NCI News Note

U.S. population data show no increase in brain cancer rates during period of expanding cell phone use

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In a new examination of United States cancer incidence data, investigators at the National Cancer Institute (NCI) reported that incidence trends have remained roughly constant for glioma, the main type of brain cancer hypothesized to be related to cell phone use. The researchers found that while cell phone use increased substantially over the period 1992 to2008 (from nearly zero to almost 100 percent of the population), the U.S. trends in glioma incidence did not mirror that increase. Results of this study were published online March 8, 2012, in the *British Medical Journal*.

The researchers compared the U.S. experience with that reported in two studies conducted in Europe, where cell phone use was widespread earlier than in the U.S. The two studies -- the International Agency for Research on Cancer (IARC) Interphone study, and a study in Sweden published in 2011-- provided the primary evidence for IARC's subsequent 2011 re-classification of microwave radiation produced by cell phones as a possible human carcinogen. (For more information, read the NCI Statement on the IARC announcement.) In this new analysis, NCI researchers compared the observed glioma incidence rates from 12 cancer registries in NCI's Surveillance, Epidemiology, and End Results program from 1992 to 2008, with projected rates based on risks observed in the Interphone and the Swedish study. Over the entire study period, glioma incidence patterns held roughly constant in all age groups. Projections based on the Interphone study, which found slight increases in risk among a small number of heavy users, were not statistically distinguishable from observed rates. On the other hand, projections based on the Swedish study were at least 40 percent higher than, and incompatible with, the actual rates. The authors recommend continued surveillance of glioma rates for a number of reasons, including changing usage patterns and technology, and because tumor latency may be longer than has been observed to date.

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