



Multiple myeloma in the Greater Bay Area, 1989-2006

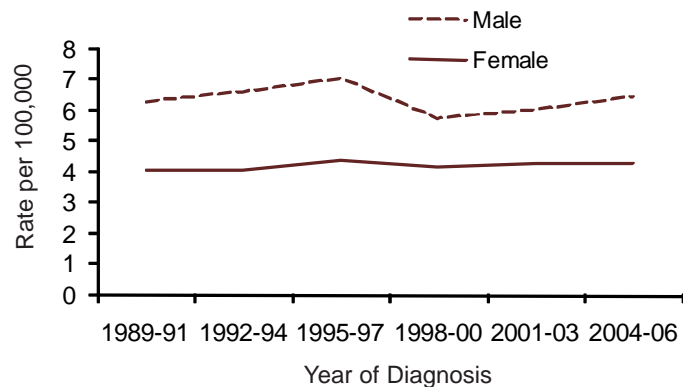
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Multiple myeloma is a relatively uncommon cancer that starts in the plasma cells (mature B cells), causing tumors to form in the bone marrow (1). Nationwide, there was a downward trend in incidence rates from 1997 to 2005 and a statistically significant decline in mortality rates from 1994 to 2005 for this form of cancer (2). It was projected that there would be 19,920 new cases and 10,690 deaths from multiple myeloma in the United States in 2008 (3). The five-year survival rate for this cancer is 34%, although recent improvements in treatments may increase survival for newly diagnosed patients. Survival rates are also greater among younger versus older patients (3). The risk factors associated with this disease are older age, being male, radiation exposure, Black race/ethnicity, having a family history of myeloma, occupational exposure – especially among petroleum-related workers, obesity and having other plasma cell diseases (3).

Incidence Trends

In contrast to national patterns, incidence rates of multiple myeloma in the Greater Bay Area have remained relatively stable since 1988. Incidence is higher among men than women (Figure 1). There were 310 new cases of multiple myeloma in the Greater Bay Area in 2006.

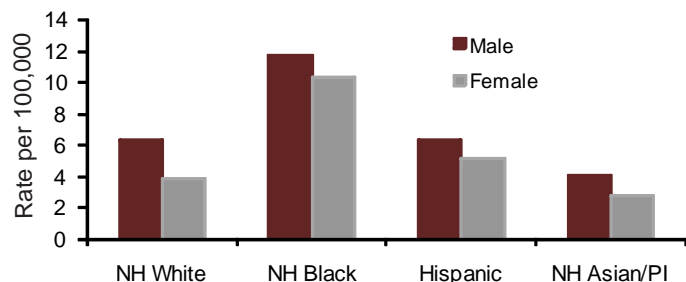
Figure 1. Age-adjusted incidence rates of multiple myeloma by year of diagnosis, Greater Bay Area, 1989-2006



Racial/Ethnic Patterns

Incidence rates of multiple myeloma in the Greater Bay Area were highest among non-Hispanic (NH) Blacks and lowest among NH Asians/Pacific Islanders (PI) (Figure 2). This trend is also seen at the national level (2). NH Blacks have a 2-4 times higher incidence rate in comparison to other racial/ethnic groups (1).

Figure 2. Age-adjusted incidence rates of multiple myeloma by race/ethnicity, Greater Bay Area, 2002-2006

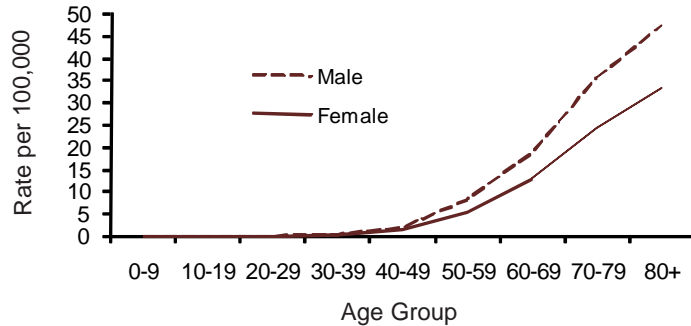




Age-Specific Incidence

Incidence rates of multiple myeloma increase sharply with age, though at a higher rate in men than in women. This form of cancer is very rare before the age of 40 (Figure 3).

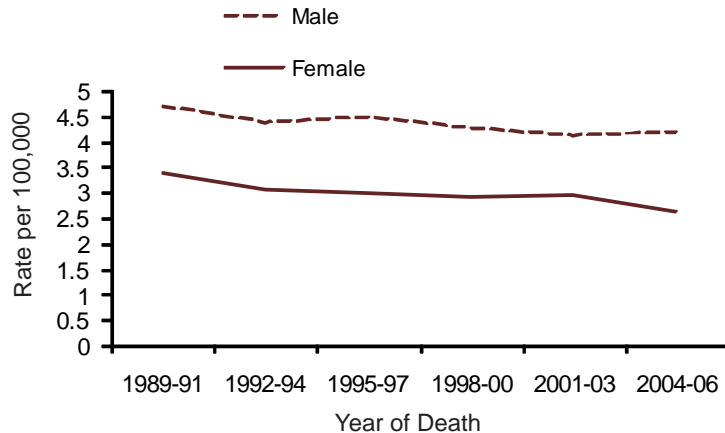
Figure 3. Age-specific incidence rates of multiple myeloma by age group, Greater Bay Area, 2002-2006



Mortality

As with incidence patterns, mortality rates for multiple myeloma are consistently higher among men than women. However, rates have been declining in both men (11%) and women (22%) in the Greater Bay Area since 1989 (Figure 4).

Figure 4. Age-adjusted mortality rates of multiple myeloma by year of death, Greater Bay Area, 1989-2006



References:

1. California Cancer Registry. "Cancer Surveillance Spotlight: Multiple Myeloma". Located at: <http://www.ccrca.org/Spotlight/PDF/MultipleMyeloma-05.pdf>.
2. National Cancer Institute. "SEER Stat Fact Sheets: Myeloma". Located at: <http://seer.cancer.gov/statfacts/html/mulmy.html>.
3. American Cancer Society (2009). "Detailed Guide: Multiple Myeloma". Located at: http://www.cancer.org/docroot/CRI/CRI_2_3x.asp?dt=30.

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.