



## Female In Situ, Stage I and Stage II Breast Cancer in the Greater San Francisco Bay Area, 1990-2004

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Nationwide, invasive breast cancer is the most common female cancer and the second leading cause of cancer death among women (ACS, 2006). Some of the risk factors associated with invasive breast cancer incidence include genetic factors, age, family history, obesity, alcohol consumption, reproductive and menstrual history, race, breast density, and physical activity level (NCI, 2006). From 1990-2004, invasive breast cancer incidence has decreased nationally (ACS, 2006) as well as in the Greater Bay Area. Early stage breast cancer (stage I and stage II) comprised 89% of all invasive breast cancer in the Greater Bay Area from 1990-2004.

### INCIDENCE TRENDS

In the Greater Bay Area, the incidence rate of early stage invasive breast cancer among females increased slightly between 1996 and 2001 but has recently returned to the level observed in the early 1990s (Figure 1). In addition, the incidence rate of in situ breast cancer increased slightly between 1990 and 2004, although rates are much lower than those for early stage invasive breast cancer.

Figure 1. Age-adjusted incidence rates of female breast cancer (in situ and early stage) by year of diagnosis, Greater San Francisco Bay Area, 1990-2004

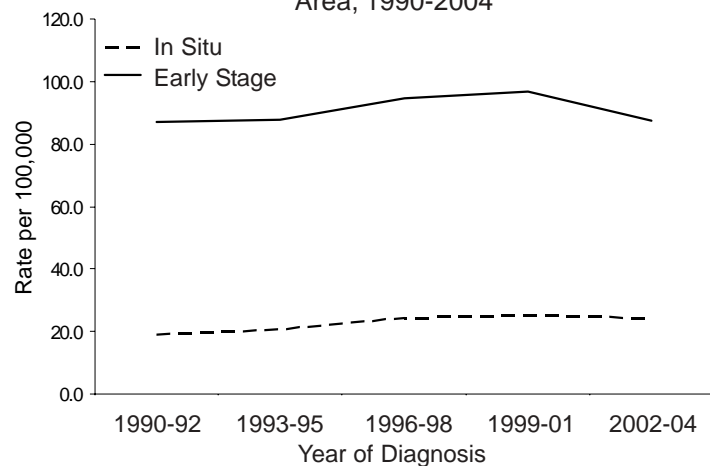
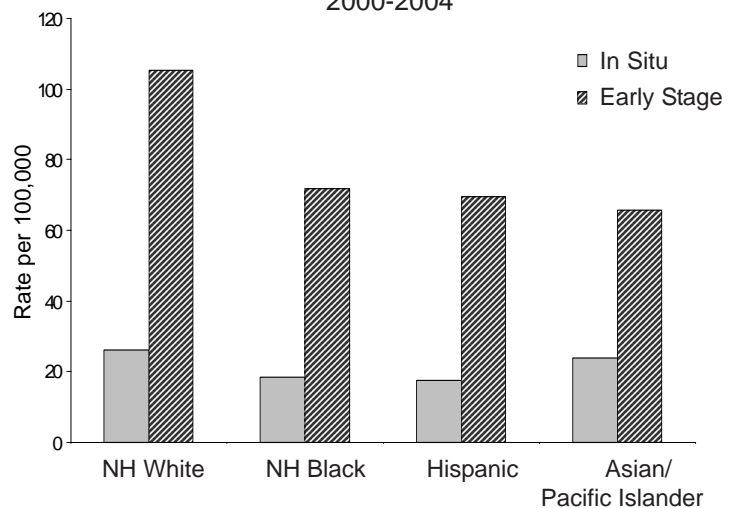


Figure 2. Age-adjusted incidence rates of female breast cancer (in situ and early stage) by race/ethnicity, Greater San Francisco Bay Area, 2000-2004



### RACIAL/ETHNIC PATTERNS

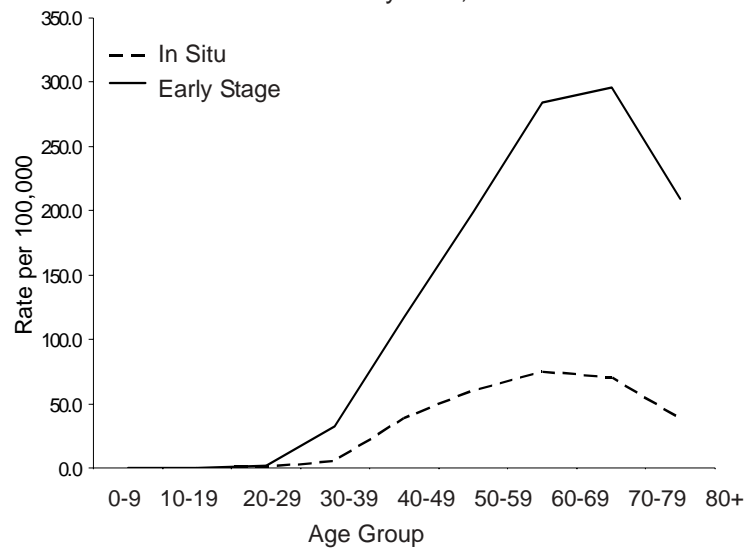
In the Greater Bay Area from 2000-2004, in situ breast cancer incidence was fairly similar among all racial/ethnic groups; however, as seen nationwide, a higher incidence of early stage invasive breast cancer occurred in non-Hispanic white women compared to women in other racial/ethnic groups (Figure 2).



## AGE-SPECIFIC INCIDENCE

The age-specific incidence rate of in situ breast cancer increases after 30 years of age, and plateaus or decreases in women over age 60 (Figure 3). The incidence of early stage invasive breast cancer increases dramatically between 30 and 60 years of age.

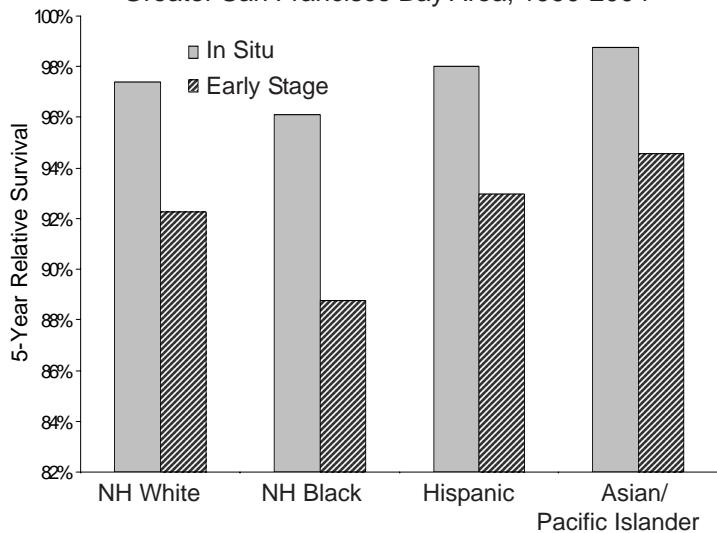
Figure 3. Age-specific incidence rates of female breast cancer (in situ and early stage), Greater San Francisco Bay Area, 1990-2004



## 5-Year Relative Survival

Among all racial/ethnic groups, the 5-year relative survival from in situ and early stage invasive breast cancer in the Greater Bay Area between 1990 and 2004 was 98% and 92%, respectively (Figure 4). In comparison to other racial/ethnic groups, Asian/Pacific Islanders experienced slightly higher survival from both early stage and in situ breast cancer, while non-Hispanic blacks had slightly lower survival from both.

Figure 4. 5-year relative survival of female breast cancer (in situ and early stage) by race/ethnicity, Greater San Francisco Bay Area, 1990-2004



### References:

American Cancer Society (ACS), Overview: Breast Cancer. 2006, [http://www.cancer.org/docroot/CRI/CRI\\_2\\_1x.asp?dt=5](http://www.cancer.org/docroot/CRI/CRI_2_1x.asp?dt=5).

National Cancer Institute (NCI), What you need to know about: Breast Cancer. 2006, <http://www.cancer.gov/cancertopics/wyntk/breast/page4>

Technical Notes: Because age distributions vary by population, a standard statistical procedure called "age-adjustment" was used so that we can examine differences in cancer incidence and mortality rates due to factors other than age. Rates are age-adjusted (using the Year 2000 population standard) unless noted to be age-specific. Race/ethnicity was categorized as four mutually-exclusive racial/ethnic groups: non-Hispanic whites (whites), non-Hispanic blacks (blacks), Hispanics, and non-Hispanic Asians/Pacific Islanders (Asians/Pacific Islanders).

About the data: Cancer data have been collected in Alameda, Contra Costa, Marin, San Francisco, and San Mateo counties since 1973, and in Monterey, San Benito, Santa Clara, and Santa Cruz counties since 1988, forming two parts (Regions 1 and 8) of the California Cancer Registry. These counties, referred to as the Greater San Francisco Bay Area are also part of the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) registry program.

Founded in 1974, the mission of the Northern California Cancer Center is to reduce the burden of cancer through surveillance, epidemiology, prevention research and education. Essential to this mission is collaboration with partners in cancer research, education and the community.

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