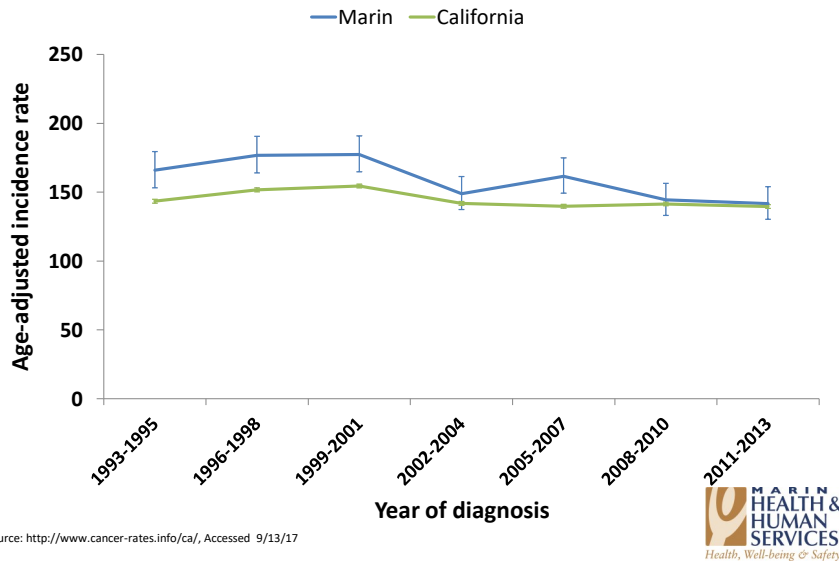


- Non Hispanic White women have higher breast cancer mortality rates than Asian and Hispanic women, as would be expected given the higher incidence among Whites Non Hispanic women.¹
- Mortality rates for Blacks women in Marin County could not be calculated due to fewer than 14 deaths in the time period.¹

[^]The largest group of women in Marin, and therefore the group with the most data on breast cancer, are Non-Hispanic White women. Charts comparing to California and the US in this report are presented for Non-Hispanic White women

Incidence Rates in Marin for White Non-Hispanic Women

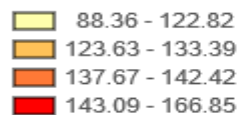
Age-adjusted Invasive Breast Cancer Incidence Rates Marin and California — Non-Hispanic, White Females, 1994–2014



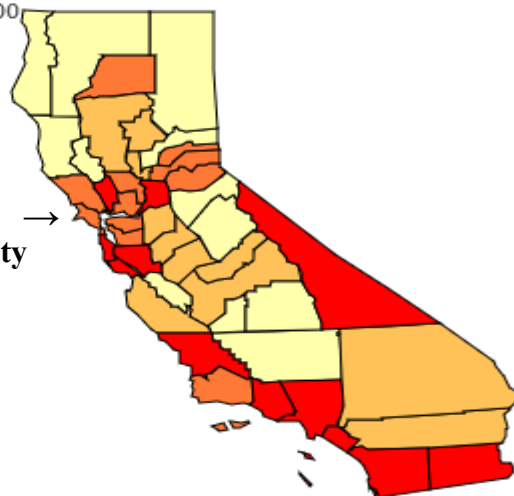
- In general over the past 20 years, the incidence rate of female breast cancer among Non-Hispanic Whites has been higher in Marin County than in California as a whole, but have been similar to rates in California in the last two 3-year periods¹
- The incidence of female breast cancer among Non-Hispanic Whites was at its highest level in the late 1990s/early 2000s in both Marin County and California.¹
- The average annual incidence rate of female breast cancer among Non-Hispanic White women in Marin County in 2012-2014 was 142 per 100,000 compared to a rate of 139 per 100,000 in California.¹

Age-Adjusted Invasive Cancer Incidence Rates in California Breast, Female, NH White, 2012 - 2014 By County Age-Adjusted to the 2000 U.S. Standard Population

California Rate: 138.75 / per 100,000



Marin County
142/100,000

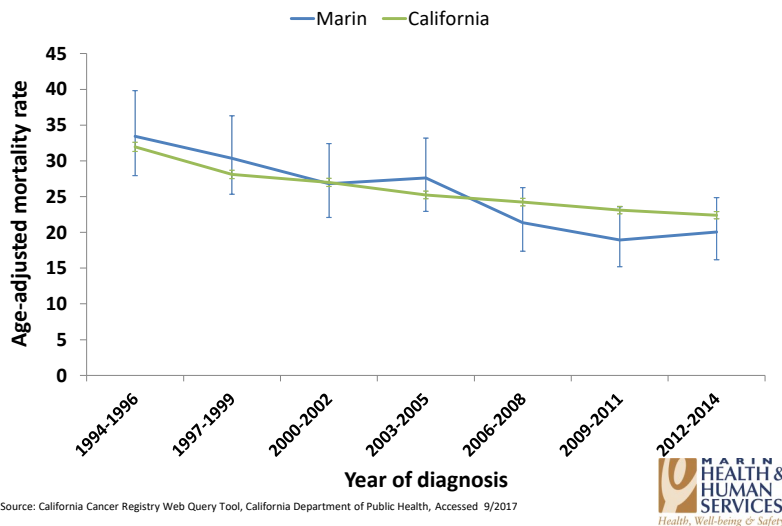


All rates per 100,000.
Data accessed September 26, 2017. Based on Oct 2016 Extract.
© 2017 California Cancer Registry.

- The breast cancer incidence rate during 2012-2014 among Non-Hispanic White females in Marin County (142/100,000) was not significantly higher than the overall female breast cancer incidence rate among White Non-Hispanic Females in California (139/100,000).¹

Mortality Rates by County, Non-Hispanic White Women

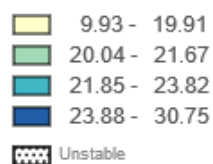
Age-adjusted Invasive Breast Cancer Mortality Rates Marin and California — Non-Hispanic, White Females, 1994–2014



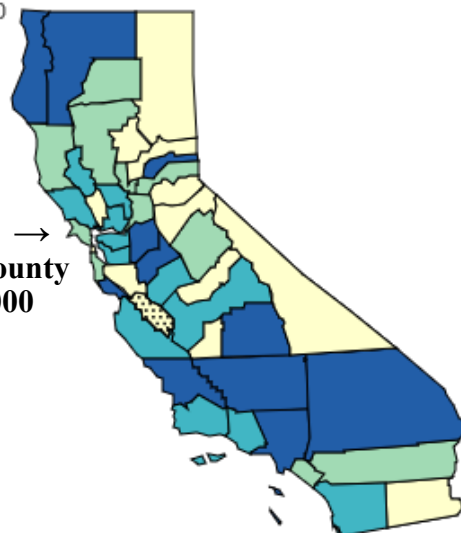
- The death rate due to female breast cancer among Non-Hispanic Whites was lower in Marin County than in California during the last two three year periods, though the difference was not significant.¹
- The death rate due to female breast cancer among Non-Hispanic Whites has decreased significantly in both Marin County and California between 1994-1996 and 2012-2014.¹

Age-Adjusted Cancer Mortality Rates in California Breast, Female, NH White, 2012 - 2014 By County Age-Adjusted to the 2000 U.S. Standard Population

California Rate: 22.39 / per 100,000



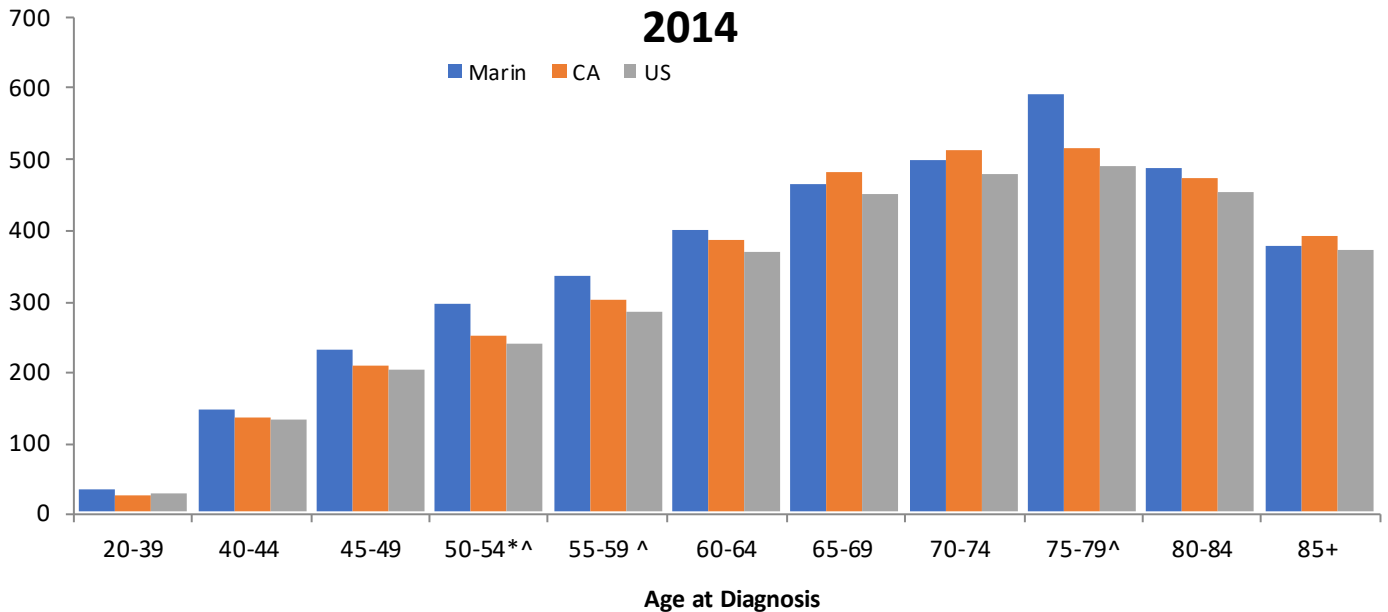
→
Marin County
20/100,000



All rates per 100,000.
Data accessed September 26, 2017. Based on Oct 2016 Extract.
© 2017 California Cancer Registry.

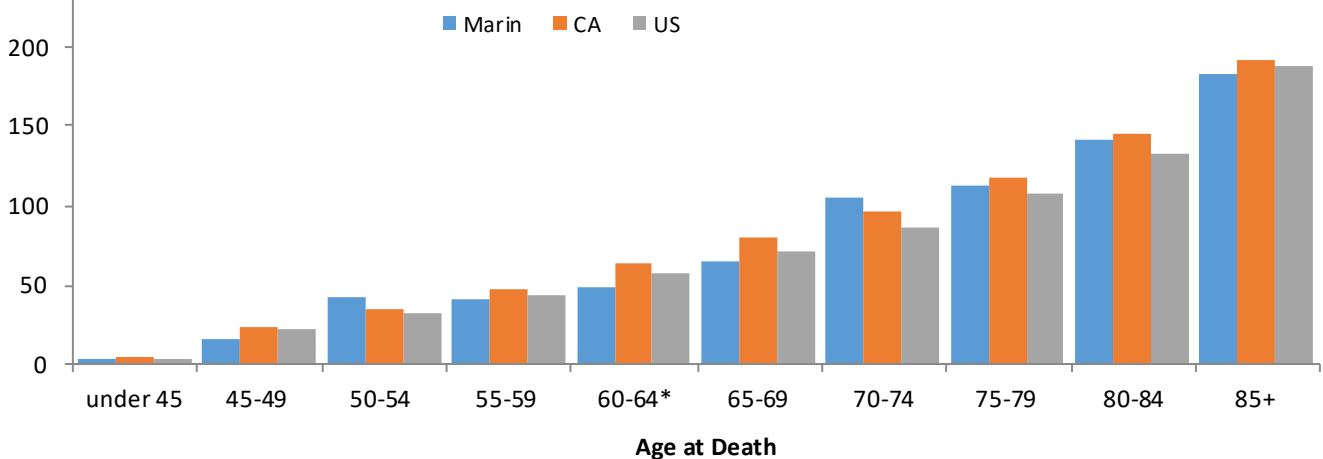
- The death rate due to female breast cancer among Non-Hispanic Whites in 2012-2014 in Marin County (20.0 per 100,000) was lower than the rate in California (22 per 100,000), though the difference was not significant.¹

Invasive Breast Cancer Incidence Rate (per 100,000) by Age of Diagnosis among Non-Hispanic White Females, Marin County, California, and the United States, 2005-2014



- The breast cancer incidence rate among Non-Hispanic White females were generally higher in Marin County than in the US (except in the highest and lowest age categories, where the rates were very similar).
- The rates were statistically significantly higher in Marin than in CA and the US for the age group 50-54, and rates in Marin were also significantly higher than the US for the age group 55-59 and 75-79.³
- Breast cancer incidence in the U.S. increases with age until approximately age 80 when women may be less likely to be screened

Breast Cancer Mortality Rate (per 100,000) by Age of Diagnosis among Non-Hispanic White Females, Marin County, California, and the United States, 2002-2014



- The breast cancer mortality rate among Non-Hispanic White women was not significantly higher in Marin County compared with California or the U.S..⁴
- In all geographic areas, the breast cancer mortality rate generally increases with increasing age.⁴

* indicates that the rate in Marin is significantly different from the rate in CA ^Indicates that the rate in Marin is significantly different from the rate in the US

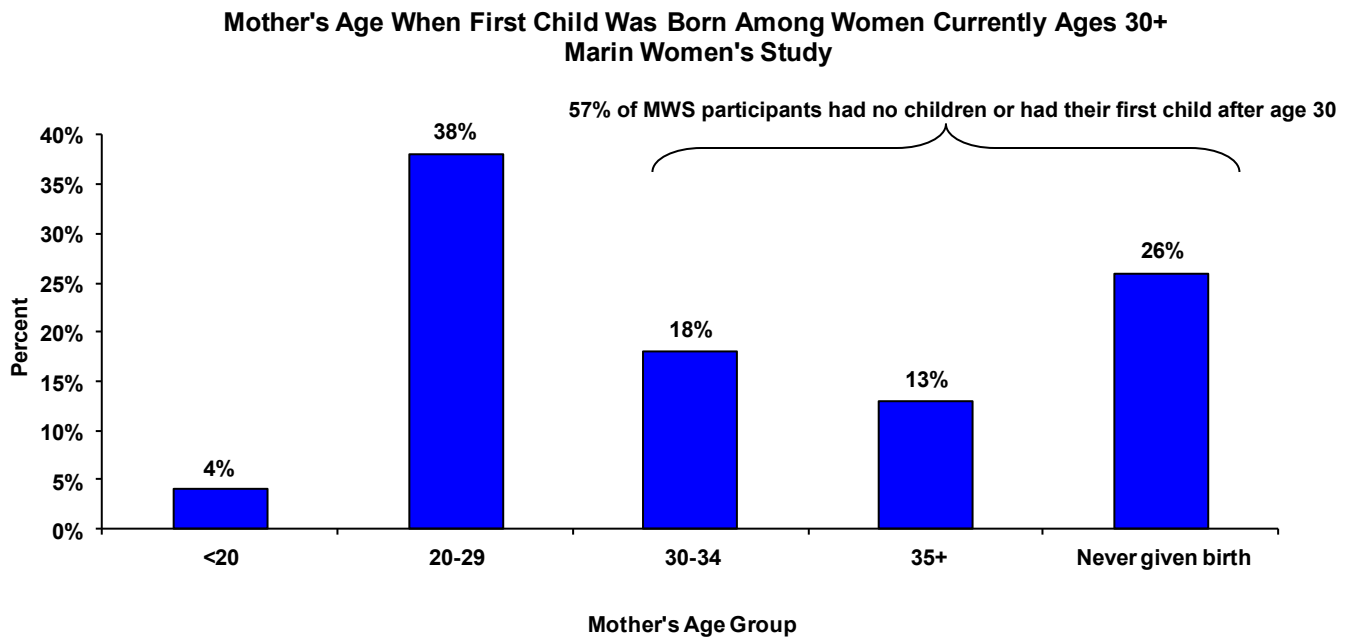
Breast Cancer Risk Factors

What raises a woman's chance of getting breast cancer?^{5,6}

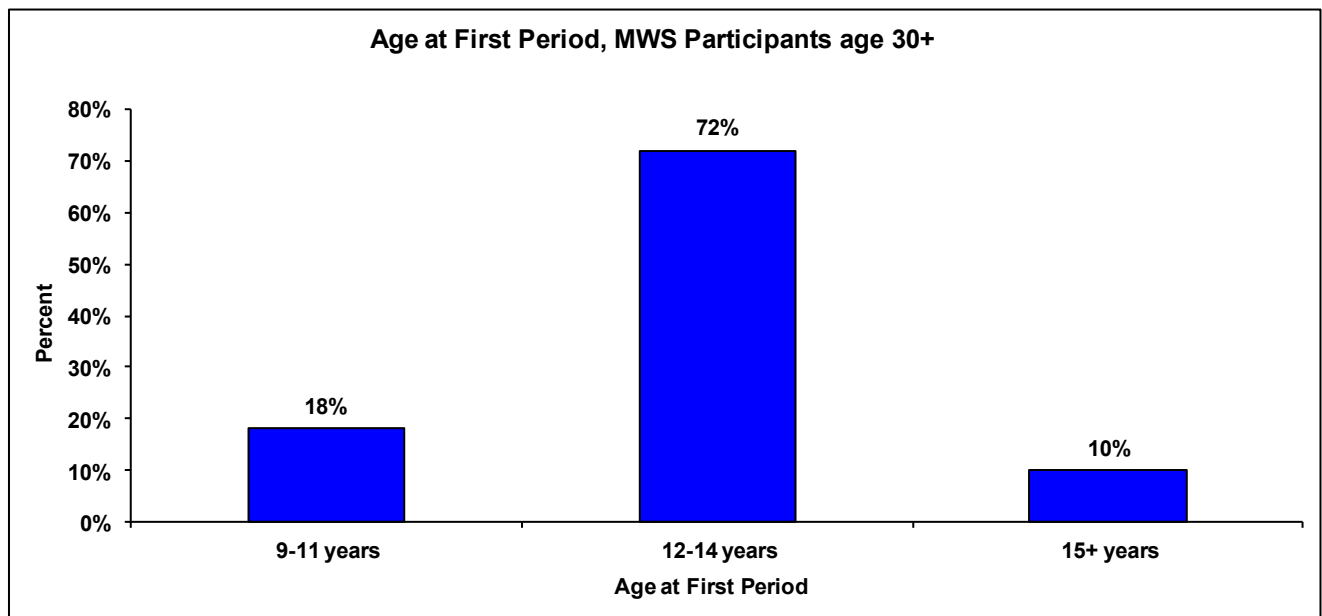
There are several factors that may affect your risk of developing breast cancer. These include:

- Getting older.
- Not having children, or having your first child later in life (after age 30).
- Starting your first menstrual period at an early age (before age 12).
- Beginning menopause at a late age (after age 55).
- Having a personal history of breast cancer or certain benign breast diseases, such as atypical ductal hyperplasia.
- Having close family relatives (such as a mother, sister, father, or daughter) who have had breast cancer.
- Having a genetic condition, such as certain mutations in your BRCA1 or BRCA2 genes.
- Having been treated with radiation therapy to the breast or chest.
- Being overweight, particularly after menopause.
- Using hormone replacement therapy for 5 or more years.
- Using oral contraceptives.
- Drinking alcohol (2+ drinks daily).
- Being physically inactive.

Selected Breast Cancer Risk Factors in Marin Women

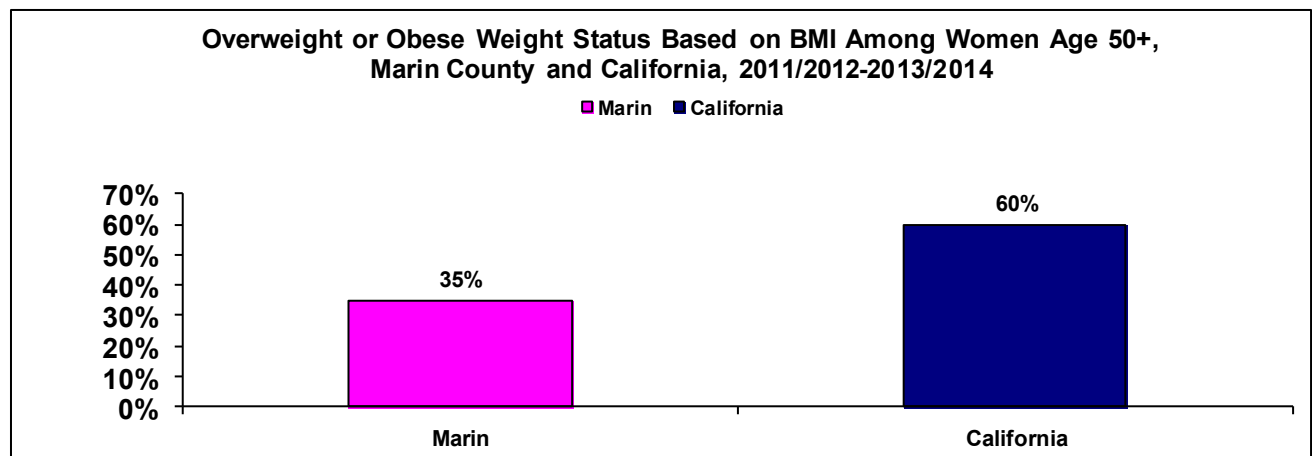


- Not having children or having children after age 30 is a risk factor for breast cancer.^{5,6}
- 57% of the Marin mammography population are at increased risk for breast cancer based on this risk factor.⁸



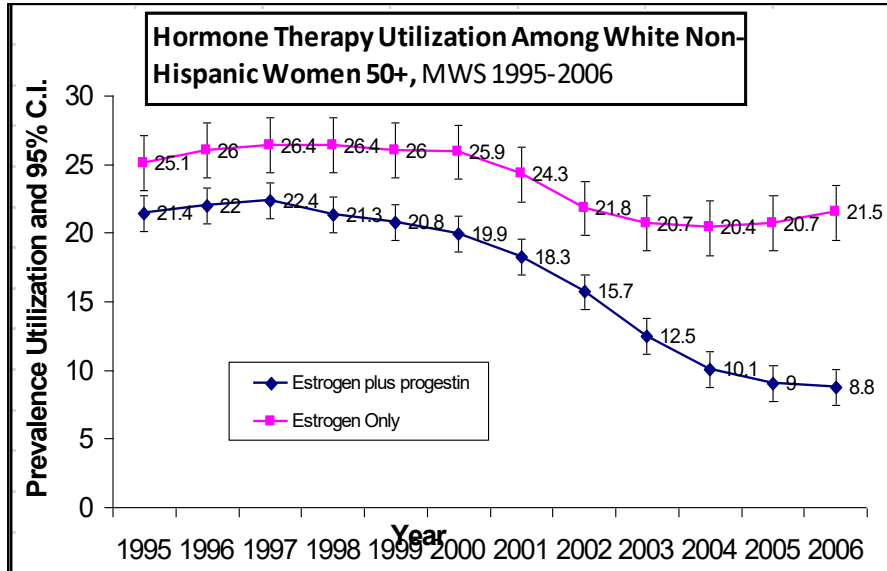
- Women who have had more menstrual cycles, by starting their periods at a younger age and/or reaching menopause at a later age, are considered at higher risk for breast cancer.^{5,6}
- An age at first period younger than age 12 and age at menopause after age 55 are considered risk factors for breast cancer.^{5,6}
- 18% of the Marin mammography population would be at increased risk for breast cancer based on the age they started their period.⁸
- 7% of the Marin mammography population reached menopause after age 55 and could be at higher risk for breast cancer.⁸

Behavioral Risk Factors

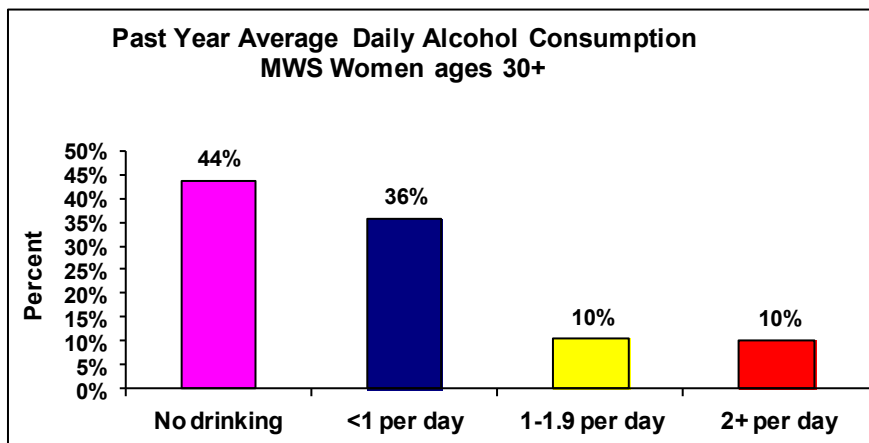


- Obesity, especially after menopause, has been associated with breast cancer.^{5,6}
- 35% of Marin women compared with 60% of California women over age 50 are overweight or obese placing them at increased risk for breast cancer.⁷

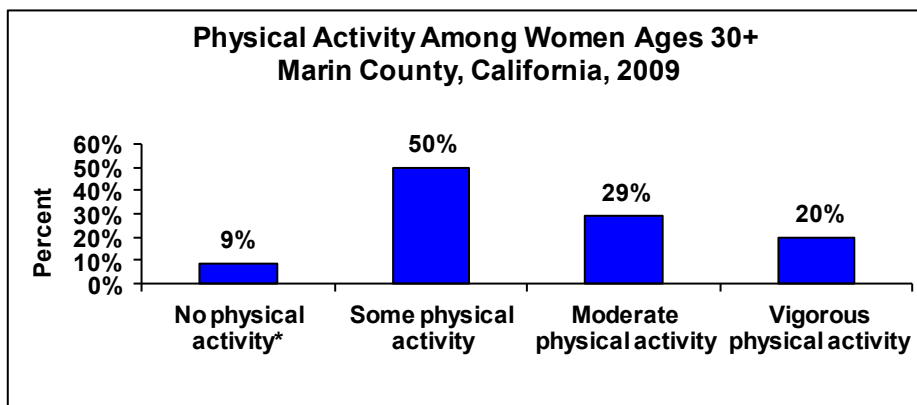
Behavioral Risk Factors (Continued)



- Prolonged use of combination estrogen/progestin hormone therapy is a risk factor for breast cancer.^{5,6}
- Use of combination hormone therapy steadily decreased in the 2000s.⁹
- 7% of Marin women age 50+ reported using combination hormone therapy in 2006-2007 which may place them at increased risk for breast cancer.



- 20% of women in the MWS reported drinking one or more alcoholic beverages a day in the past year, 10% of which reported drinking two or more alcoholic beverages per day.⁸
- 30% of Marin women 30 and older reported drinking 4 or more drinks on at least one occasion during the past year compared with only 20% of California women.⁷



- Physical activity reduces breast cancer risk.^{5,6}
- Approximately 1 in 10 Marin women aged 30 and older do not engage in any physical activity.¹⁰

Mammogram Screening

- In 2009-2011/2012, 79% of Marin women over 40 had received a mammogram in the past 2 years.¹¹
- Women who were above the poverty level but below 200% poverty were less likely to have had a mammogram in the past two years than women in the lowest and two highest income groups.¹¹
- Use of mammography differed by race, though estimates for non-White groups were unstable due to small sample sizes.¹²
- Use of mammography was lower in those with less than a BA/BS degree.¹¹
- The percent of women who received a mammogram in the past two years differed most markedly by insurance status. Women who were currently insured were much more likely to have had a mammogram in the past two years than women who were not currently insured.¹¹
- Overall, the biggest barriers to receiving a mammogram were low income and/or lack of insurance.¹¹

~ statistically unstable

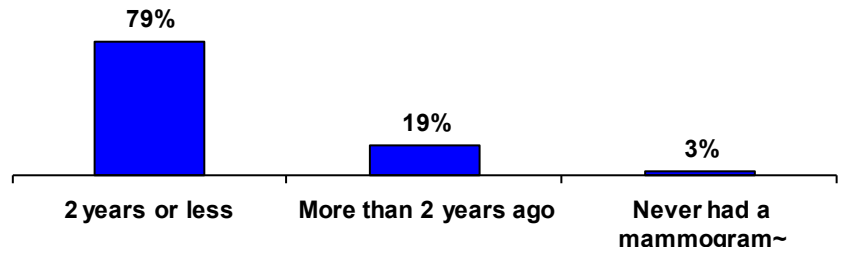
For additional information, please contact:
Marin County Department of Health and Human Services
Epidemiology Program
MarinEPI@marincounty.org

or visit <http://www.healthymarin.org>

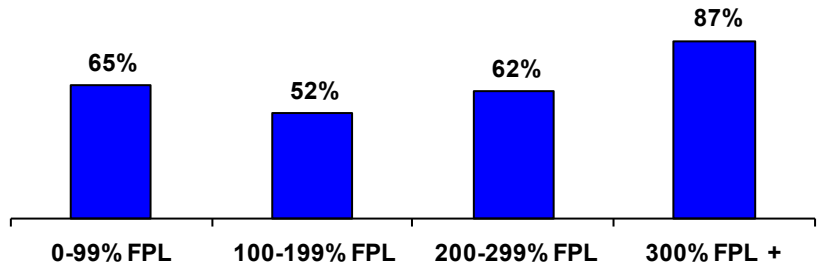
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4. Software: Surveillance Research Program, National Cancer Institute SEER*Stat software (www.seer.cancer.gov/seerstat) version 8.3.2. Data: Surveillance, Epidemiology, and End Results (SEER) Program www.seer.cancer.gov SEER*Stat Database: Incidence - SEER 18 Regs Research Data + Hurricane Katrina Impacted Louisiana Cases, Nov 2015 Sub (2000-2013) -Katrina/Rita Population Adjustment- - Linked To County Attributes - Total U.S., 1969-2014 Counties, National Cancer Institute, DCCPS, Surveillance Research Program, Surveillance Systems Branch, released April 2016, based on the November 2015 submission.
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11. California Health Interview Survey. CHIS 2009-2011/2012. Los Angeles, CA: UCLA Center for Health Policy Research.
12. California Health Interview Survey. CHIS 2011/2012. Los Angeles, CA: UCLA Center for Health Policy Research.

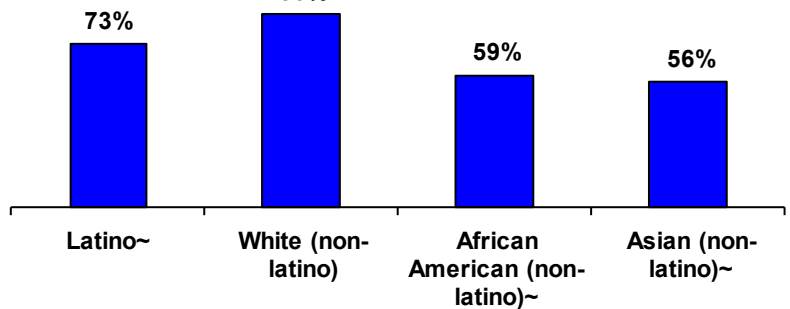
Time Since Last Mammogram among Women Ages 40+, Marin County, California, 2009-2011/2012



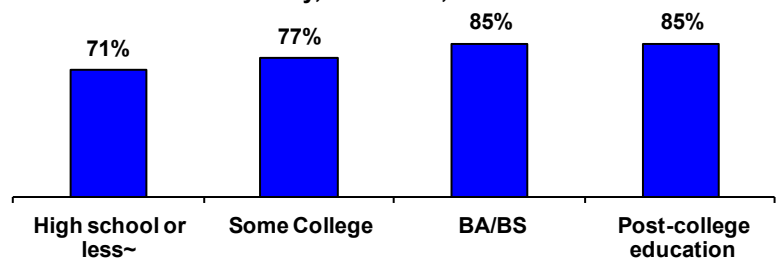
Mammogram in the Past 2 Years by Federal Poverty Level among Women Ages 40+ Marin County, California, 2009-2011/2012



Mammogram in the Past 2 Years by Race/Ethnicity among Women Ages 40+, Marin County, California, 2011-2012



Mammogram in the Past 2 Years by Highest Education Received among Women Ages 40+ Marin County, California, 2009-2011/2012



Mammogram in the Past 2 Years by Insurance Status among Women Ages 40+ Marin County, California, 2009-2011/2012

