WILEY

A new analysis confirms that U.S. lung cancer rates are declining overall, but it also uncovers previously unrecognized trends related to cancer subtype, sex, race/ethnicity, and age. Published early online in *CANCER*, a peer-reviewed journal of the American Cancer Society, the findings provide a more accurate picture of the state of lung cancer in the country and will help researchers in their ongoing efforts to monitor the population's lung health.

Overall, lung cancer rates are declining in the United States, but little is known about trends related to different subtypes of lung cancer and different demographic groups. To investigate, Denise Riedel Lewis, PhD, MPH, of the National Cancer Institute, and her colleagues analyzed information from the Surveillance, Epidemiology, and End Results (SEER) program. Their goal was to update the classification of lung cancer subtypes and to determine the rates of lung cancer overall as well as the rates of squamous cell, small cell, adenocarcinoma, large cell, other, and unspecified carcinomas among US whites and blacks diagnosed from 1977 to 2010 and white non-Hispanics, Asian/Pacific Islanders, and white Hispanics diagnosed from 1992 to 2010.

The researchers found that squamous and small cell carcinoma rates declined since the 1990s, although less rapidly among females than males. Rates for unspecified

lung cancer also declined. Adenocarcinoma rates decreased among males through 2005, after which they rose rapidly from 2006 to 2010 among every racial/ethnic/gender group. Recent adenocarcinoma rates were higher among young females than among males for all racial/ethnic groups.

The findings indicate that lung cancer rates vary by subtype, sex, race/ethnicity, and age. “It is important to monitor these changes as clinical cancer experts diagnose lung cancer and offer treatment based on specific characteristics of the cancer,” said Dr. Lewis. Because 90 to 95 percent of lung cancers in the United States are attributable to smoking, rate changes reflect historical cigarette smoking rates, duration, cessation, and cigarette composition. “These results can serve as a place marker for our population’s changing lung exposures,” Dr. Lewis noted.