

### Incidence

- ◆ Except for skin cancers, breast cancer is the most common cancer among women in the U.S., accounting for nearly 29 percent of newly diagnosed cancers.<sup>1 p.4</sup>
- ◆ An estimated 232,670 new cases of invasive breast cancer are expected to occur among women in the U.S. during 2014.<sup>9,p.9</sup>
- ◆ An estimated 2,360 new cases of breast cancer are expected to be diagnosed in men in the U.S. in 2014.<sup>9,p.9</sup>
- ◆ In addition to invasive breast cancer, 62,570 new cases of in situ breast cancer are expected to occur among women in the U.S. during 2014.<sup>9,p.9</sup> Of these, about 83 percent will be ductal carcinoma in situ (DCIS).<sup>1,p.1</sup>
- ◆ In situ breast cancer incidence rates increased 2.8 percent per year from 2005 to 2009<sup>7,p.9</sup> and from 2006-2010 have remained stable.<sup>9,p.9</sup>
- ◆ Between 1980-1987, breast cancer incidence rates increased rapidly, probably due to increases in mammography screening.<sup>1,p.7</sup>
- ◆ Incidence rates stabilized in the early 1990s followed by a slower increase in the late 90s, perhaps due to further increases in mammography, rising rates of obesity and menopausal hormone therapy (MHT) (also known as postmenopausal hormone use).<sup>1,p.7</sup>
- ◆ The incidence rate decreased sharply- almost seven percent from 2002-2003 and is believed to be due to the decrease in menopausal hormone therapy (MHT) use.<sup>1,p.7</sup> The decline occurred mainly in white women over 50 and for ER+ disease. The trend may also reflect a decrease in mammography screening.<sup>1,p.7</sup>
- ◆ Since 2004, breast cancer incidence rates have remained stable (for both women under 50 as well as over 50).<sup>1,p.7</sup>
- ◆ During 2006-2010, the median age at the time of breast cancer diagnosis in the U.S. was 61 years old.<sup>1,p.4</sup>
- ◆ Although incidence rates for white and African American women are becoming more similar in the U.S.,<sup>1,p.7</sup> non-Hispanic white women still have a higher incidence of breast cancer than African American women for most age groups. However African American women have a higher incidence before age 40 and are more likely to die from breast cancer at every age.<sup>1,p.4</sup>
- ◆ From 2006-2010, incidence and death rates for breast cancer were lower among women of other racial and ethnic groups than non-Hispanic white and African American women. Asian American/Pacific Islander women had the lowest incidence and death rates.<sup>1,p.4</sup>
- ◆ African American women in the U.S. are less likely to be diagnosed with smaller tumors (less than 2.0 cm) and more likely to be diagnosed with larger tumors (greater than 5.0 cm) than white women.<sup>1,p.8</sup>
- ◆ One case of breast cancer is diagnosed every two minutes, and one woman will die of breast cancer every 13 minutes in the U.S.

One every two minutes is derived from the following equation:

$$365 \text{ days/yr} \times 24 \text{ hr/day} \times 60 \text{ min/hr} = 525,600 \text{ minutes in each year}$$

$$525,600 / 232,670 \text{ cases diagnosed/yr} = 2.2589 = 2$$

One every thirteen minutes is derived from the following equation:

$$365 \text{ days/yr} \times 24 \text{ hr/day} \times 60 \text{ min/hr} = 525,600 \text{ minutes in each year}$$

$$525,600 / 40,000 \text{ women die/yr} = 13.14 = 13$$

### Mortality

- ◆ Breast cancer is second only to lung cancer in cancer deaths among women in the U.S.<sup>1,p.4</sup>
- ◆ An estimated 40,000 women in the U.S. are expected to die from breast cancer in 2014.<sup>9,p.9</sup>
- ◆ Breast cancer is the most common cause of cancer death for women 40-59 in the U.S.<sup>6</sup>
- ◆ An estimated 430 men in the U.S. are expected to die from breast cancer in 2014.<sup>9,p.9</sup>
- ◆ Early detection and effective treatment have resulted in a 34 percent decline in breast cancer mortality in the U.S. since 1990.<sup>1,p.9</sup>
- ◆ The decline in mortality had been faster for women younger than 50 (3.1 percent per year) than women 50 and older (1.9 percent per year).<sup>1,p.9</sup>
- ◆ By 2010 death rates for African American women were 41 percent higher than white women.<sup>1,p.9</sup>
- ◆ In the U.S., death rates from male breast cancer have decreased 1.8 percent per year since 2000.<sup>1,p.9</sup>

- ◆ Approximately 17 percent of breast cancer deaths occurred in women who were diagnosed in their 40s, and 22 percent occurred in women diagnosed in their 50s.<sup>3</sup>

## Survival

- ◆ There are more than 3.1 million breast cancer survivors in the U.S.<sup>10, p. 4</sup>
- ◆ Approximately 72 percent of breast cancer survivors (nearly 2.3 million women) are aged 60 years and older and fewer than 10 percent are aged younger than 50 years.<sup>10, p. 4</sup>
- ◆ The current relative survival rates for women diagnosed with breast cancer in the U.S. are:
  - 89 percent at 5 years after diagnosis
  - 83 percent after 10 years
  - 78 percent after 15 years<sup>1, p.10</sup>
- ◆ In 1980, the 5-year relative survival rate for women diagnosed with early stage breast cancer (cancer that hasn't left the breast) was about 74 percent.<sup>6</sup> Today, that number is 99 percent.<sup>1, p.10</sup>
- ◆ For all races, the five-year relative survival rate for women with:
  - localized breast cancer is 99 percent,
  - regional disease is 84 percent
  - distant stage disease is 24 percent<sup>1, p.10</sup>
- ◆ In the U.S., the 5-year relative survival rate is lower among women with breast cancer before age 40 (85 percent) compared to women diagnosed at age 40 and older (90 percent).<sup>1, p.10</sup>
- ◆ Poverty, less education and a lack of health insurance are associated with lower survival. People who live in lower income areas also have a lower 5-year survival rate than those who live in higher income areas. The presence of other illnesses, unequal access to medical care and disparities in treatment may contribute to the differences in survival.<sup>1, p. 10</sup>
- ◆ Aggressive tumor characteristics linked to poorer prognosis appear to be more common in African American women and may contribute to lower survival rates.<sup>1, p. 10</sup>
- ◆ Breast cancer survival has been increasing since 1983.<sup>4</sup>
- ◆ Survival for stage IV breast cancer has modestly improved over time, but disparities between black and white patients remain.<sup>5</sup>

## Screening

- ◆ According to the National Health Interview Survey, the percentage of women 40 and older who reported having a mammogram within the past two years increased from 29 percent in 1987 to 70 percent in 2000 and since then has remained stable (66.5 percent in 2010).<sup>2, p.36</sup> (Note- On July 6, 2010 the [CDC reported](#) that for 2008 the overall, age-adjusted, up-to-date mammography prevalence for U.S. women aged 50-74 years was 81.1 percent, compared with 81.5 percent in 2006.)
- ◆ In the U.S., white, African American and American Indian/Alaska Native women 40 years of age and older reported similar prevalence of having a mammogram in the past two years (66 percent—69 percent); however, in women of other racial/ethnic groups, the prevalence of mammography screening is lower: 64.4 percent in Hispanic women, and 61.9 percent in Asian women.<sup>2, p. 38</sup>
- ◆ In the U.S., the lowest prevalence (31.5 percent) of mammography screening in the past two years occurred among women who do not have health insurance, followed by immigrant women who have lived in the U.S. for less than 10 years (37.4 percent).<sup>2, p.38</sup>
- ◆ Only 50.8 percent of women 40 and older in the U.S. reported having a mammogram in the last year.<sup>2, p.38</sup>
- ◆ Recent studies suggest that many women in the U.S. are getting their first mammogram later than recommended, not having mammograms at recommended intervals or not receiving appropriate and timely follow-up of positive screening results. This may lead to more advanced tumor size and stage at diagnosis.<sup>2, p.36</sup>

## Risk Factors

- ◆ Estimated new female cases and deaths by age, 2013<sup>1, p.1</sup>

Age	In Situ	Invasive	Deaths
<40	1,900	10,980	1,020
<50	15,650	48,910	4,780

50-64	26,770	84,210	11,970
65+	22,220	99,220	22,870
<b>All ages</b>	<b>64,640</b>	<b>232,340</b>	<b>39,620</b>

- ◆ Seventy-nine percent of new cases and 88 percent of deaths occurred in women 50 and older.<sup>1, p. 4</sup>
- ◆ A woman's chance of developing breast cancer increases with age. In the U.S., a woman has about a 12.3 percent, or 1 in 8 risk of developing breast cancer in her lifetime.<sup>1, p.4</sup> In the 1970s the lifetime risk was 1 in 11.<sup>1, p.4</sup>
- ◆ Approximately five to ten percent of breast cancers in women in the U.S. are due to inherited genetic mutations (much less than 1 percent of the general population).<sup>1, p.12</sup>
- ◆ In the U.S., women with BRCA1 mutations are estimated to have a 44-78 percent risk of developing breast cancer by age 70; for women with BRCA2 mutations the risk is 31-56 percent.<sup>1, p.12</sup>
- ◆ According to the US Preventive Services taskforce, women with a strong family history (about 2 percent of adult U.S. women) should be evaluated for genetic testing for BRCA mutations.<sup>1, p.12</sup>
- ◆ A recent study found that women who gained 55 pounds or more after age 18 had almost a 50 percent greater risk of breast cancer compared to those who maintained their weight. A gain of 22 pounds or more after menopause was linked to an 18 percent greater risk.<sup>1, p.15</sup>
- ◆ Growing evidence suggests that women who get regular physical activity have a 10-20 percent lower risk of breast cancer compared to women who are inactive (stronger evidence for postmenopausal women).<sup>1, p.15</sup>
- ◆ Many studies have confirmed that alcohol consumption increases breast cancer risk by about 7-12 percent for each 10g (about a drink) of alcohol consumed each day.<sup>1, p.16</sup>
- ◆ Recent oral contraceptive use may increase breast cancer risk by about 10-30 percent. However, women who stopped using oral contraceptives for 10 years or more have the same risk as women who never used the pill.<sup>1, p.16</sup>

## Diagnosis

- ◆ About 15-20 percent of breast cancers overproduce HER2.<sup>1, p. 25</sup>
- ◆ Percentage of different types of invasive breast cancer:<sup>7</sup>
  - Invasive ductal carcinoma: 50-75 percent
  - Invasive lobular carcinoma: 10-15 percent
  - Medullary carcinoma: 1-5 percent
  - Mucinous carcinoma: 1-5 percent
  - Papillary carcinoma: less than 1 percent
  - Tubular carcinoma: 1-5 percent
  - Inflammatory breast cancer: 1-5 percent
  - Paget disease of the breast: 1-3 percent
- ◆ About 15 to 20 percent of breast cancers are triple negative or basal-like<sup>8</sup>

## Treatment

- ◆ Percentage of surgery options for women diagnosed with early stage breast cancer (I or II):<sup>10, p. 5</sup>
  - 59 percent have lumpectomy
  - 36 percent have mastectomy
  - 4 percent have radiation therapy and/or chemotherapy without surgery
  - 1 percent have no treatment
- ◆ Percentage of surgery options for women diagnosed with late stage breast cancer (III or IV):<sup>10, p. 5</sup>
  - 13 percent have lumpectomy
  - 59 percent have mastectomy
  - 16 percent have radiation therapy and/or chemotherapy without surgery
  - 10 percent have no treatment
- ◆ Depending on the diagnosis, 20-40 percent of women who have mastectomy have breast reconstruction.<sup>1, p. 23</sup>
- ◆ Although reported rates of breast reconstruction in the United States vary widely, a recent study found that among women with employer-based health insurance, rates have increased from 46 percent in 1998 to 63 percent in 2007.<sup>10, p.5</sup>
- ◆ Women who are younger, white, have private insurance, or have a higher level of education or income are more likely to have reconstruction.<sup>10, p.5</sup>
- ◆ About five percent of women who have sentinel node biopsy and 16-18 percent who have axillary node dissection will develop lymphedema.<sup>1, p. 23</sup>

- <sup>1</sup> [Breast Cancer Facts and Figures 2013-2014](#), ACS
- <sup>2</sup> [Cancer Prevention and Early Detection Facts and Figures 2013](#), ACS
- <sup>3</sup> Statement from Otis W. Brawley, M.D., Chief Medical Officer, American Cancer Society, November 16, 2009-  
<http://pressroom.cancer.org/index.php?s=43&item=201>
- <sup>4</sup> NCI Website-[http://progressreport.cancer.gov/doc\\_detail.asp?bid=1&did=2009&chid=95&coid=927&mid](http://progressreport.cancer.gov/doc_detail.asp?bid=1&did=2009&chid=95&coid=927&mid)
- <sup>5</sup> Shaheenah Dawood, Kristine Broglio, Ana M. Gonzalez-Angulo, Aman U. Buzdar, Gabriel N. Hortobagyi, Sharon H. Giordano. *Journal of Clinical Oncology*, Vol 26, No 30 (October 20), 2008: pp. 4891-4898
- <sup>6</sup> SEER Cancer Statistics Review 1975-2008-table 4.12- [http://seer.cancer.gov/csr/1975\\_2008/results\\_single/sect\\_04\\_table\\_12.pdf](http://seer.cancer.gov/csr/1975_2008/results_single/sect_04_table_12.pdf)
- <sup>7</sup> Susan G. Komen, *Understanding Breast Cancer*- <http://ww5.komen.org/BreastCancer/TypesofTumors.html> accessed on 10-04-13
- <sup>8</sup> Susan G. Komen, *Understanding Breast Cancer*- <http://ww5.komen.org/TripleNegativeBreastCancer.html>, accessed on 10-04-13
- <sup>9</sup> [Cancer Facts and Figures 2014](#), ACS
- <sup>10</sup> [Cancer Treatment and Survivorship Statistics, 2014](#)