

XVI. BRAIN AND OTHER NERVOUS SYSTEM CANCERS

Brain and other nervous system cancers are the 13th and 17th most commonly diagnosed cancers among males and females, respectively, in the Greater Bay Area. There are many different types of brain and other nervous system tumors included in this classification: astrocytic tumors, oligodendroglial tumors, mixed gliomas, and others [88]. Risk factors for these tumors are generally unknown; however, having specific genetic syndromes may increase the risk of a central nervous system tumor.

Overall, incidence rates of brain and other nervous system cancers declined during 1988-2018 (-0.5% per year). No significant decreases occurred in most racial/ethnic groups, but a significant decrease was observed in Hispanic males and females (-0.8% per year). The 2014-2018 incidence rates were higher among males (7.2 per 100,000) than females (4.7 per 100,000). Incidence rates in NH White males and females were approximately twice the rates for other racial/ethnic groups. In 2014-2018, the incidence rates in the Greater Bay Area were comparable to the California rates (**Table 9a**).

Mortality rates also decreased during this period (overall: -0.5% per year males: -0.5% per year females: -0.4% per year). Only Hispanic males had a significant reduction (-0.9% per year). Mortality rates were twice as high for NH White males and females than for other racial/ethnic groups. Mortality rates for all racial/ethnic groups in the Greater Bay Area were comparable to those of California (**Table 9b**).

Glioblastoma

While glioblastoma multiforme (GBM) is relatively rare, its poor prognosis and resulting rates of mortality make it an important public health issue. These tumors arise in glial cells, a specific type of cell in the brain that surround neurons and provide support and insulation. Glial cells are the most abundant cell type in the central nervous system [89].

GBM is more common in males than females. In the Greater Bay Area, incidence rates were highest in NH White males and females (5.0 and 3.1 per 100,000, respectively) and lowest in Asian/Pacific Islander males and females (2.1 and 1.3 per 100,000, respectively). Incidence rates have generally been stable over the past three decades in the Greater Bay Area population as a whole, but GBM has been increasing significantly in NH White males (0.6% per year) and females (0.9% per year) between 1988 and 2018. The incidence rate for Hispanic females has been decreasing since 1988 (-1.3% per year).

GBM incidence rates in males were comparable to rates in California (3.8 per 100,000 vs. 3.7 per 100,000) for males; females in both regions had an incidence rate of 2.2 per 100,000 (**Figure 28**).

Table 9a and 9b: Brain and Other Nervous System Cancer Age-Adjusted Incidence and Mortality Rates per 100,000 by Sex, Race/Ethnicity, and Region¹, 2014-2018

9a: Incidence

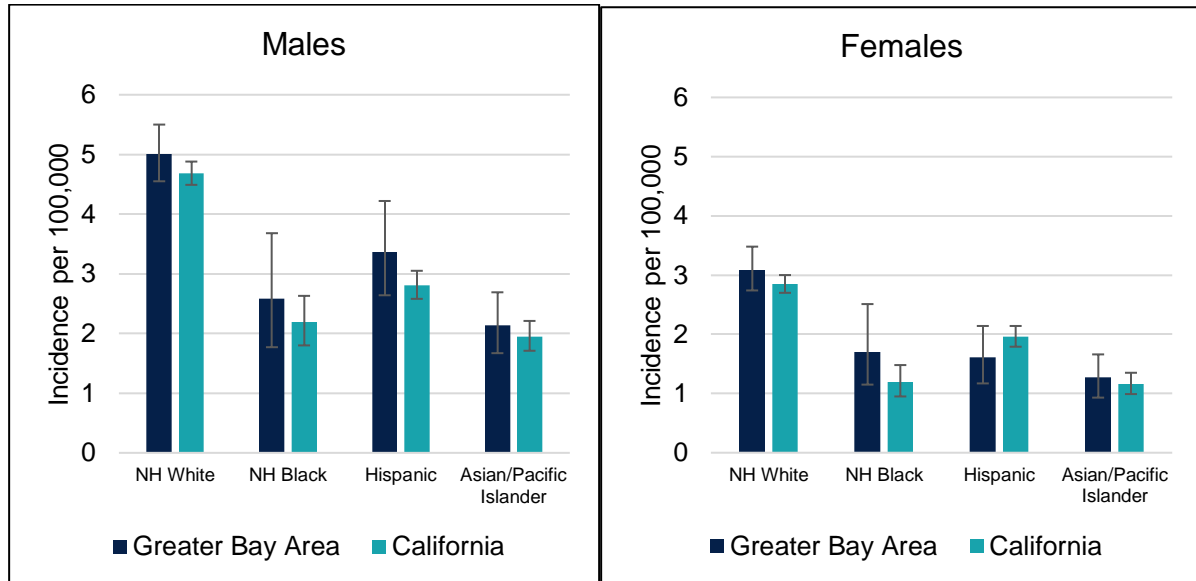
Race/Ethnicity	Greater Bay Area		California	
	Males	Females	Males	Females
All Racial/Ethnic Groups	7.2	4.7	7.1	4.9
NH White	9.4	6.1	9.1	6.2
NH Black	4.6	3.5	4.9	3.2
Hispanic	6.0	4.0	5.5	4.4
Asian/Pacific Islander	4.9	3.1	4.5	3.1

9b: Mortality

Race/Ethnicity	Greater Bay Area		California	
	Males	Females	Males	Females
All Racial/Ethnic Groups	4.9	3.2	5.4	3.5
NH White	6.4	3.9	6.8	4.3
NH Black	3.0	2.6	3.7	2.3
Hispanic	3.4	2.5	4.1	3.0
Asian/Pacific Islander	3.4	2.2	3.2	2.1

¹ The two regions represented include: (1) the Greater Bay Area (nine-county region), and (2) all of California (including the nine-county region of the Greater Bay Area).

Figure 28: Glioblastoma Age-Adjusted Incidence Rates¹ by Sex, Race/Ethnicity, and Region², 2014-2018



¹ Error bars (in Black at the top of the bars) indicate 95% confidence intervals surrounding the corresponding incidence rates.

² The two regions represented include: (1) the Greater Bay Area (nine-county region) and (2) all of California (including the nine-county region of the Greater Bay Area).