

in women, including breast cancer. In 2002, the WHI announced that use of combined MHT (estrogen plus progestin, given to women with an intact uterus) increased the risk of breast cancer. In addition, the tumors were larger and more likely to have spread to the lymph nodes than in the placebo group. The risk of developing breast cancer increased with the length of time women were taking the hormones, and decreased once they stopped taking them.

Early Detection

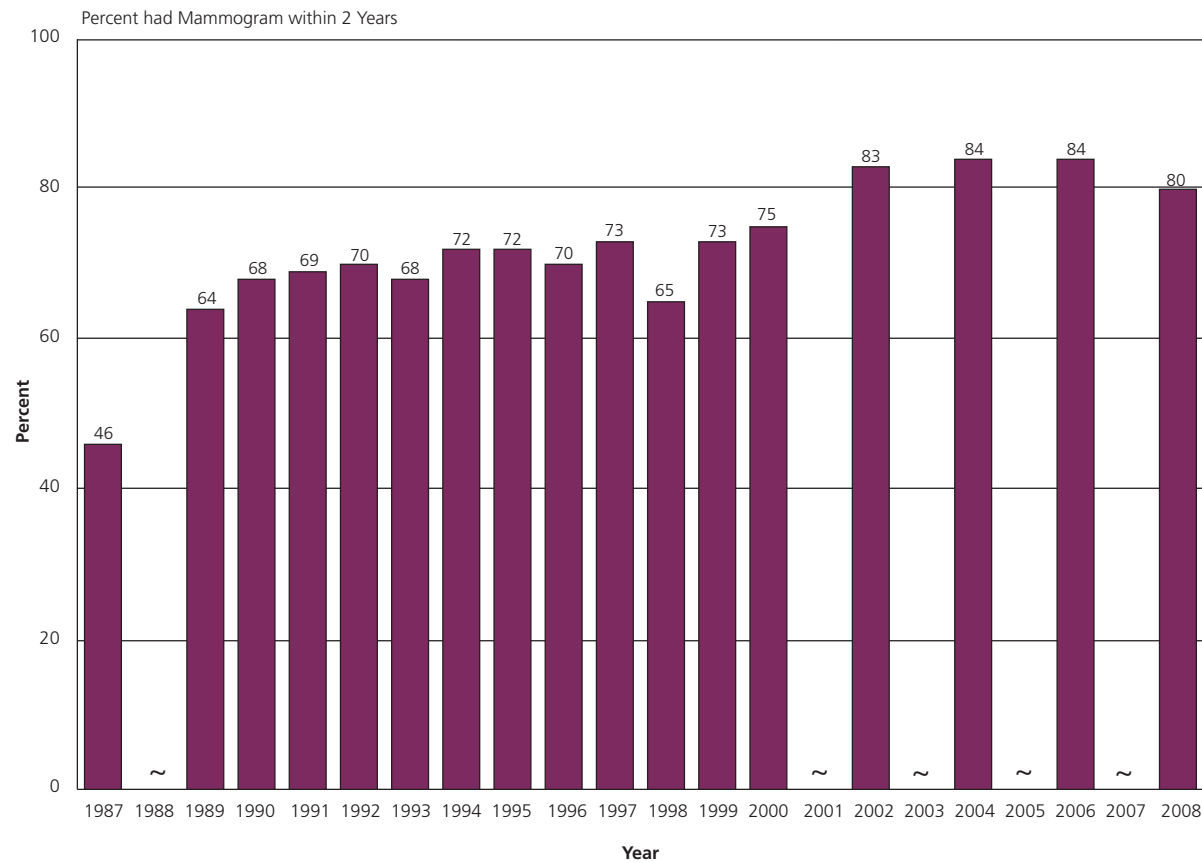
Mammography can often detect breast cancer at an early stage, when treatment is more effective and a cure is more likely. Steady declines in breast cancer mortality among women since 1989 have been attributed to a combination of early detection and improvements in treatment. Mammography is a very accurate screening tool for women at both average and increased risk;

however, even regular screening will not find all breast cancers at an early stage because some breast cancers grow rapidly and spread beyond the breast in the interval between mammograms. Nonetheless, the best available evidence indicates that breast cancer screening saves lives.

American Cancer Society Screening Guidelines for the Early Detection of Breast Cancer

Breast cancer screening for women at average risk includes clinical breast exam (CBE) and mammography. The American Cancer Society recommends that for women in their 20s and 30s, CBE be part of a periodic health examination, preferably at least every three years. The Society also recommends women receive an annual mammogram beginning at age 40.

Trends in Mammography Use among Women Ages 50 and Older, Minnesota, 1987-2008



Source: Minnesota Behavioral Risk Factor Surveillance System (BRFSS). Analyses were conducted by the Minnesota Cancer Surveillance System (MCSS). ~ These questions were only asked in even numbered years starting in 2000.

Breast Cancer in Minnesota



We **save lives** and create more birthdays by helping you stay well, helping you get well, by finding cures, and by fighting back.

cancer.org | 1.800.227.2345



©2013, American Cancer Society, Inc.



THE OFFICIAL SPONSOR OF BIRTHDAYS.®

Female Breast Cancer

Breast cancer is the most commonly diagnosed cancer among women in the United States. Based on current rates, 1 of 7 women in Minnesota will be diagnosed with this cancer in their lifetime.

Female breast cancer rates have changed markedly since cancer reporting was implemented in Minnesota in 1988. Breast cancer incidence among women began declining significantly around 2000, and accounted for 31% of all cancer diagnoses among women in 2009 compared to 34% in 2000. Due to steady declines in mortality, breast cancer accounted for 15% of cancer deaths among women in 2009 compared to 20% in 1988.

The breast cancer incidence rate among non-Hispanic white women over the most recent five-year period was 2% lower in Minnesota than reported by the 17 geographic areas participating in the Surveillance, Epidemiology, and End Results (SEER) program, and the mortality rate was 7% lower in Minnesota than in the US. About 20% of breast cancers in Minnesota were diagnosed at the earliest, in situ, stage, when SEER program data indicate that five-year relative survival is 100%.

Trends in Breast Cancer Incidence and Mortality

Incidence rates of invasive female breast cancer in Minnesota decreased significantly, by 3.9% per year, from 2000-2004 and then increased significantly, by 1.4% per year, from 2004-2009. The average trend (AAPC) from 2000-2009 was a decline of 1% per year, which is not statistically significant. The mortality rate decreased significantly, by 2.5% per year, from 1988-2009. These are similar to national trends.

The decline in incidence may have resulted from a decrease in the use of menopausal hormone therapy (MHT), the documented reduction in the use of mammography, and/or other factors. The sharp decrease in mortality among women has resulted from a combination of increased breast cancer screening with mammography and improvement in this cancer's medical management.

Demographics of Breast Cancer

While breast cancer risk increases with age, it has a younger average age at diagnosis than many common cancers. From 2005-2009, about 58% of breast cancer diagnoses and 40% of deaths in Minnesota occurred among women younger than 65 years of age.

In Minnesota and nationally, non-Hispanic white women are the mostly likely to be diagnosed with breast cancer, but African American women are more likely to die of the disease. From 2005-2009, female breast cancer incidence rates in Minnesota were 15% lower among African American women compared to non-Hispanic white women, but mortality rates were 30% higher. Female breast cancer incidence rates were somewhat lower in Minnesota than in the SEER 18 areas for each race/ethnic group except American Indians. Among American Indian women statewide, breast cancer incidence was 40% higher.

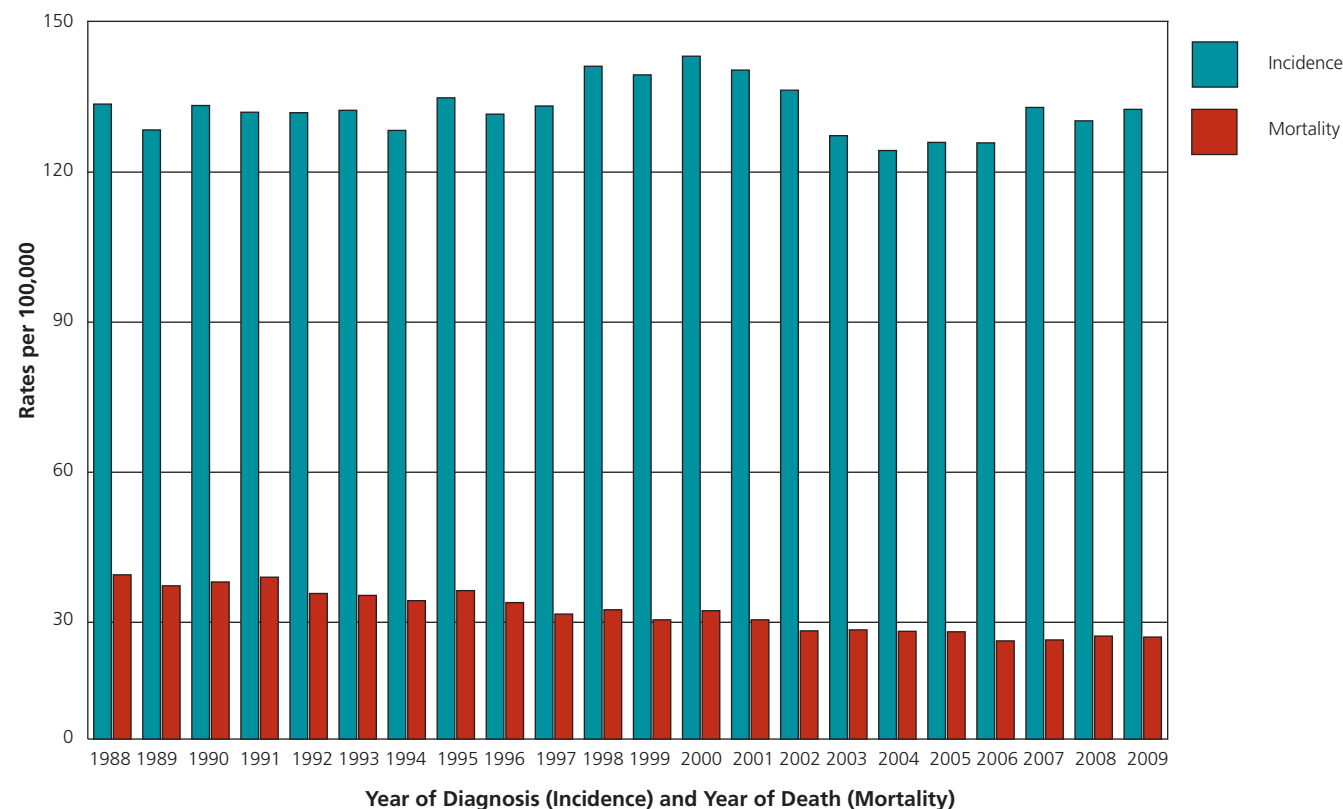
In general, the rate of late-stage disease should decline as breast cancer screening becomes more widely adopted.

Percent of Female Breast Cancers Diagnosed at Late Stage by Race/Ethnicity, Minnesota, 2003-2007

| Race/Ethnicity | Average Number of Cases Diagnosed/Year | *Late Stage |
|---------------------------------|--|-------------|
| African American | 62 | 50% |
| American Indian Statewide | 22 | 33% |
| American Indian CHSDA residents | 13 | 29% |
| Asian/Pacific Islander | 32 | 41% |
| Hispanic (all races) | 30 | 50% |
| Non-Hispanic White | 3,325 | 35% |

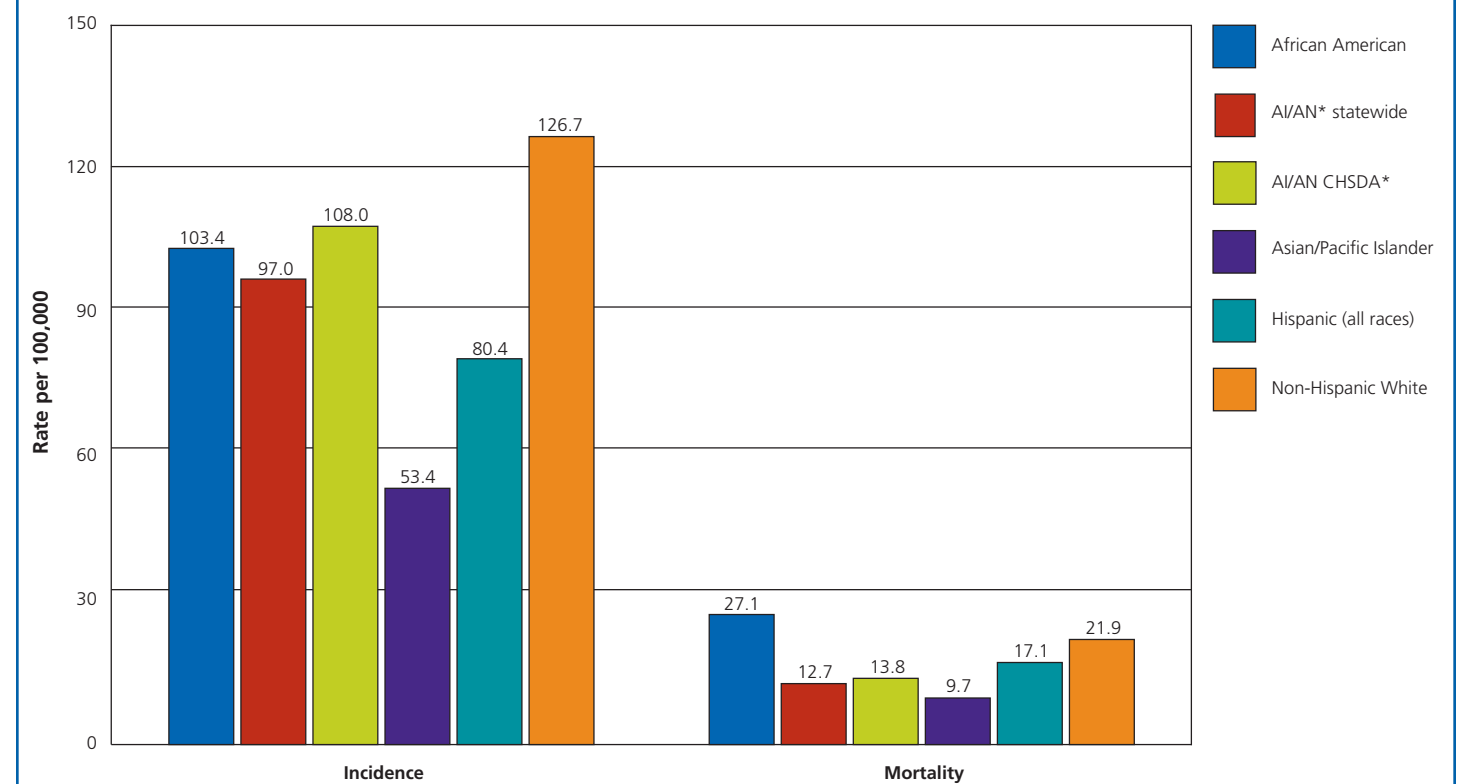
Source: Minnesota Cancer Surveillance System (May 2010).
* Late-stage cancers have extended beyond the breast (regional or distant stage) when diagnosed. The denominator is all invasive cancers, including those that were unstaged (2.2%).

Female Breast Cancer Incidence and Mortality, Minnesota, 1988-2009



Source: Minnesota Cancer Surveillance System (MCSS), December 2011 (incidence) and Minnesota Center for Health Statistics (mortality). Rates are age-adjusted to the 2000 US population.

Female Breast Cancer by Race/Ethnicity, Minnesota, 2003-2007



Source: Minnesota Cancer Surveillance System (MCSS), May 2010. Rates are age-adjusted to the 2000 US population.
*AI/AN is American Indian/Alaska Native. CHSDA is Contract Health Service Delivery Area.

Risk Factors

Cumulative exposure of breast tissue to the naturally occurring hormone estrogen is a strong predictor of risk. Therefore, early age at menarche, late onset of menopause, late childbearing, and having fewer children increase risk. Other established risk factors include: benign breast disease with atypical hyperplasia, obesity, alcohol consumption, physical inactivity, and higher

socioeconomic status. Family history, especially of premenopausal breast cancer, is strongly associated with increased breast cancer risk. Mutations in the BRCA1 or BRCA2 gene are specific inherited risk factors. However, known risk factors only account for 50% of breast cancers.

The Women's Health Initiative (WHI) is a large, randomized clinical trial of the effects of MHT on the risks of many diseases