

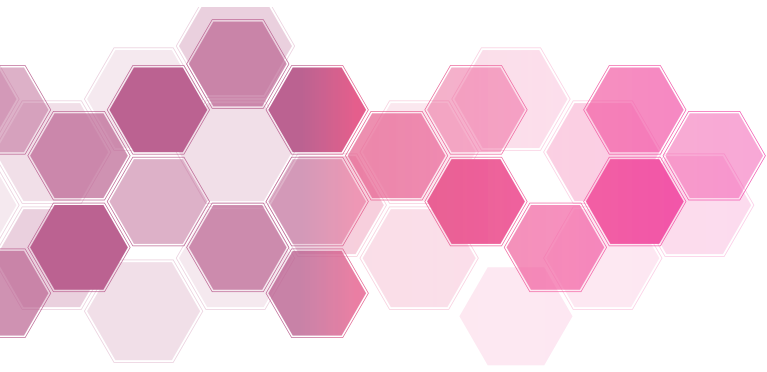
INDIANA
CANCER
CONSORTIUM

BREAST CANCER

An Excerpt of Indiana Cancer Facts & Figures: 6th Edition

BOTTOM LINE

Breast cancer is the second leading cause of cancer death and, excluding skin cancers, the most frequently diagnosed cancer among females in the US.¹ The lifetime risk of developing breast cancer among females is one in eight.¹ Breast cancer is typically diagnosed during a screening examination. An estimated 281,550 new cases of invasive breast cancer and 43,600 breast cancer-related deaths are expected to occur among females nationally in 2021.¹ At the state level, in 2021, an estimated 5,460 new cases of female breast cancer and 910 deaths are expected to occur.¹ White and African American females have similar incidence rates; however, African American females have higher mortality rates.² This may be, in part, because of late diagnosis, diagnosis in younger individuals, more aggressive breast cancers diagnosed in African American women, and barriers to health care access.² Today, there are 3.8 million US females who are breast cancer survivors.¹ Females should have frequent conversations with their health care providers about their risks for breast cancer and how often they should be screened. Breast cancer is rare among males, as an estimated 2,650 cases will occur among US men in 2021.¹ However, because males are prone to ignoring warning signs, they are often diagnosed at later stages and have poorer prognoses. During 2021, it's estimated that 530 men are expected to die from breast cancer.¹



WHAT IS THE IMPACT ON INDIANA RESIDENTS?

TABLE 5. BURDEN OF INVASIVE FEMALE BREAST CANCER*—INDIANA, 2013-2017

*Age-adjusted to the US 2000 Standard Population. Source: Indiana State Cancer Registry

	Average number of cases per year	Rate per 100,000 females	Number of cases	Rate per 100,000 females
	(2013-2017)	(2013-2017)	(2017)	(2017)
Indiana Incidence	4,915	130.8	5,030	129.4
Indiana Deaths	882	24.2	908	24.4

Note: Excludes in situ

WHO GETS BREAST CANCER?

Sex and age are the two greatest risk factors for developing breast cancer. Females have a much greater risk of developing breast cancer (>99 percent of Indiana cases occur among females), and that risk increases with age. Overall, in Indiana from 2013-2017, 83.4 percent of all breast cancer incidence, and 86 percent of breast cancer deaths, occur in females over the age of 50.⁴

RISK FACTORS

Factors associated with increased breast cancer risk include weight gain after the age of 18 and/or being overweight or obese (for postmenopausal breast cancer); menopausal hormone therapy (combined estrogen and progestin), physical inactivity, and alcohol consumption.¹ Research also indicates that long-term, heavy smoking increases breast cancer risk, particularly among females who start smoking before their first pregnancy.

- **Family history.** People who have had one or more first-degree relatives who have been diagnosed with breast cancer have an increased risk. Additionally, according to the American Cancer Society (ACS), breast cancer risk increases if a person has a family member who carries the breast cancer susceptibility genes, known as BRCA 1 or BRCA 2, which account for 5 to 10 percent of all female breast cancers. BRCA mutations also account for 5 to 20 percent of all male breast cancers, and 15 to 20 percent of familial breast cancers.¹
- **Race.** In Indiana, during 2013-2017, the breast cancer incidence rates for African-American and white females were similar, but the mortality rate for African American females was significantly higher than the rate for white females.⁴
- **Reproductive factors.** Females may have an increased risk if they have a long menstrual history (menstrual periods that start early and/or end later in life), have recently used hormonal birth control, have never had children, or had their first child after the age of 30.¹
- **Certain medical findings.** High breast tissue density, high bone mineral density, type 2 diabetes, certain benign breast conditions, and lobular carcinoma in situ may increase risk for developing breast cancer. In addition, high dose radiation to the chest for cancer treatment increases risk.¹

Factors associated with a decreased risk of breast cancer include limiting or avoiding alcohol intake, breastfeeding, regular moderate or vigorous physical activity, and maintaining a healthy body weight. Two medications – tamoxifen and raloxifene – have been approved to reduce breast cancer risk in females at high risk.¹

WHAT IS THE IMPACT ON INDIANA RESIDENTS? CONT.

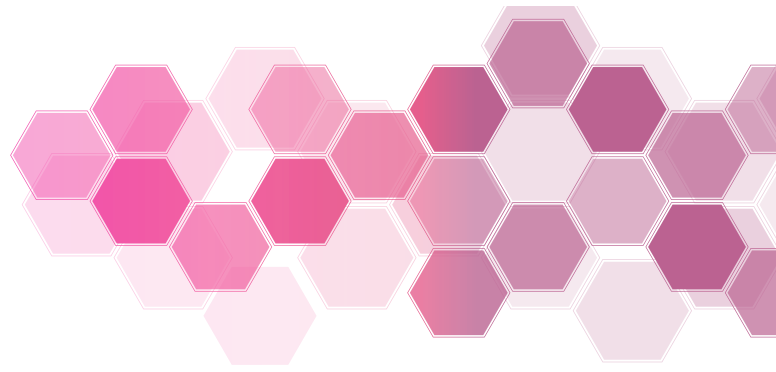


FIGURE 10. FEMALE BREAST CANCER INCIDENCE AND MORTALITY (DEATH) RATES TRENDS BY RACE*—INDIANA, 2013-2017

*Age-adjusted to the US 2000 Standard Population. Source: Indiana State Cancer Registry

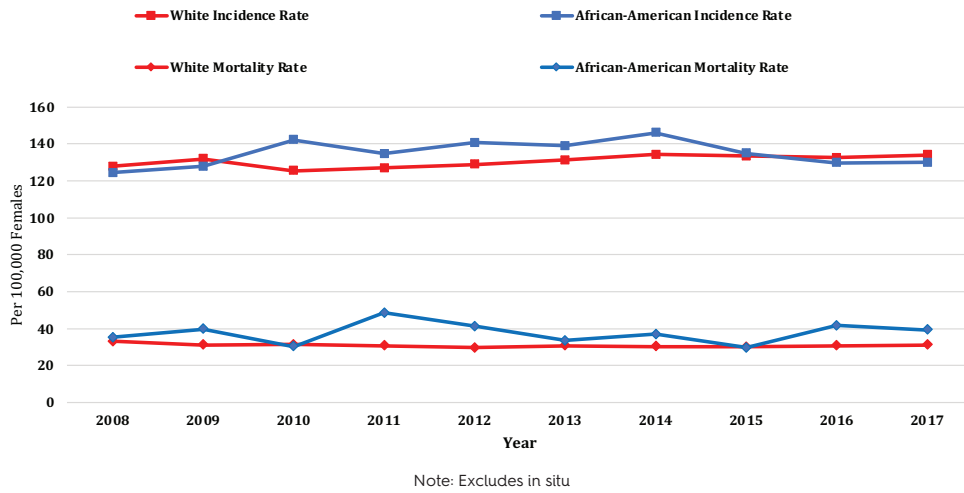
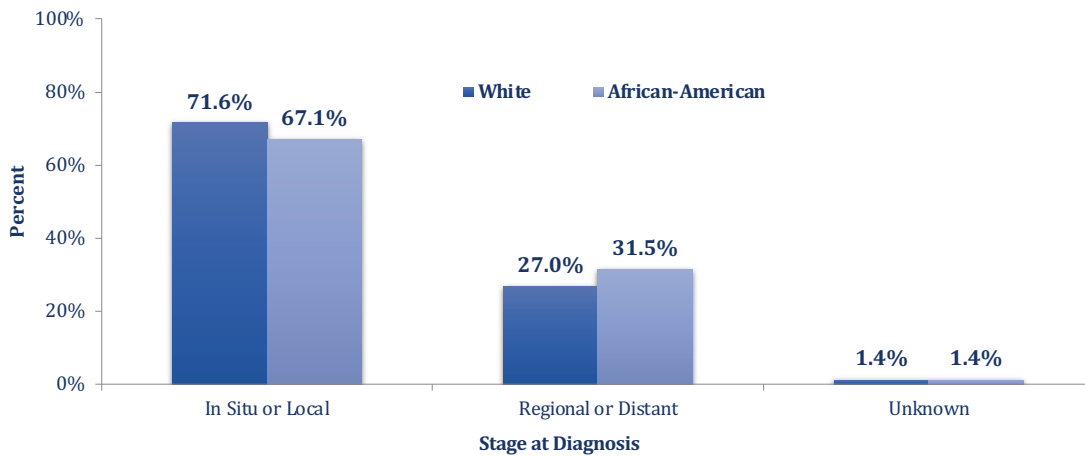


FIGURE 11. PERCENT OF FEMALE BREAST CANCER CASES BY STAGE OF DIAGNOSIS AND RACE—INDIANA, 2013-2017

Source: Indiana State Cancer Registry



CAN BREAST CANCER BE DETECTED EARLY? *see the "Be Aware" box for additional information.*

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

- **Breast self-awareness.** Females in their 20s should be aware of the normal look and feel of their breasts, so that they can identify potentially dangerous changes. These changes may include a lump, hard knot, or thickening inside the breast or under-arm area; swelling, warmth, redness, or darkening of the breast; change in the size or shape of the breast; dimpling or puckering of the skin; itchy, scaly sore or rash on the nipple; pulling in of the



WHAT IS THE IMPACT ON INDIANA RESIDENTS? CONT.

nipple or other parts of the breast; nipple discharge that starts suddenly; and new pain in one spot that does not go away.

- **Screening mammograms.** The United States Preventive Services Task Force (USPSTF) recommends a screening mammogram every two years for females aged 50 to 74, which help detect cancers before a lump can be felt. Females between the ages of 40 to 49, especially those with a family history of breast cancer, should discuss the risks and benefits of mammography with their health provider to determine if it is right for them.
- **Clinical breast exams.** According to the ACS, research has not shown a clear benefit of regular physical breast exams done by either a health professional or through self breast exams. Women should be familiar with how their breasts normally look and feel and immediately report any changes to a health care provider.

According to the State Cancer Profiles, only 76.64 percent of females aged 50 to 74 years and older had a mammogram during the past two years, with Indiana ranking 33rd (rank of 1st = best).³ The Affordable Care Act requires preventive screening services to be included in most insurance policies. Often, these services are paid in full. Individuals should check with their individual insurance providers for specific plan information.

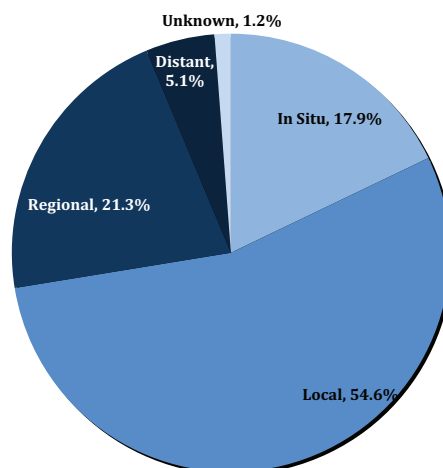
WHAT FACTORS INFLUENCE BREAST CANCER SURVIVAL?

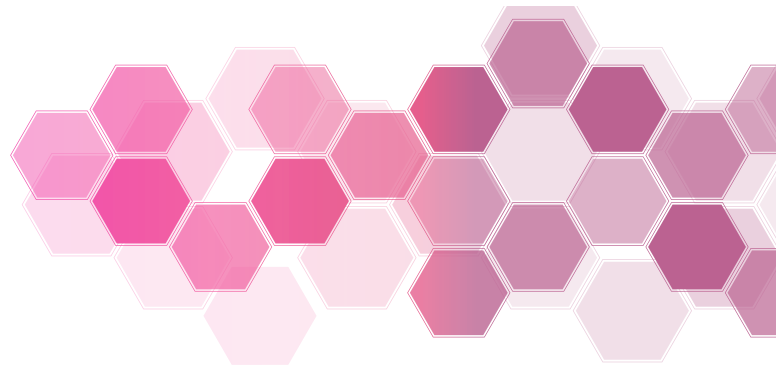
Staging of breast cancer takes into account the number of lymph nodes involved and whether the cancer has moved to a secondary location [Figure 12]. When breast cancer is detected early, before it can be felt, the five-year survival rate is 99 percent.¹ During 2013 to 2017, in Indiana, 17.9 percent of breast cancer cases were diagnosed in situ (the earliest stage possible for diagnosis) and 54.6 percent of breast cancer cases were diagnosed at the local stage. During this same time, 26.4 percent of Indiana's breast cancer cases were diagnosed in the regional or distant stages.⁴

According to the ACS, there are multiple treatment options available for breast cancer patients. Surgical treatment options include mastectomy (the medical term for the surgical removal of one or both breasts, either partially or completely) and lumpectomy (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. Other treatments include chemotherapy, hormone therapy, and targeted therapy. These can be given orally or intra-venously in order to reach cancer cells anywhere in the body. An individual's treatment plan is personalized and based both on medical and personal choices. Individuals should partner with their medical providers and be active participants in the development of a treatment and care plan.

FIGURE 12. PERCENT OF FEMALE BREAST CANCER CASES DIAGNOSED DURING EACH STAGE*—INDIANA, 2013–2017

*Includes all in situ and invasive cases Source: Indiana State Cancer Registry





WHAT IS THE IMPACT ON INDIANA RESIDENTS? **CONT.**

BE AWARE!

COMMON SIGNS AND SYMPTOMS OF BREAST CANCER

The most common symptom of breast cancer is a new lump or mass. It is important to have anything new or unusual checked by a doctor.

OTHER SYMPTOMS OF BREAST CANCER MAY INCLUDE*:

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

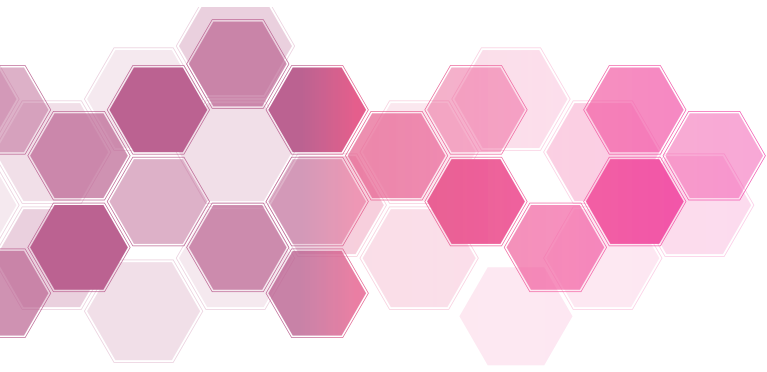
**Although these symptoms can be caused by things other than breast cancer, it is important to have them checked out by your doctor.*

TAKE CHARGE!

WHAT YOU CAN DO TO HELP PREVENT BREAST CANCER

- Know your risk! Talk to your doctor about your personal and family history, and screening.
 - Get screened regularly.
- Be smoke free! Visit www.in.gov/quitline for free, evidence-based smoking cessation assistance.
 - Maintain a healthy weight.
 - Adopt a physically active lifestyle.
 - Limit or avoid alcohol consumption.
- Limit postmenopausal hormone use. When evaluating treatment options for menopausal symptoms, consider the increased risk of breast cancer associated with the use of estrogen and progestin and discuss this with your physician.
- Breastfeed, if you can. Studies suggest that breastfeeding for one year or more slightly reduces a woman's overall risk of breast cancer.

**Although these symptoms can be caused by things other than breast cancer, it is important to have them checked out by your doctor.*



REFERENCES

1. American Cancer Society. Cancer Facts & Figures 2021. Atlanta, GA. 2021.
2. American Cancer Society. Breast Cancer Facts & Figures 2019-2020. Atlanta, GA. 2019.
3. National Cancer Institute. State Cancer Profiles. Accessed online at <https://statecancerprofiles.cancer.gov/> on July 20, 2021.
4. Indiana State Cancer Registry, 2021