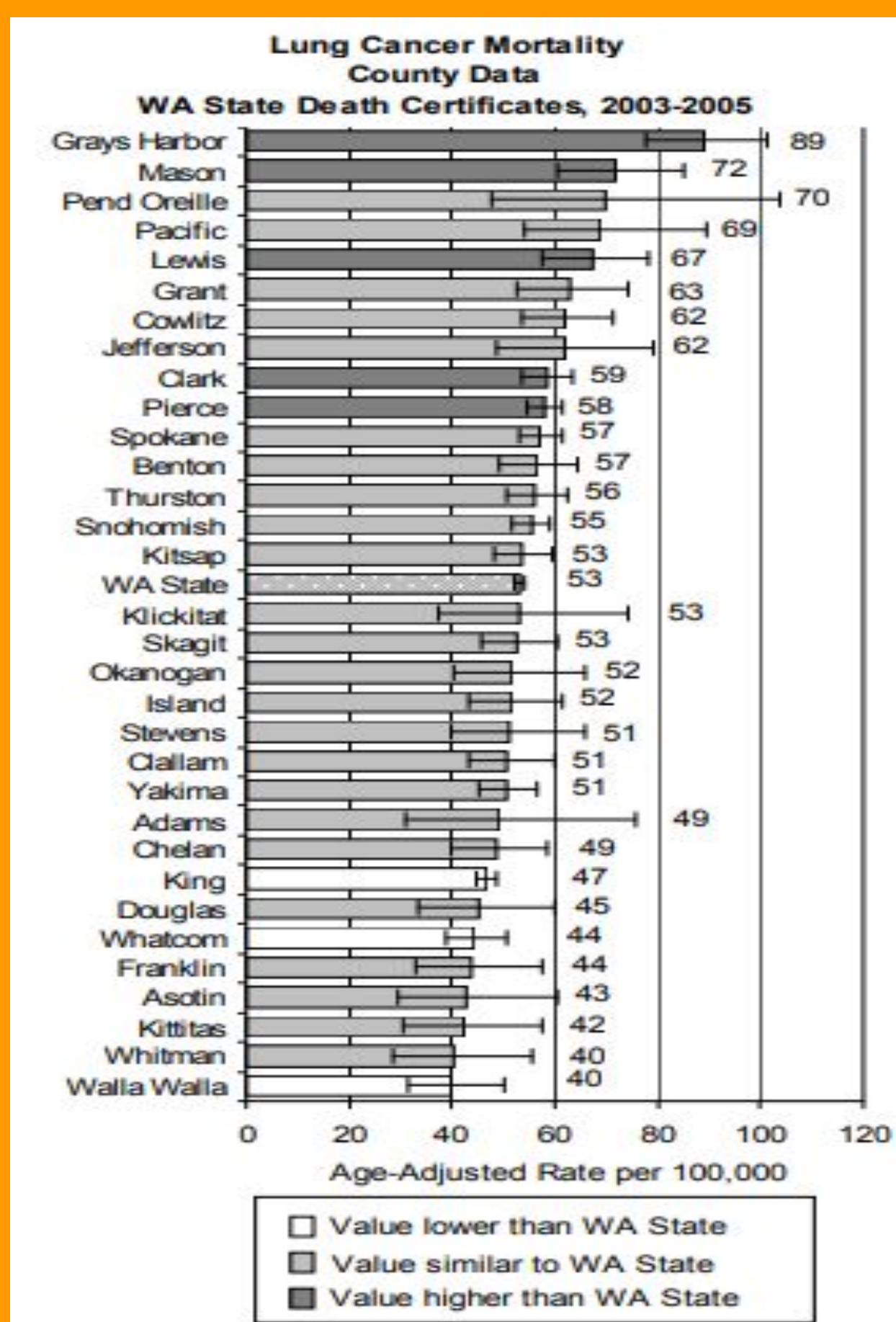


Lung Cancer and the Environment

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ABSTRACT

While smoking is widely recognized as a significant risk factor for lung cancer, the role of genetics and environmental factors in the development of the disease is still a matter of debate. Findings suggest that both environmental and genetic factors may contribute to the development of lung cancer highlighting the need for targeted prevention and screening strategies. In regards to the environment as a risk contributing to lung cancer we can help reduce the burden of lung cancer in our communities by keeping our environment clean and safe.

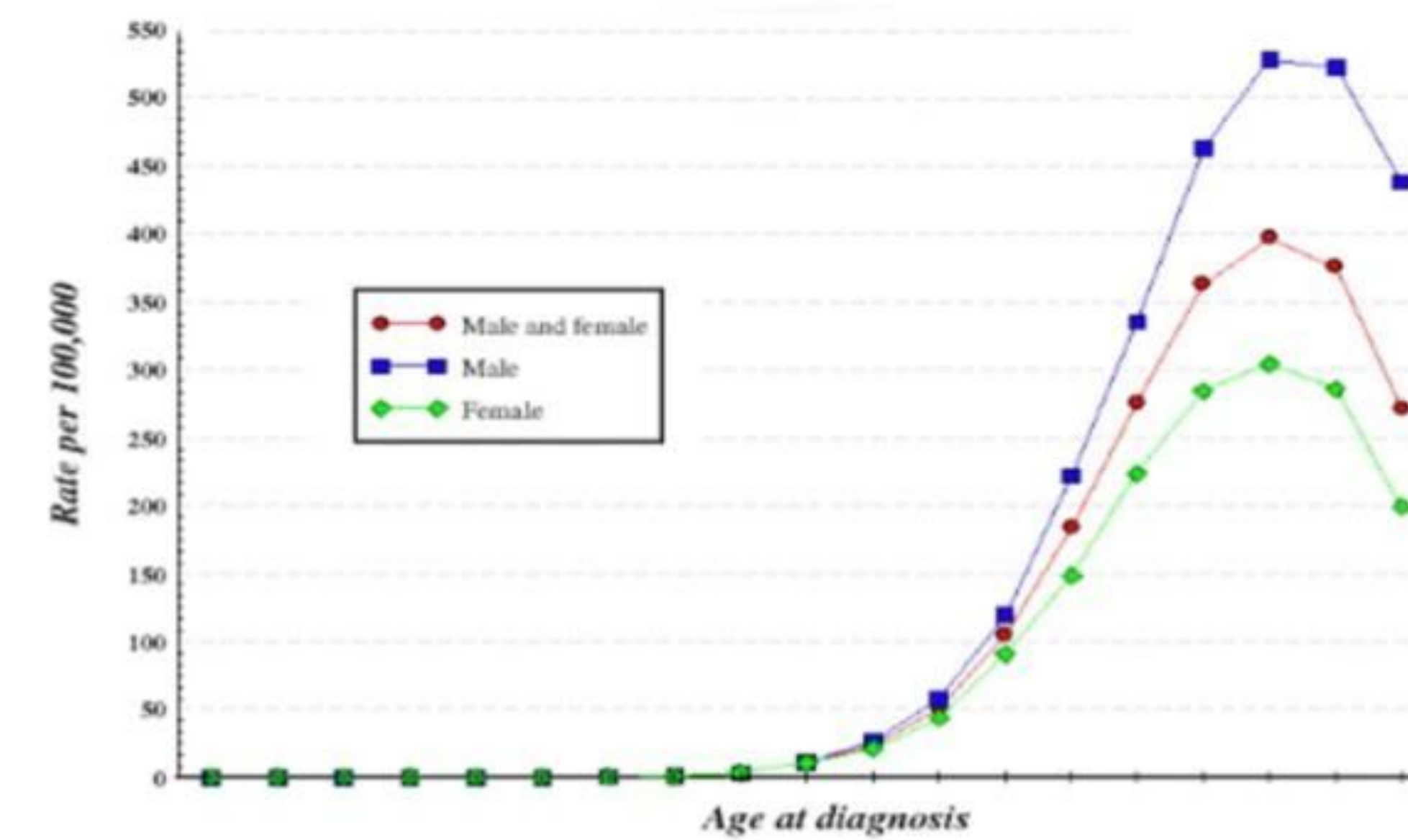


BACKGROUND

Lung cancer mortality rates are narrowing because the difference between male and female smoking rates over the past few decades has narrowed. Washington males and females in nearly all age groups had similar smoking prevalence rates. This finding indicates that in Washington, lung cancer rates in women will likely continue to approach rates in men in coming years. Although smoking plays an important role in lung cancers in both genders, a greater percent of women than men with lung cancer are nonsmokers.

DATA RESEARCH

The graph below shows the incidence of lung cancer in humans relative to age.



In the graph, we can conclude that, with advancing in age, the chance of getting cancer greatly increases. The curve is a bell shape almost, which steeply increase up to 75-79 age and then decreased a little. In my research I wanted to see if there were differences between smokers and non-smokers and specifically environmental factors that lead to lung cancer and lung cancer deaths.

POSSIBLE SOLUTIONS

A lot of lung cancer can be prevented with the cessation of smoking in any form. Continued education about vaping and e-cigarettes is critical. Eliminating second hand smoke is also very important and education about not smoking around children should be continued and increased in schools. Continued environmental clean up is important to reduce lung cancer risk for everyone. Occupational education and safety precautions in jobs should mandatory for employers of high risk exposures situations.

HEALTH DISPARITIES

Health disparities are seen in several different races mostly African American, Mexican, and Native Americans. African Americans are 15% less likely to be diagnosed early, with 19% needing life saving surgical treatment, Mexicans are 15% less likely to be diagnosed early and 28% are more likely to not receive any treatment. Native Americans are 16% less likely to be diagnosed early, while 3% more likely to not receive any treatment all statistics are compared to white Americans.

DATA ANALYSIS

RESULTS

The results of having lung cancer can spread to other parts of the body such as the brain and the bones. Cancer that spreads can cause pain, nausea, headaches and other symptoms depending of what organ is affected.

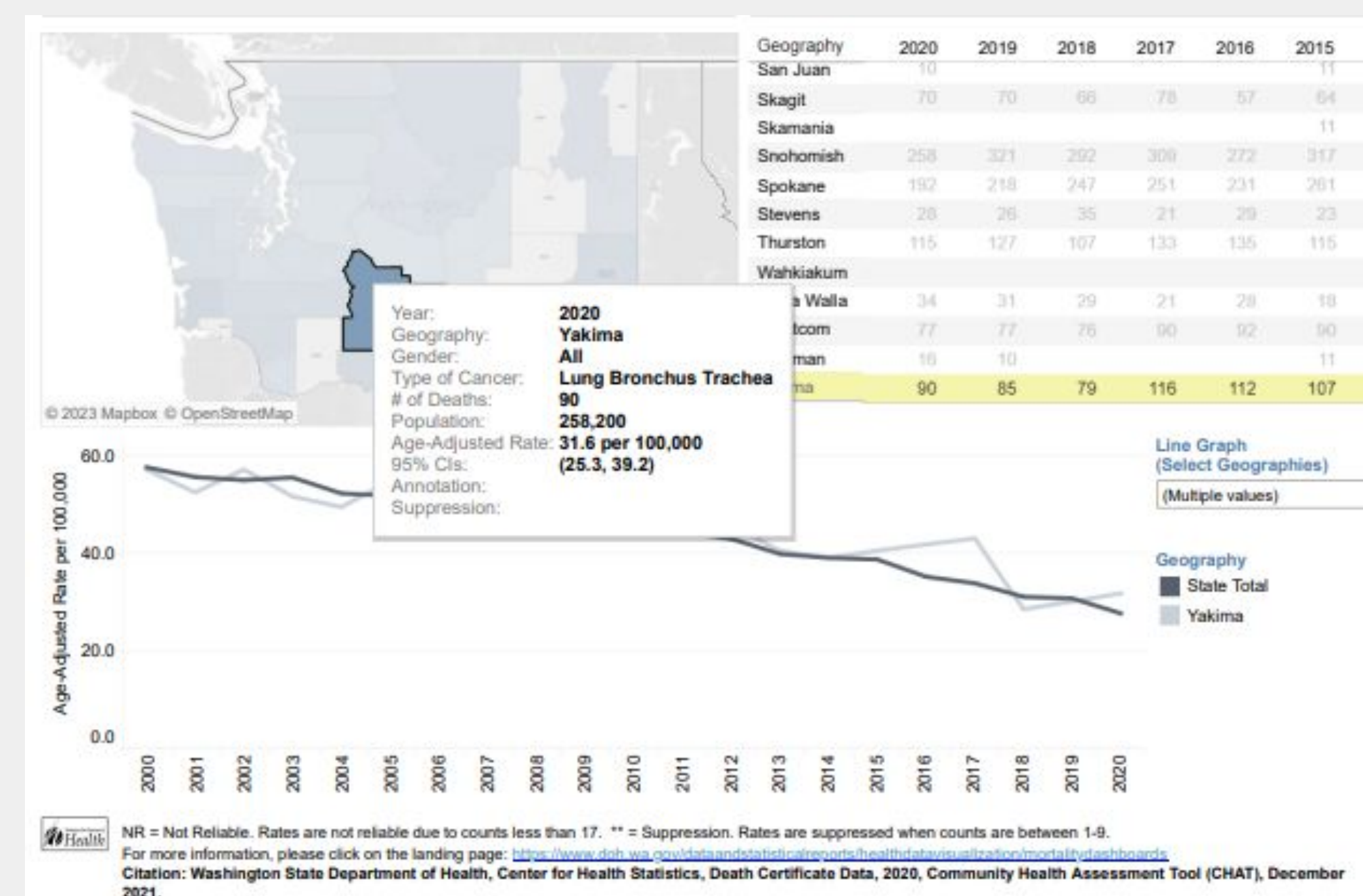
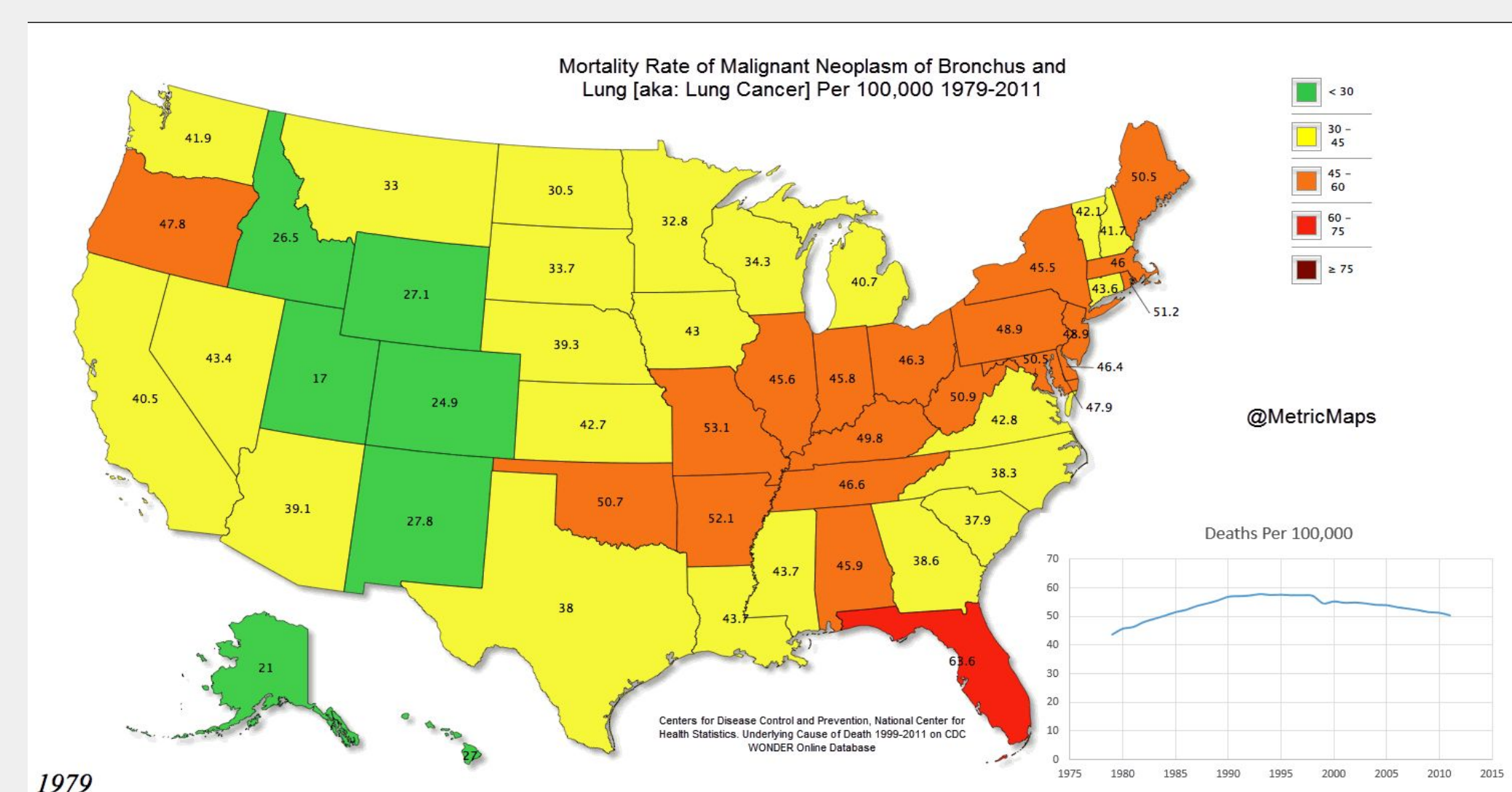
Lung Cancer Causes:

1. Smoking rates: Tobacco smoking is the leading cause of lung cancer, and areas with higher smoking rates are likely to have a higher incidence of lung cancer.
2. Occupational exposure: Certain jobs, such as mining, construction, and manufacturing, can expose workers to substances that increase their risk of lung cancer.
3. Environmental exposure: Exposure to environmental toxins, such as radon, asbestos, and air pollution, can increase the risk of lung cancer.
4. Demographics: Certain demographic groups, such as older adults, men, and people with a family history of lung cancer, may have a higher risk of developing lung cancer.

Washington state is 13th in the nation for lung cancer rates. Yakima county is in the middle of all counties with 31.6 deaths per 100,000 age adjusted. Pacific county is the highest in Washington state with 53.1 deaths per 100,000 age adjusted. Smoking continues to play the risk factor but environment plays a big risk factor role in certain counties as well. I looked at jobs in Pacific county that could lead to environmental contributions to lung cancer.

- Male-dominated industries included mining (91.0 percent), construction (83.6 percent), utilities (75.2 percent), manufacturing (70.9 percent) and transportation and warehousing (77.8 percent).
- Female-dominated industries included finance and insurance (84.1 percent), health care and social assistance (77.5 percent), professional, scientific, and technical services (81.5 percent) and educational services (69.4 percent).

Overall I think my hypothesis was correct as smoking rates are declining we still see environmental causes of lung cancer developing especially in industries and jobs that expose a person to risk.



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