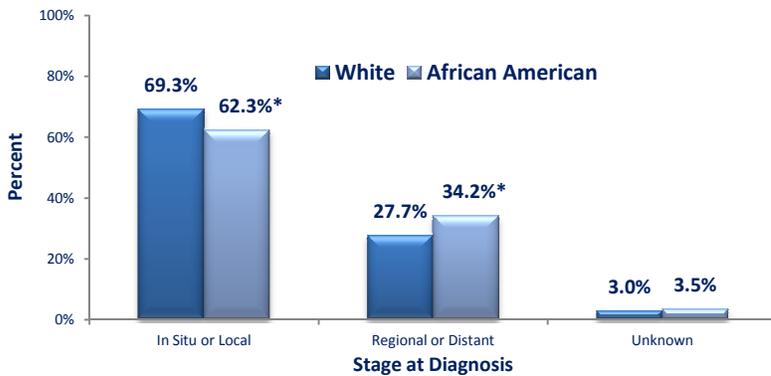


BREAST CANCER is the second leading cause of cancer death and, excluding skin cancers, the most frequently diagnosed cancer among female Hoosiers, with about 4,200 cases diagnosed each year. African American females are at increased risk for poor outcomes relating to breast cancer, in part, because they are more often diagnosed at a younger age, at a later stage of disease, and with more aggressive forms of breast cancer (Figure 1). Breast cancer is rare among males. However, because males are prone to ignoring warning signs they are often diagnosed at later stages and have poorer prognoses.

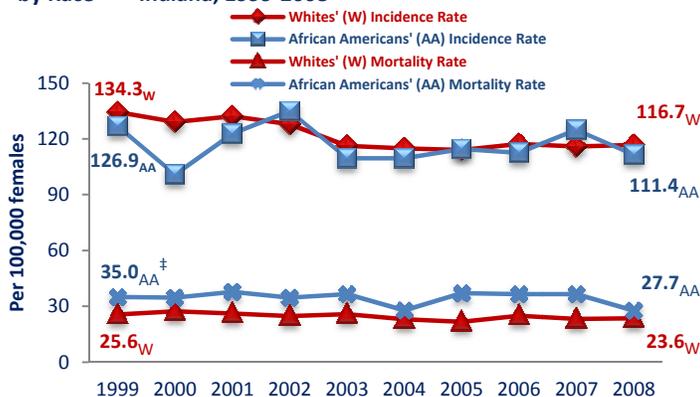
Figure 1. Percent of Female Breast Cancer Cases by Stage of Diagnosis and Race — Indiana, 1999-2008



*Proportion of cases diagnosed in the regional or distant stage compared to the local stage was significantly higher ($P < .05$) among African American females than among white females
Source: Indiana State Cancer Registry

SEX AND AGE are the two greatest risk factors for developing breast cancer. Females have a much greater risk of developing breast cancer than do males, and that risk increases with age. Overall in Indiana, the breast cancer incidence and mortality rates have decreased from 1999 to 2008 (Figure 2).

Figure 2. Female Breast Cancer Incidence and Mortality Rates Trends by Race* — Indiana, 1999-2008



*Age-adjusted

†Overall, the breast cancer incidence rate among all Indiana females was significantly lower ($P < .05$) in 2008 compared to 1999. However, statistical significance was not found when looking at the changes among each race between those years.

‡Rate among African Americans was significantly higher than rate among whites ($P < .05$)

§Breast cancer mortality rate decreased significantly ($P < .05$) for both white and African Americans females and both races combined when comparing 1999 to 2008

Source: Indiana State Cancer Registry

Who Gets Breast Cancer?

Sex and age are the two greatest risk factors. Some additional factors include:

- ❑ **Genetics** – Females who have had two or more first degree relatives who have been diagnosed with breast cancer have an increased risk. Additionally, breast cancer risk increases if a female has a family member who carries the BRCA 1 or 2 genes, which account for 5-10% of breast cancer cases.
- ❑ **Race** – In Indiana, during 2004-2008, the breast cancer incidence rates for African American and white females were similar, but the mortality rate for African American females was 48% higher than for whites. This increased risk can partially be attributed to African American females being diagnosed with more aggressive forms of breast cancer or at later stages.
- ❑ **Estrogen** – Females who started menstruation before age 12 or menopause after age 55 might be at increased risk as a result of a higher lifetime exposure to estrogen.
- ❑ **Pregnancy and breast feeding history** – There are studies that show that females who have not had children, had their first child after age 30, or have not breastfed might have an increased risk of developing breast cancer.
- ❑ **History of hormone replacement therapy (HRT)** – Using HRT can increase a female's risk of developing and dying from breast cancer. This risk can be increased after just two years of using HRT.
- ❑ **Certain medical findings** – High breast tissue density, high bone mineral density, and biopsy-confirmed hyperplasia increase females' risk for developing breast cancer.
- ❑ **Alcohol Intake** – Having two or more alcoholic drinks a day increases risk by 21%.
- ❑ **Weight and exercise** – Gaining weight after age 18 and being overweight, especially post menopause, can increase your risk of developing breast cancer. The more body fat a woman has, the higher her estrogen levels typically are, increasing her risk of developing breast cancer.



Can Breast Cancer Be Detected Early?

Yes! Females should have frequent conversations with their health care provider about their risks for breast cancer and how often they should be screened. In general, females should follow these recommendations:

- ❑ **Breast Self Awareness and Breast Self Exams.** Women in their 20s should be aware of the normal look and feel of their breasts, so that they can identify potentially dangerous changes.
- ❑ **Clinical Breast Exams.** Women in their 20s and 30s should have a clinical breast exam by a health care professional every three years. Women in their 40s should have yearly clinical breast exams.
- ❑ **Annual Screening Mammograms.** Women, beginning at the age of 40, should have yearly screening mammograms, which help detect cancers before a lump can be felt.

Be Aware! Common Signs and Symptoms of Breast Cancer

- ❑ Lumps, hard knots, or thickening
- ❑ Swelling, warmth, redness, or darkening
- ❑ Pulling in of the nipple or other parts of the breast
- ❑ Change in size or shape
- ❑ Nipple discharge that starts suddenly
- ❑ Dimpling or puckering of the skin
- ❑ Itchy, scaly sore, or rash on the nipple
- ❑ New pain in one spot that doesn't go away

What Factors Influence Breast Cancer Survival?

- ❑ Staging of breast cancer takes into account the number of lymph nodes involved and whether the cancer has moved to a secondary location. When breast cancer is detected early, before it is able to be felt, the five-year survival rate is 98%.
- ❑ There are multiple treatment options available for breast cancer patients.
 - Mastectomies are the complete surgical removal of the breast.
 - Lumpectomies are the removal of only the cancerous area of the breast.
 - Local radiation can be used to treat the tumor without affecting the rest of the body.
 - Systemic drugs, which include chemotherapy, hormone therapy and targeted therapy, can be given orally or intravenously that reach cancer cells anywhere in the body.

GET INVOLVED: Join the Indiana Cancer Consortium (ICC)

- ❑ The ICC is a statewide network of over 100 agencies including the Indiana State Department of Health.
- ❑ ICC seeks to reduce the cancer burden in Indiana through the development, implementation and evaluation of a comprehensive plan that addresses cancer across the continuum from prevention through palliation.
- ❑ Become a member at www.indianacancer.org.

Community resources

- To learn more about the [Indiana Breast and Cervical Cancer Program](http://www.in.gov/isdh/24967.htm), visit www.in.gov/isdh/24967.htm or call the Indiana Family Helpline at 1-855-HELP-1ST (1-855-435-7178).
- To learn more about the Breast Cancer burden in Indiana, refer to the [Indiana Cancer Facts and Figures 2012: Breast Cancer](http://www.indianacancer.org) report at www.indianacancer.org.
- To access a community toolkit, including resources and information, visit <http://indianacancer.org/breast-cancer-toolkit/>.

References

1. Indiana Cancer Consortium, Indiana State Department of Health and the American Cancer Society Great Lakes Division; *Indiana Cancer Facts and Figures 2012*. March, 2012. Available at <http://indianacancer.org/resources-for-indiana-cancer-consortium-members/indianacancerfactsandfigures2012/>. Updated cancer statistics are available online from the Indiana State Cancer Registry Statistics Report Generator at <http://www.in.gov/isdh/24360.htm>.