Lung Cancer Death Rates among Young and Middle-aged White Women Climb in Some States

New Analysis Points to Tobacco Control Efforts or Lack Thereof as Likely Cause

ATLANTA –June 25, 2012—A new study comparing lung cancer death rates among women by year of birth shows dramatic differences in trends between states, likely reflecting the success or failure of tobacco control efforts. The study, published early online in the Journal of Clinical Oncology, finds that while lung cancer death rates declined continuously by birth year for women born after the 1950s in California, rates in other states declined less quickly or even increased. In some southern states, lung cancer death rates among women born in the 1960s were approximately double those of women born in the 1930s.

Lung cancer death rates had been falling among young and middle-aged white women in the U.S., but then abruptly leveled off, reflecting an increase in smoking among girls in the 1960s and 1970s. To study whether this unfavorable trend varied across states, in view of large differences in tobacco control policies, researchers led by Ahmedin Jemal, PhD, analyzed lung cancer death rates from 1973 through 2007 by age among white women for 23 states for which there was adequate data, using the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) mortality database.

California has consistently led the U.S. in using public policies to reduce cigarette smoking. It was the first state to establish a comprehensive statewide tobacco control program through increased excise taxes (1988), and pioneered local government ordinances for smoke-free work places as early as the mid-1970s. In contrast, public policies against tobacco use have been weaker in many southern and Midwestern states, particularly among tobacco-growing states.

In California, age-specific lung cancer death rates by year of birth continued to decrease in all age groups younger than age 75 starting in the 1990s, with declines beginning earlier in younger age groups. In New York, the age-specific trends were generally similar to those in California except the decreases were much less steep. In Alabama, in contrast, rates continued to increase for those age 70 years or more, whereas rates for young and middle-aged women decreased for a short time, but are now increasing in the most recent time period, especially for women younger than age 50. In California, the lung cancer death rate for women born after 1950 is less than a third of that among those born in 1933, while in Alabama the death rate in women born after 1950 is more than double that of women born in 1933. Similar increasing rates in women born after 1950s were found in many southern states, including Tennessee, South Carolina, Louisiana, and Kentucky.

"The dramatic rise in lung cancer death rates in young and middle-aged white women in several Southern states points to a lack of effective policies or interventions, like excise taxes and comprehensive smoke-free laws, that deter initiation of smoking among teenagers and promote smoking cessation among adults," said Ahmedin Jemal, PhD, American Cancer Society vice president of surveillance research. "Our findings underscore the need for additional interventions to promote smoking cessation in these high-risk populations, which could lead to more favorable future mortality trends for lung cancer and other smoking-related diseases."

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