



SURGICAL TREATMENT OF
**BREAST
CANCER**
IN PENNSYLVANIA
2002 • 2011

Breast Cancer Fast Facts

- More than 13,000 Pennsylvania women were diagnosed with breast cancer in 2011, and 2,090 died from the disease.
- Pennsylvania Health Care Cost Containment Council (PHC4) records indicate that 10,977 women had surgical treatment for breast cancer in 2011.
- From 2002 through 2011, the number of women having one or more mastectomies increased and the number of women having one or more lumpectomies increased, but the number of women having both types of surgeries in the same year decreased 60 percent.
- The number of women hospitalized multiple times for breast cancer within the same year declined between 2002 and 2011, due primarily to a decrease in the number of multiple lumpectomy procedures.
- 58 percent of Pennsylvania women who had breast cancer surgery in 2011 were 60 years of age and older. Only 3% were under 40.
- The average Medicare payment for an inpatient mastectomy in 2010 was \$5,109.

About PHC4

The Pennsylvania Health Care Cost Containment Council (PHC4) is an independent state agency established by Pennsylvania law (Act 89 of 1986, as amended). PHC4 is charged with collecting, analyzing and reporting information that can be used to improve the quality and restrain the cost of health care in Pennsylvania.

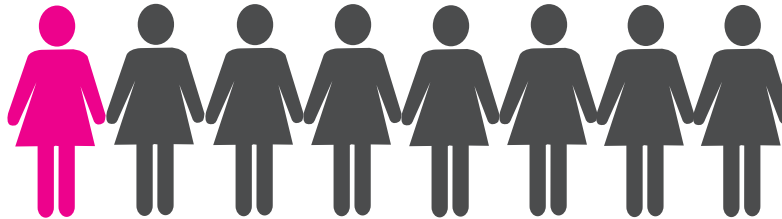
Factors That Increase the Risk for Breast Cancer in Women

(Source: American Cancer Society)

- Age over 65
- Biopsy-confirmed atypical hyperplasia
- BRCA1 and/or BRCA2 gene mutations
- Mammographically dense breasts
- High endogenous estrogen or testosterone levels
- High bone density (postmenopausal)
- High-dose radiation to chest
- First-degree relatives with breast cancer
- Alcohol consumption
- Ashkenazi Jewish heritage
- Early menarche (<12 years)
- Height (tall)
- Late age at first full-term pregnancy (>30 years)
- Late menopause (>55 years)
- No history of breastfeeding a child
- No full-term pregnancies
- Obesity (postmenopausal)/adult weight gain
- Personal history of endometrium, ovary, or colon cancer
- Recent and long-term use of menopausal hormone therapy containing estrogen and progestin
- Recent oral contraceptive use

Breast Cancer in Pennsylvania

In Pennsylvania and nationally, breast cancer is the second leading cancer site for women, after skin cancer.*



1 IN 8

PENNSYLVANIA WOMEN WILL BE DIAGNOSED WITH BREAST CANCER AT SOME POINT IN THEIR LIFETIME.*

The risk for breast cancer is low in young women and increases with age. The risk increases significantly over the age of 50, and half of breast cancer diagnoses occur in women over the age of 65.* Studies show, however, that when breast cancer does occur at an early age, it is often more aggressive and more resistant to treatment than breast cancer that occurs later in life.

An estimated 140,000 Pennsylvania women are living with breast cancer, according to the PA Breast Cancer Coalition. These women and their families can benefit from access to the most current information available for breast cancer treatment. The standard treatment recommendation for breast cancer is surgery with adjuvant treatments that may include radiation, chemotherapy, or targeted drug therapy. Adjuvant therapy, also called adjuvant care, is treatment that is given in addition to the primary, main or initial treatment. Clinical trials are also available.

This report provides important information about current surgical treatments performed at Pennsylvania hospitals and outpatient surgery centers. It can be a resource to newly diagnosed women as well as survivors looking for information on what other women are doing to fight breast cancer. This report also highlights 10-year trends in mastectomy and lumpectomy procedures. It provides current and relevant information to survivors, those dealing with breast cancer, the health care community, and policy makers as they search for the most effective treatments. While this report discusses trends in breast cancer surgery, readers should remember that decisions about an individual patient's appropriate treatment options should be made in consultation with a physician.

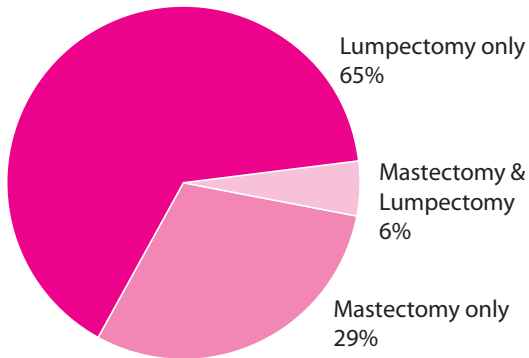
Men with Breast Cancer in PA

In 2011, 84 men had surgical treatment for breast cancer—resulting in 95 hospitalizations. Of those men, 60 had a mastectomy, 16 had a lumpectomy, and 8 had both mastectomy and lumpectomy procedures.

* Information based upon PA Department of Health statistics.

Surgical Treatment for Breast Cancer

Women Having Surgical Treatment for Breast Cancer, by Procedure, 2011

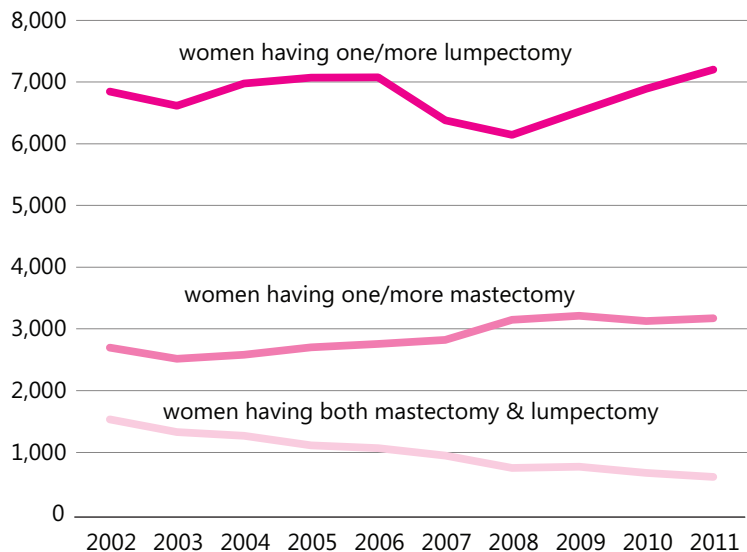


The Pennsylvania Department of Health estimated that in 2011, more than 13,000 Pennsylvania women were diagnosed with breast cancer. PHC4 data shows that 10,977 Pennsylvania women had surgical treatment for breast cancer—either a mastectomy or lumpectomy, or both—in a Pennsylvania hospital or surgery center in 2011.

Of the 10,977 women who had surgery, 7,200 (nearly two thirds) had a lumpectomy. About 29% of women had a mastectomy, and almost 6% had lumpectomy AND mastectomy procedures.

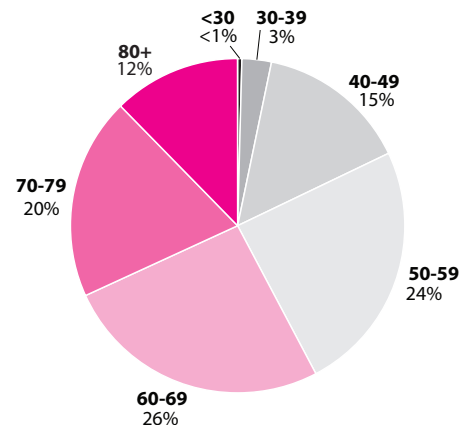
Surgical Treatment Trends

PHC4 statistics from 2002 through 2011 show a trend toward fewer women having both types of surgeries in the same year and more having only mastectomies or lumpectomies. As the chart at the right illustrates, between 2002 and 2011, the number of women having one or more mastectomies rose from 2,696 to 3,173 and the number of women having one or more lumpectomies increased from 6,843 to 7,200. Also of note is the 60% drop in women who had both mastectomy and lumpectomy procedures in the same year, from 1,535 to 604.



Age of Women Having Breast Cancer Surgery, 2011

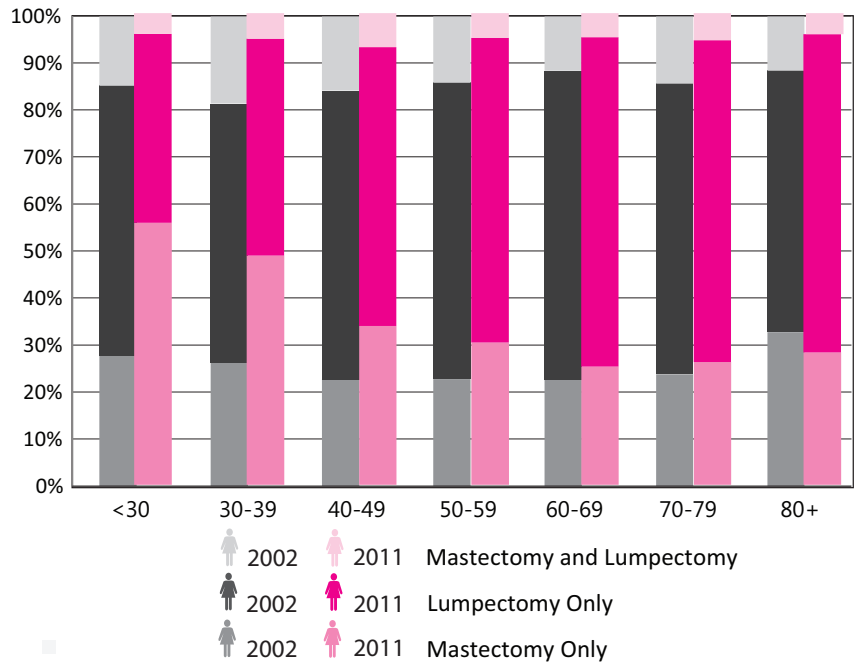
The age distribution of women who had a surgical treatment for breast cancer in 2011 is shown in the graphic on the right. Women age 60 and over account for 58%, women between the ages of 40 and 59 account for 39%, and women under 40 make up 3%.



Surgical Treatment for Breast Cancer

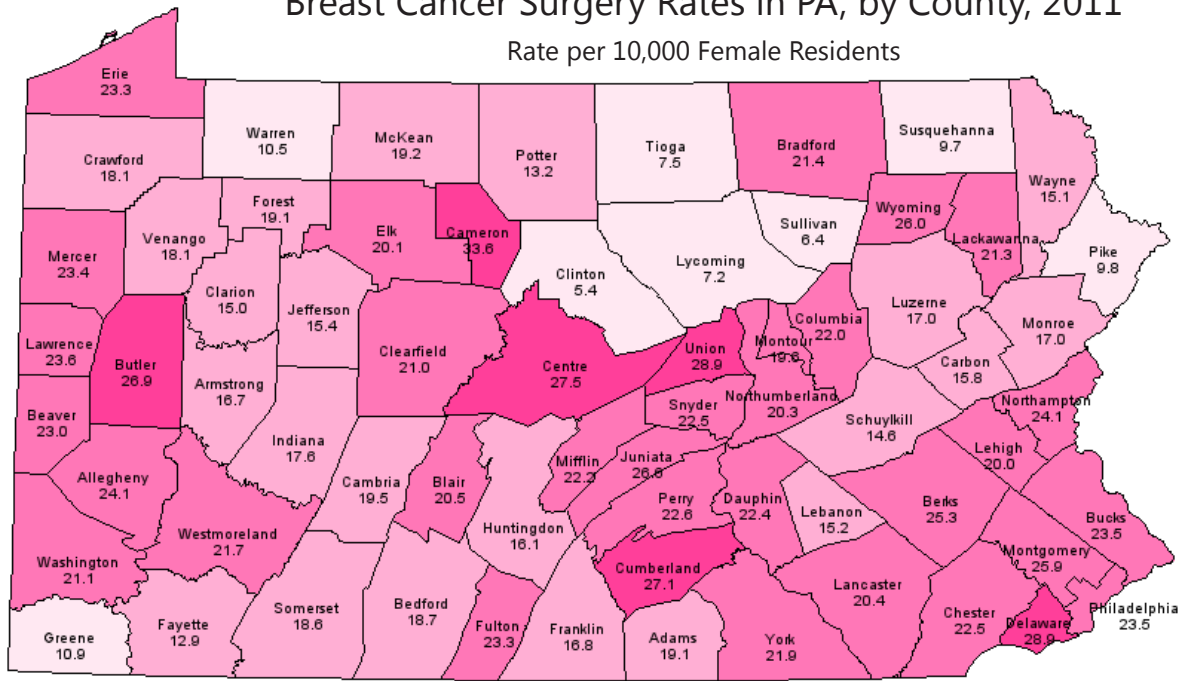
Women Having Breast Cancer Surgery, by Age Group and Procedure

In 2002, there was little difference among age groups in the percentage of women undergoing a mastectomy (24%), lumpectomy (62%) or both (14%) procedures. In 2011, however, there is a marked difference with respect to age. The percentage of women under 40 undergoing a mastectomy rose from 26% in 2002 to 49% in 2011. This age group was also less likely to undergo a lumpectomy in 2011 (45%) than in 2002 (55%).



Breast Cancer Surgery Rates in PA, by County, 2011

Rate per 10,000 Female Residents

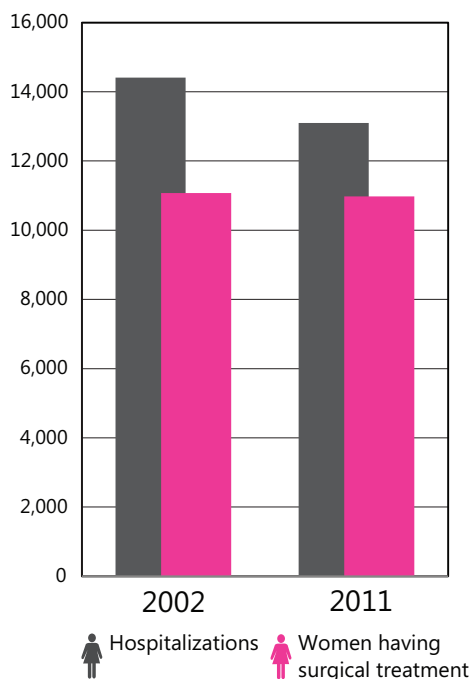


This map represents the rate at which women had breast cancer surgery in 2011.

Age-Adjusted Rate: 5.4 to 12.4 12.5 to 19.5 19.6 to 26.6 26.7 to 33.6

Hospitalizations Related to Breast Cancer

For a variety of reasons, some women may undergo multiple breast cancer-related surgeries in the same year, but that number has declined in the past decade. As shown in the chart below, the number of women undergoing surgery decreased less than one percent, going from 11,074 in 2002 to 10,977 in 2011. However, the number of hospitalizations decreased 9.7%, dropping from 14,389 in 2002 to 12,989 in 2011.



The decrease in the number of hospitalizations can be traced to a drop in the number of hospitalizations for lumpectomy procedures during the 2002-2011 time period. In 2002, the percent of women hospitalized more than once for a lumpectomy was 22.8%. By 2011, only 16.9% of women were hospitalized more than once for lumpectomy. However, 99% of women having a mastectomy were hospitalized just once in both 2002 and 2011.

Of the 3,795 hospitalizations for mastectomy in 2011, 22.3% were for bilateral (both breasts) mastectomies. Additionally, 35.3% (1,340) of hospitalizations also included reconstructive surgery.

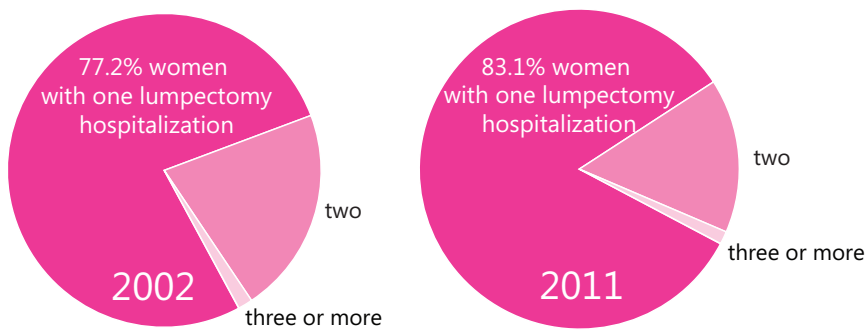
Women diagnosed with primary (invasive) or in-situ breast cancer (early cancer that has not spread to neighboring tissue) accounted for 99% of the hospitalizations for surgery. The other 1% of women had either metastatic or uncertain diagnoses. Of the 9,952 hospitalizations of women with primary breast cancer, 67% were for lumpectomy procedures, and 32% were for mastectomies. An in-situ diagnosis was present in 2,939 hospitalizations—82% of which resulted in lumpectomies and 18% in mastectomies.

2.2 Days

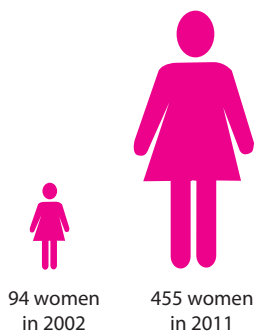
The average length of hospitalization for an inpatient mastectomy case in 2011

The use of outpatient surgery has increased since 2002 for both mastectomies (21% are outpatient) and lumpectomies (97% are outpatient).

Percentage of Women with One or More Hospitalizations for Lumpectomy



Women in PA Electing Prophylactic Mastectomy



Sometimes, even before a diagnosis of breast cancer, a woman may elect to have a mastectomy because of a significant family history of breast cancer, the presence of a genetic predictor such as BRCA1 or BRCA2, or a personal history of breast cancer. More Pennsylvania women had a prophylactic (preventative) mastectomy in 2011 than in 2002. In 2002, 94 women had prophylactic mastectomies, and in 2011, 455 women had prophylactic mastectomies in an attempt to avoid developing breast cancer.

The Cost of Breast Cancer in Pennsylvania

In addition to the mental and physical costs of fighting breast cancer, there are significant financial costs associated with breast cancer treatment. The Pennsylvania Department of Health offers the Healthy Women Program, part of the federal Centers for Disease Control and Prevention's National Breast and Cervical Cancer Treatment Program. The Healthy Women Program provides free mammograms for many uninsured and underinsured women in the Commonwealth. Women in Pennsylvania who are uninsured can obtain free treatment through the Commonwealth's Breast and Cervical Cancer Prevention and Treatment Program (BCCPT). Women who qualify can receive coverage (with only nominal copayments) for medical needs unrelated to the cancer diagnosis throughout the course of breast or cervical cancer treatment. **For more information, call 1-800-215-7494.**

Medicare and Medicaid fee-for-service programs paid for 28% of all inpatient mastectomies in 2010, which amounted to \$4,667,495. The median age of a Medicare patient undergoing a mastectomy in 2010 was 73 years, and Medicare paid an average of \$5,109 for the mastectomy. Of the women covered by Medicare, 9% underwent a bilateral mastectomy and 13% received reconstructive surgery.

The median age of women in the Medicaid program who underwent a mastectomy in 2010 was 50 years. Women in Medicaid were more likely than women in Medicare to have a bilateral mastectomy (22% of Medicaid women) and reconstructive surgery (30%). In 2010, Medicaid fee-for-service payments for inpatient mastectomies averaged \$7,445 per woman and totaled \$856,149 for the year.

Notes:

- Patient information submitted by PA inpatient and outpatient/ambulatory surgery facilities from calendar years 2002-2011. All discharge data subjected to PHC4 validation and correction processes.
- Women/men who underwent surgical treatment for breast cancer were defined as having a principal diagnosis code of breast cancer and a procedure code for mastectomy and/or lumpectomy.
- Women who underwent prophylactic mastectomy were defined as having a diagnosis code of prophylactic organ removal-breast and a procedure code for simple or subcutaneous mastectomy.
- Medicare fee-for-service (FFS) payment data was provided by the Centers for Medicare and Medicaid Services. Medicaid fee-for-service payment data was provided by the PA Department of Public Welfare. Calendar year 2010 was the most recent payment data available to PHC4.
- Medicare FFS was assigned as the primary payer when the primary payer listed in the discharge record was Medicare FFS, the Medicare payment was greater than zero, and the payment value was greater than the Medicaid FFS payment (if present).
- Medicaid FFS was assigned as the primary payer when the primary payer (Medicaid) indicated the primary payer was Medicaid FFS, the payment was greater than zero, and the payment value was greater than the Medicare FFS payment (if present).
- Census data is from the US Census Bureau.
- County rates include females 20 years and older, and are reported per 10,000 residents.
- Rates for counties with smaller populations are sensitive to small changes in the number of admissions, so rates might be reflective of minor fluctuations in the number of admissions.
- Data does not include PA residents who underwent surgery for breast cancer outside of PA.



PENNSYLVANIA HEALTH CARE COST CONTAINMENT COUNCIL

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The information in this report and other PHC4 publications is available online at www.phc4.org. Additional financial, hospitalization and ambulatory procedure health care data is available for purchase. For more information, contact PHC4's Data Requests Unit at specialrequests@phc4.org or 717-232-6787.