Changing Incidence in Lung Cancer Among Women in Wisconsin

Emerging Trends - from the Wisconsin Cancer Registry System (WCRS)

Mary Foote, Epidemiologist, WCRS

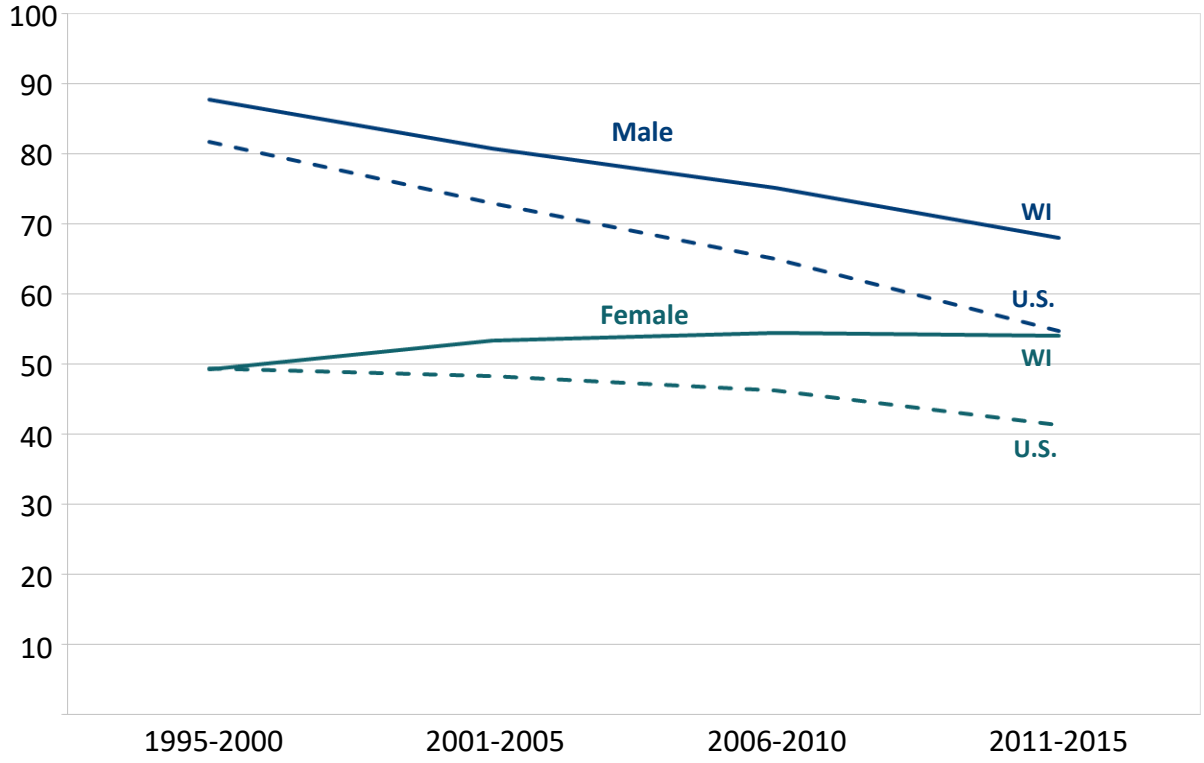
Lung cancer causes more preventable deaths than any other cancer and is the leading cause of cancer deaths in women, killing more women each year than breast, uterine, and ovarian cancer combined.

Cancer Incidence Trends by Sex

Historically considered to be predominantly a man's disease, lung cancer diagnoses have been decreasing for men (Figure 1). Wisconsin shows a downward trend similar to that of the United States for men. However, unlike the U.S. incidence rates for women showing a downward trend, the Wisconsin rates for women have been stable since the 2001-2005 years.

Figure 1. Lung Cancer Incidence Trends

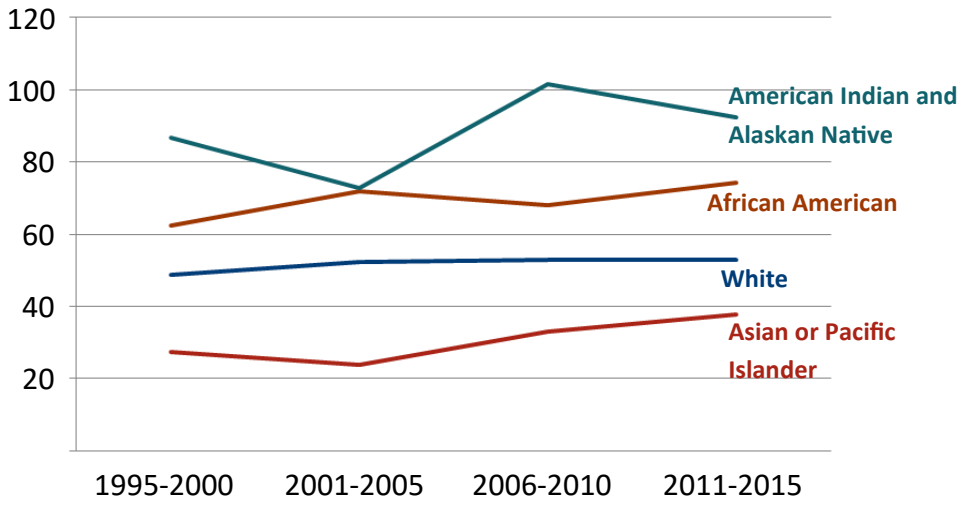
Wisconsin and United States, 1995-2015



Rates are per 100,000 and age-adjusted to the 2000 U.S. standard population.

Figure 2a. Lung Cancer Incidence Trends among Females by Race, Wisconsin, 1995-2015

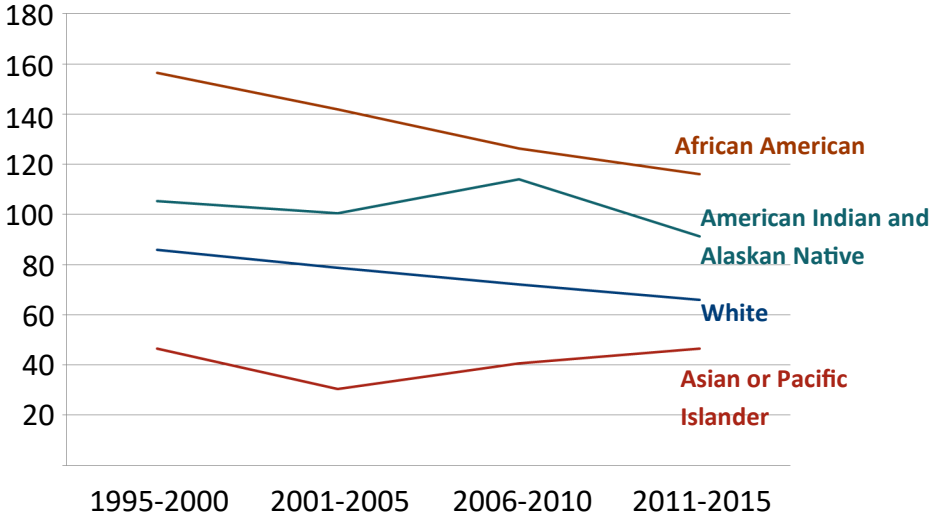
Figure 2a shows how the trends in female incidence rates vary by race, with a stable rate among white females and steeper increases among African American, American Indian, and Asian or Pacific Islander females.



Rates are per 100,000 and age-adjusted to the 2000 U.S. standard population.

Figure 2b. Lung Cancer Incidence Trends among Males by Race, Wisconsin, 1995-2015

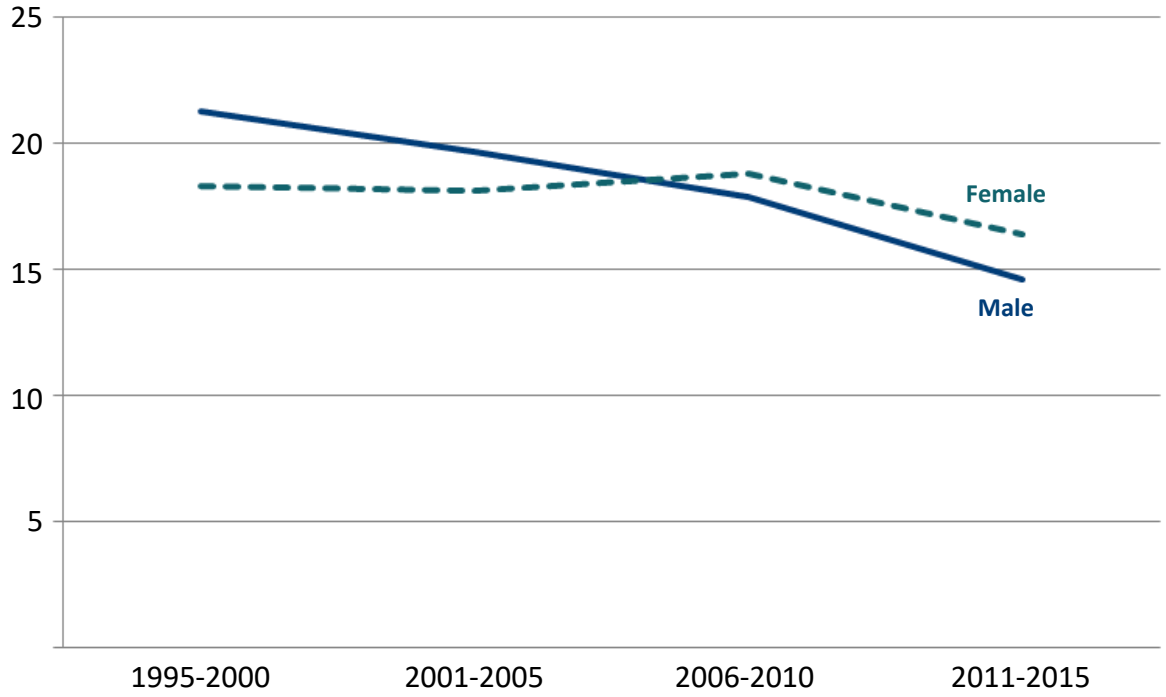
By contrast to Figure 2a, Figure 2b shows the decline in rates among males for all races except for the Asian or Pacific Islander population.



Rates are per 100,000 and age-adjusted to the 2000 U.S. standard population.

Figure 3. Lung Cancer Incidence Trends by Sex among Younger Ages 30-54, Wisconsin, 1995-2015

Women 30 to 54 years of age now have higher incidence rates of lung cancer compared to men of the same age. Figure 3 illustrates that the age-specific incidence rates generally decreased for both men and women 30 to 54 years of age, but the decline was greater among men.



Rates are per 100,000 and age-adjusted to the 2000 U.S. standard population.

Different Types of Lung Cancer in Women and Men

Lung cancer in women is often different than lung cancer in men. Men are more likely to develop squamous cell lung cancer, while women are more commonly diagnosed with adenocarcinoma. Adenocarcinoma is the most common type of lung cancer found in young, nonsmoking women.

The symptoms of lung cancer are often different in women than in men. Squamous cell lung cancer (more common in men) usually grows near the airways and often leads to common symptoms of lung cancer, such as a persistent cough and coughing up blood. Adenocarcinomas (more common in women) often develops in the outer regions of the lungs and can grow and spread before they cause any symptoms.

Some studies have suggested that women may be more susceptible to carcinogens in cigarettes, and may develop lung cancer after fewer years of smoking. Even though smoking is the number one cause of lung cancer in women, a higher percentage of women who develop lung cancer have no history of smoking. Other risk factors include radon exposure, secondhand smoke, environmental and occupational exposures, and a family history of lung cancer.

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Conclusion

The historical trend of higher overall lung cancer incidence among men continues, although the rates are steadily declining. More recent surveillance has found incidence rates among women have plateaued, and among younger ages, rates are higher for women. This flip in lung cancer trends has important implications for public health and underscores the need to emphasize smoking cessation and the prevention of other known risk factors for lung cancer, particularly among younger female populations.

For more information about lung cancer in Wisconsin:

- WCRS publications: https://www.dhs.wisconsin.gov/wcrs/data-pubs.htm
- Wisconsin Interactive Statistics on Health (WISH): https://www.dhs.wisconsin.gov/wish/cancer/index.htm
- Cancer-Rates.info: https://www.cancer-rates.info/wi/

Notes: Rates for the American Indian and Asian or Pacific Islander populations are based on smaller numbers, with more annual variation, than for white and African American populations. American Indian cases include cases identified by linkage with Indian Health Service enrollment list.

Data Source: Wisconsin data from Wisconsin Cancer Reporting System, Office of Health Informatics, Division of Public Health, Department of Health Services, and national data from Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) SEER*Stat Database: Incidence - SEER 13 Regs Research Data, Nov 2017 Sub (1992-2015).

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