



## Non-Small Cell Lung Cancer in the Greater San Francisco Bay Area, 1990-2004

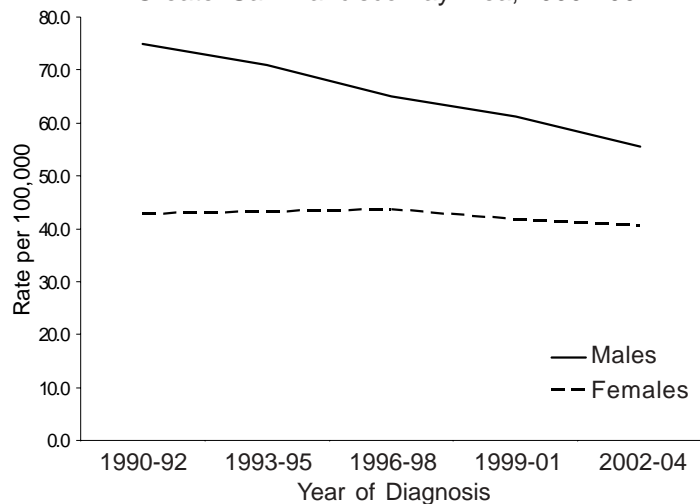
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Lung cancer is one of the top five most common cancers for men and women of all races/ethnicities in the Greater Bay Area and the leading cause of cancer death nationwide. Some of the risk factors for non-small cell lung cancer are tobacco smoking, exposure to arsenic, asbestos, radon, family history, diet, and air pollution (ACS, 2006). In 2004 in the Greater Bay Area, lung cancer accounted for 22,000 new diagnoses and over 2,472 deaths. The decline seen in incidence rates for lung cancer, especially among males, has been attributed to the decreased use of tobacco products (ACS, 2006). Non-small cell lung cancer is the most prevalent form of this disease, comprising 88% of all lung cancers in the Greater Bay Area from 1990-2004.

### INCIDENCE TRENDS

The incidence rate of non-small cell lung cancer in the Greater Bay Area declined for both males and females from 1990-2004, with males experiencing a much greater decline (25%) than females (6%) (Figure 1). Due to the steady decline in male lung cancer incidence rates, the gap between males and females is narrowing.

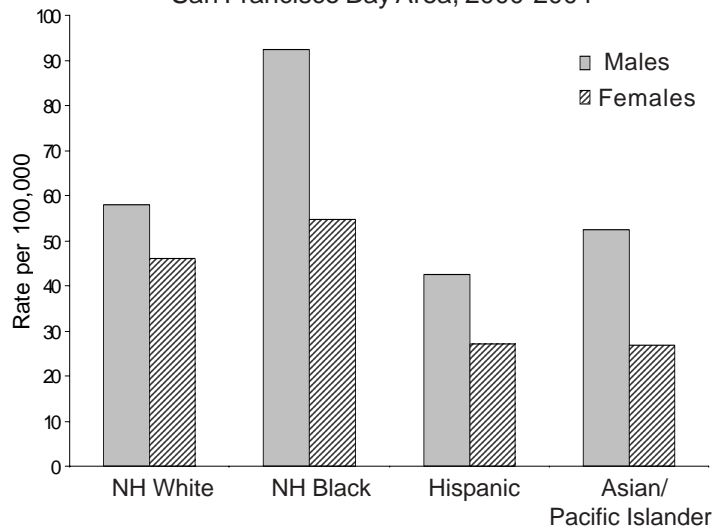
Figure 1. Age-adjusted incidence rates of non-small cell lung cancer by sex and year of diagnosis, Greater San Francisco Bay Area, 1990-2004



### RACIAL/ETHNIC PATTERNS

Among males in the Greater Bay Area, the incidence rate of non-small cell lung cancer from 2000-2004 was almost two times higher among non-Hispanic blacks, the group with the highest rates, than non-Hispanic whites (Figure 2). Among females, the racial/ethnic variation in incidence rates were less marked, although rates were still highest in non-Hispanic blacks, followed by non-Hispanic whites, Hispanics and non-Hispanic Asian/Pacific Islanders.

Figure 2. Age-adjusted incidence rates of non-small cell lung cancer by sex and race/ethnicity, Greater San Francisco Bay Area, 2000-2004

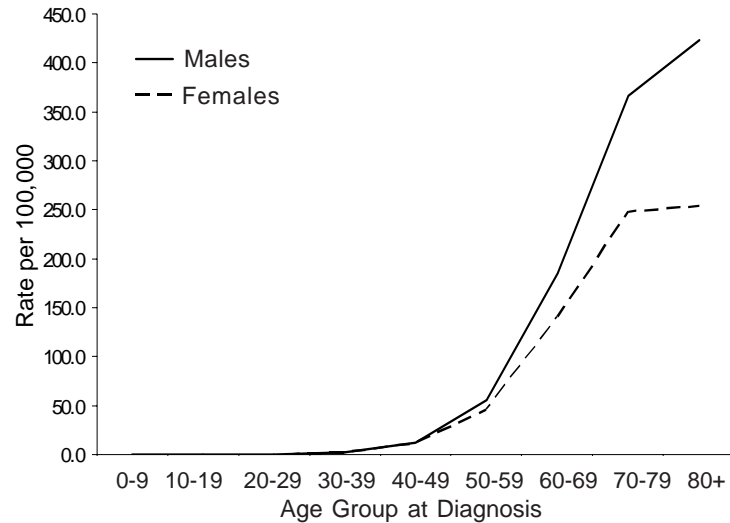




## AGE-SPECIFIC INCIDENCE

Among males and females, the incidence rate of non-small cell lung cancer begins rising sharply after 40 years of age and continues to increase with advancing age (Figure 3). After 60 years of age, the incidence rates in males increase more dramatically than those in females.

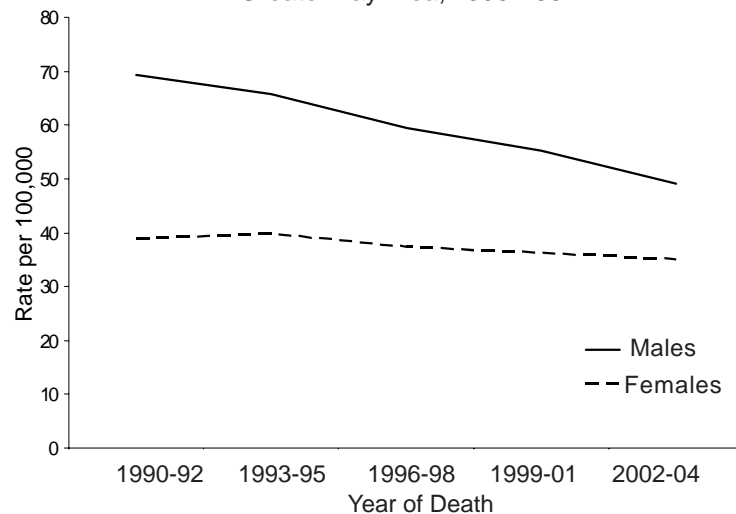
Figure 3. Age-specific incidence rates of non-small cell lung cancer by sex, Greater San Francisco Bay Area, 2000-2004



## MORTALITY

As seen with incidence rates, mortality rates for non-small cell lung cancer in the Greater Bay Area declined 41% for men and 10% for women between 1990 and 2004 (Figure 4). The decline in mortality has been attributed to the advancement in cancer detection techniques (Brooke, 2006).

Figure 4. Age-adjusted mortality rates of non-small cell lung cancer by sex and year of death, Greater Bay Area, 1990-2004



### References:

Brooks, BJ. Clinical update on oncology treatments and trends. *American Journal of Managed Care*, 12(3 Suppl): S43-70, 2006.

American Cancer Society (ACS). Overview: Lung Cancer Cancer - Non-small Cell. 2006, [http://www.cancer.org/docroot/CRI/CRI\\_2\\_1x.asp?dt=15](http://www.cancer.org/docroot/CRI/CRI_2_1x.asp?dt=15)

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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