



Small cell lung cancer in the Greater Bay Area, 1989-2006

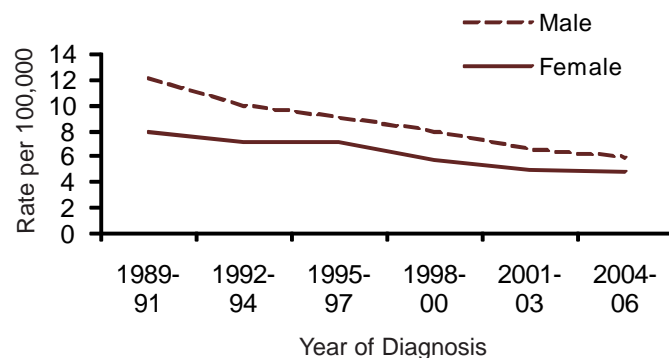
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Lung cancer is the leading cause of cancer death in the United States for both men and women (1), and it is projected to account for 26% (men) and 23% (women) of cancer deaths in California in 2009 (2). About 10-15% of lung cancer cases are classified as small cell (SCLC), named for the small cells that make up these cancers. SCLC often starts in the bronchi at the center of the chest and can multiply quickly, forming large tumors. Survival after SCLC is substantially worse than survival after non-small-cell lung cancer (1). Nearly 90% of lung cancer cases are caused by smoking, though other risk factors include: exposure to secondhand smoke among non-smokers, as well as exposure to radon, asbestos, radiation treatment on the lungs, arsenic in drinking water, and air pollution. Having a personal or family history of lung cancer, as well as a diet low in fruits and vegetables are also risk factors for lung cancer (1). However, incidence rates have been declining recently, both nationwide and in California, in parallel with the declining prevalence of cigarette smoking (3, 2).

Incidence Trends

Incidence rates for SCLC in the Greater bay Area declined more rapidly among men (52%) than women (39%) over the period of 1989-2006 (Figure 1). Incidence rates of all types of lung cancer also declined in California from 1988 to 2004 (2). There were 328 new cases of SCLC in the Greater Bay Area in 2006.

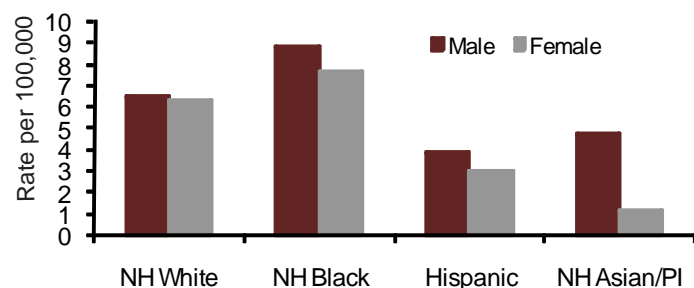
Figure 1. Age-adjusted incidence rates of small cell lung cancer by year of diagnosis, Greater Bay Area, 1989-2006



Racial/Ethnic Patterns

SCLC is more common among men than women and is not evenly distributed among racial/ethnic groups. In the Greater Bay Area, non-Hispanic (NH) Blacks have the highest rate of this form of cancer, while NH Asians/Pacific Islanders (PI) and Hispanics have the lowest rates (Figure 2). This pattern is also seen nationwide (3).

Figure 2. Age-adjusted incidence rates of small cell lung cancer by race/ethnicity, Greater Bay Area, 2002-2006

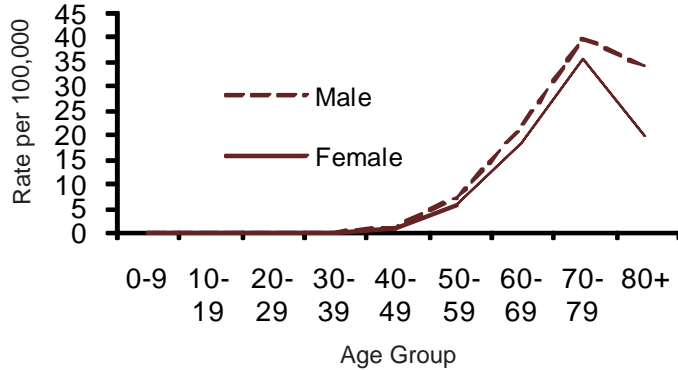




Age-Specific Incidence

The occurrence of SCLC is very rare before the age of 40, but rates steadily increase after this age for both men and women. Incidence rates peak between the ages of 70 and 79 (Figure 3).

Figure 3. Age-specific incidence rates of small cell lung cancer by age group, Greater Bay Area, 2002-2006



Mortality

From 1989 to 2006, mortality rates for all types of lung cancer have been decreasing in the Greater Bay Area, by 36% for men and 14% for women (Figure 4).

Figure 4. Age-adjusted mortality rates of small cell lung cancer by year of death, Greater Bay Area 1989-2006



References:

1. American Cancer Society (2009). "Overview: Lung Cancer-Small Cell". Located at: http://www.cancer.org/docroot/CRI/CRI_2_1x.asp?dt=16.
2. American Cancer Society, California Division and Public Health Institute, California Cancer Registry. "California Cancer Facts and Figures 2009". Oakland, CA: American Cancer Society, California Division, September 2008
3. National Cancer Institute. "SEER Stat Fact Sheets: Lung and Bronchus". Located at: <http://seer.cancer.gov/statfacts/html/lungb.html>.

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.