

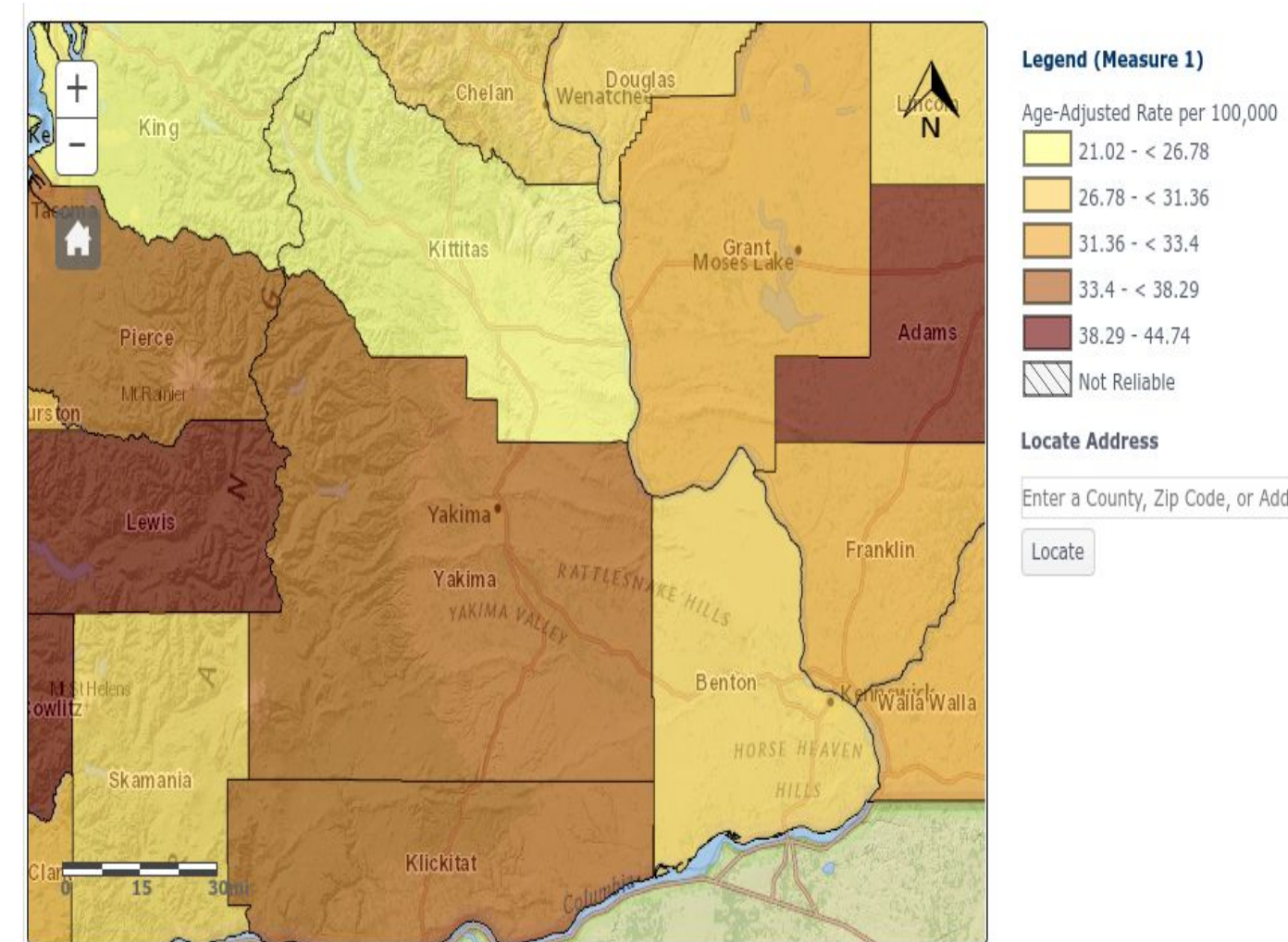
# Exploring the Relationship Between Tobacco Use and Lung Cancer Risk

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### ABSTRACT

Tobacco use, particularly in the form of smoking cigarettes, has long been established as a significant risk factor for the development of lung cancer. As high school students collaborating with the Washington Tracking Network, we aimed to investigate the link between tobacco use and lung cancer risk. Through extensive research and analysis of existing literature, we found compelling evidence supporting the association between tobacco consumption and increased susceptibility to lung cancer. Our study underscores the urgent need for concerted efforts in public health advocacy to educate individuals about the dangers of tobacco use and promote smoking cessation initiatives. By raising awareness and empowering communities to adopt healthier lifestyles, we can mitigate the burden of lung cancer and safeguard the well-being of our population. This research serves as a catalyst for proactive measures aimed at reducing tobacco-related morbidity and mortality, ultimately contributing to improved public health outcomes.

### WASHINGTON TRACKING DATA



Yakima Nation Age-Adjusted Rate of Cancer for Tobacco. Washington Tracking Network (WTN). (n.d.). <https://fortress.wa.gov/doh/wtn/WTNPortal#q0=1020>

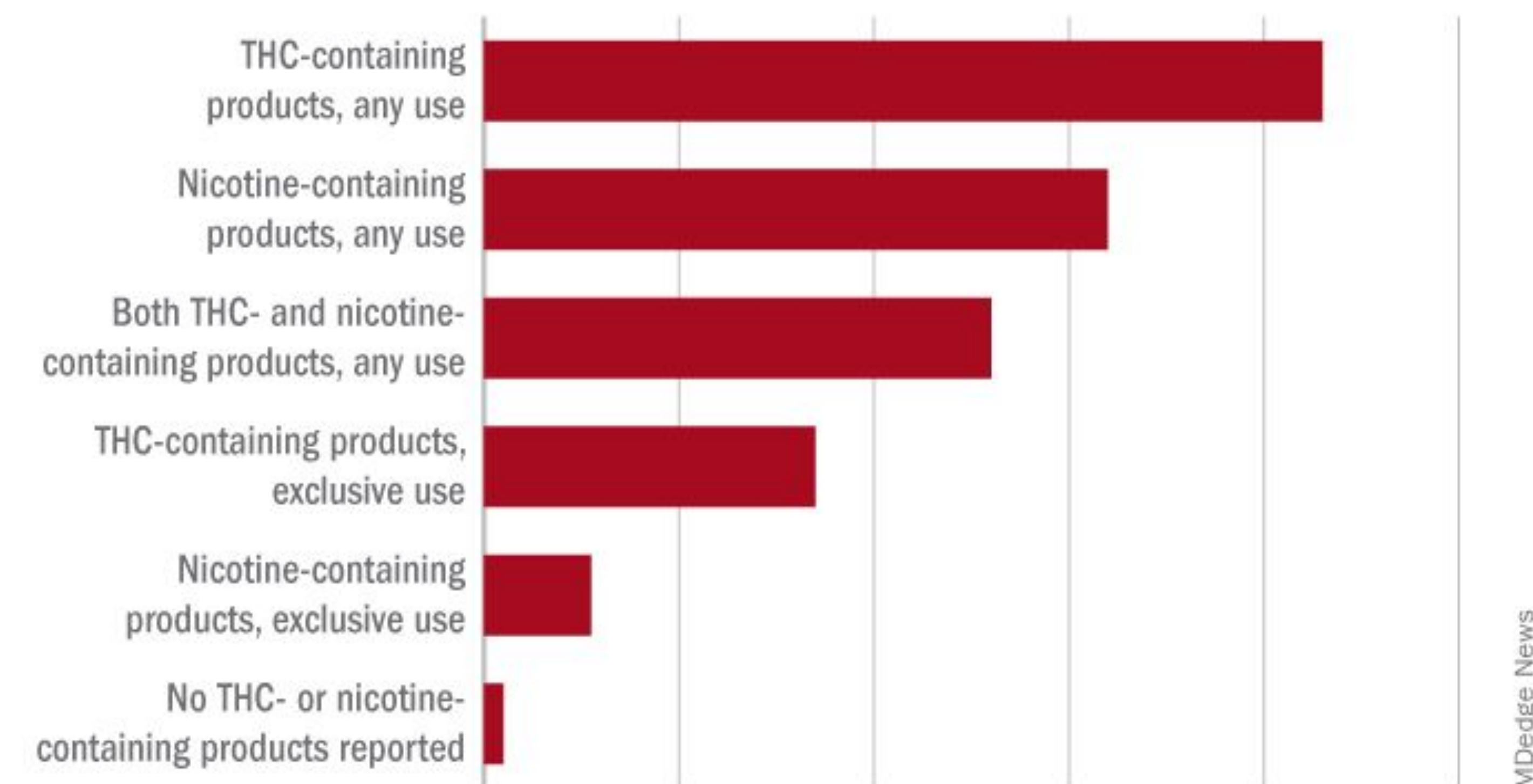
This picture shows how people by age died from Cancer who did Tobacco. The color shows what age it was through so for example Yakima was ages 33 -38

### BACKGROUND

The prevalence of tobacco use among teenagers has historically been a concern due to its well-documented association with various health issues, including lung cancer. However, the advent of e-cigarettes has reshaped the landscape of nicotine consumption, with an unprecedented surge in vaping among adolescents. While initially touted as a safer alternative to traditional cigarettes, mounting evidence suggests that vaping poses its own set of health risks, including an increased likelihood of developing lung cancer later in life.

### E-CIGARETTE, OR VAPING, PRODUCT USE-ASSOCIATED LUNG INJURY

#### Vaping substances used in 3 months preceding EVALI symptoms



Note: Based on data collected for 1,378 patients as of Oct. 15, 2019.

Source: MMWR 2019 Oct 28;68(early release):1-5

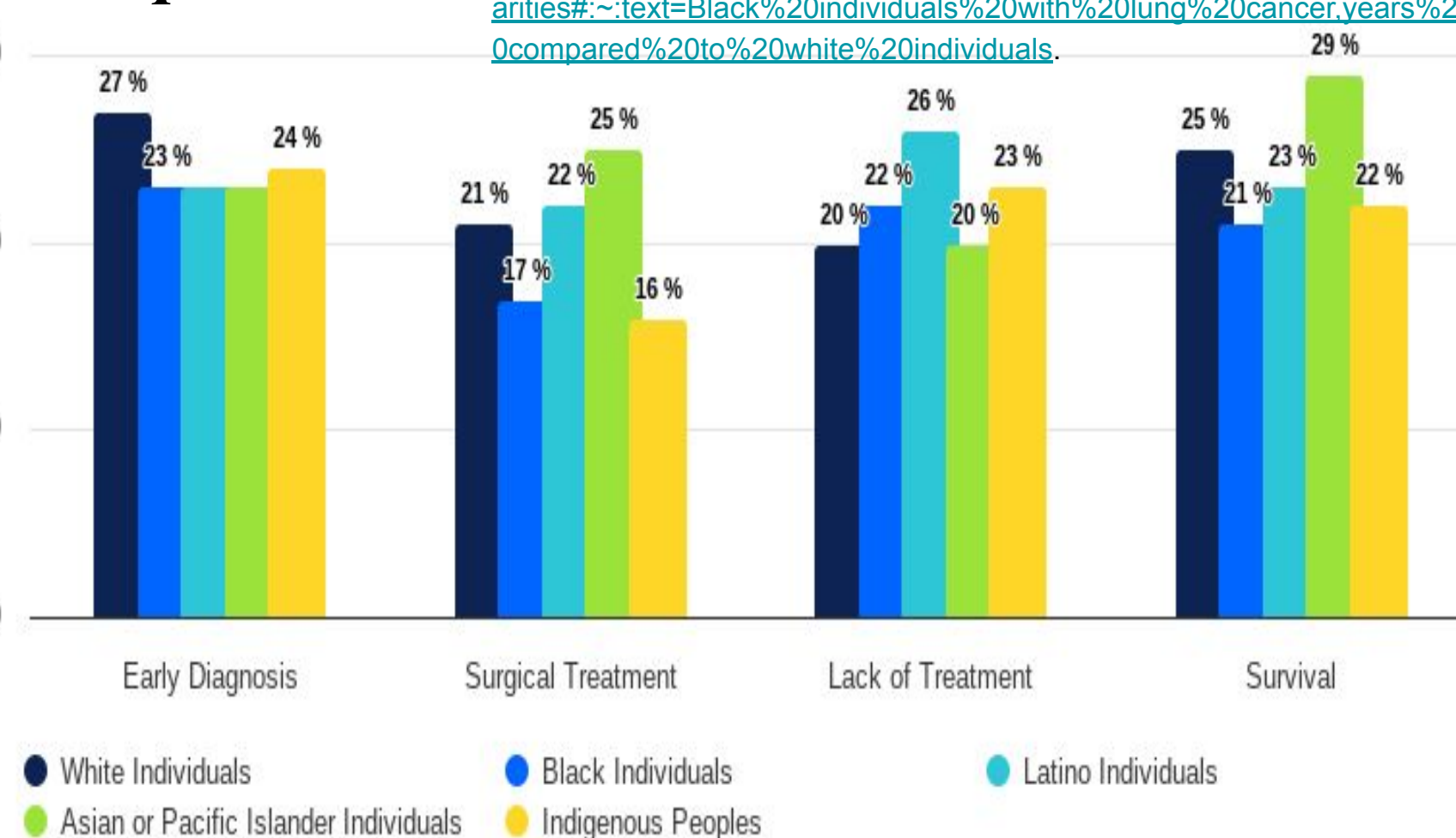
Publish date: October 29, 2019, & Therese Borden MDDedge News. (2019, November 15). CDC, FDA in hot pursuit of source of vaping lung injuries. CHEST Physician. <https://www.mdedge.com/chestphysician/article/21145/pulmonology/cdc-fda-hot-pursuit-source-vaping-lung-injuries>

EVALI showed in the last three months of the most substances used that can cause serious lung damage and/or lung cancer

### POSSIBLE SOLUTIONS

Preventing Tobacco by not smoking anymore. People who Tobacco smoke can contribute to about 85% to 90% of lung cancer cases. Another possible solution can be getting surgery to cut out the cancer tissue. Targeted therapy can also help by using drugs to block the growth and spread of cancer cells. Targeted therapy is a type of cancer treatment that controls how cancer cells grow, divide, spread. As they know more about the DNA of the cancer they can control the cancer it a lot more. This can also help to target the proteins.

### State of lung cancer: Racial and ethnic disparities.



### HEALTH DISPARITIES

They base your Disparities by color so for example if your black with lung cancer and get diagnosed then it's 15% less likely to be diagnosed early, 19% less likely to receive surgical treatment, 11% to not receive any treatment and 16% less likely to survive 5 years compared to if your white. This shows if you are a different color it can mean different things in the process of getting or diagnosing lung cancer.

### REFERENCES

Yakima Nation Age-Adjusted Rate of Cancer for Tobacco. Washington Tracking Network (WTN). (n.d.). <https://fortress.wa.gov/doh/wtn/WTNPortal#q0=1020>

Publish date: October 29, 2019, & Therese Borden MDDedge News. (2019, November 15). CDC, FDA in hot pursuit of source of vaping lung injuries. CHEST Physician.

<https://www.mdedge.com/chestphysician/article/21145/pulmonology/cdc-fda-hot-pursuit-source-vaping-lung-injuries>

State of lung cancer: Racial and ethnic disparities. <https://www.lung.org/research/state-of-lung-cancer/racial-and-ethnic-disparities#:~:text=Black%20individuals%20with%20lung%20cancer,years%20compared%20to%20white%20individuals>

Tobacco-related cancers and prevention. Tobacco-related cancers and prevention – Cancer Prevention. (n.d.). <https://cancerprevention.euro.iaarc.fr/european-code-against-cancer/tobacco-related-cancers-and-prevention/>

Ltd., H. P. (2021, July 29). Smoking and lung cancer. HealthMatch.

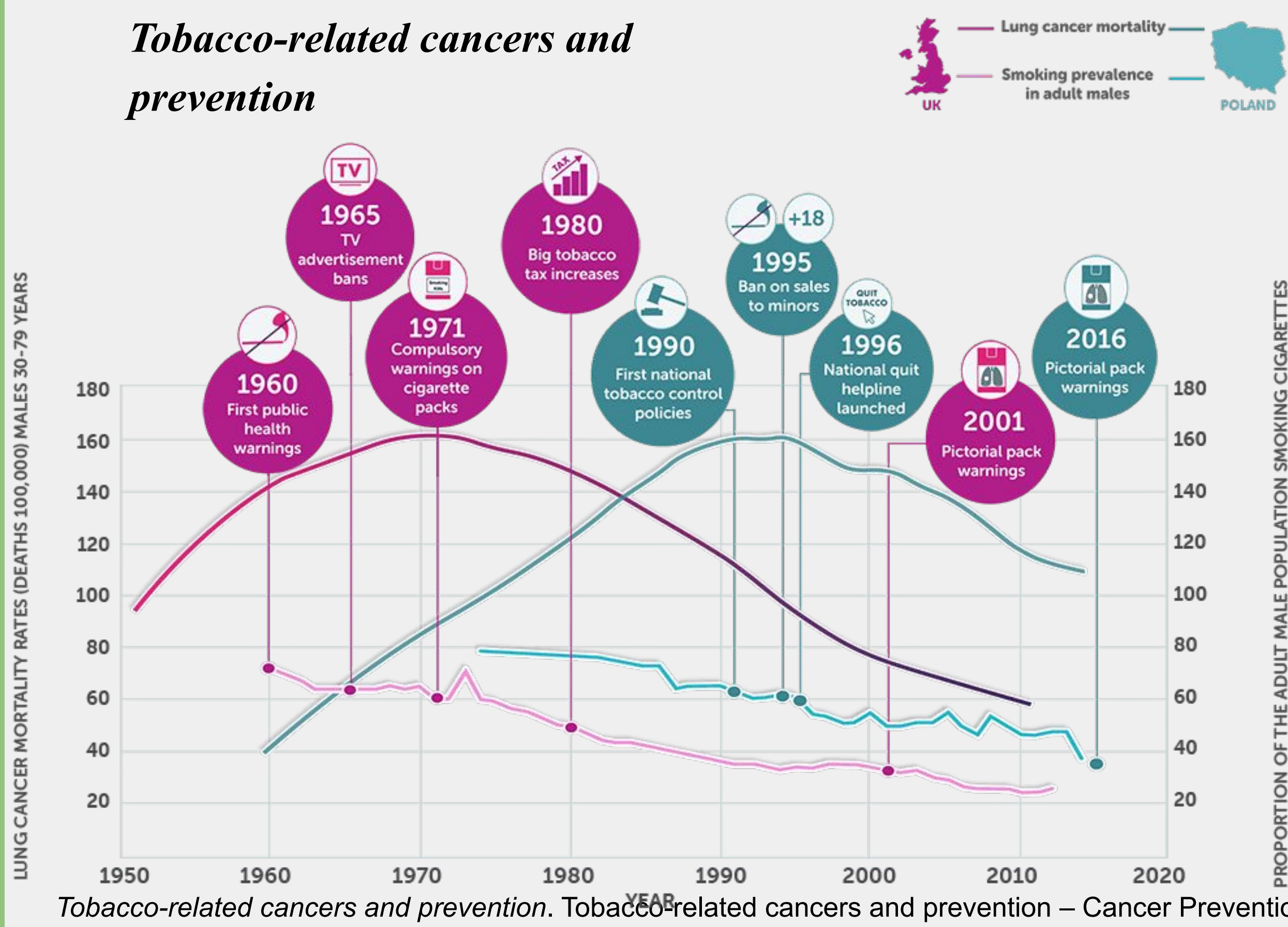
<https://healthmatch.io/blog/smoking-and-lung-cancer-how-big-is-the-problem-today>

### DATA ANALYSIS

#### RESULTS

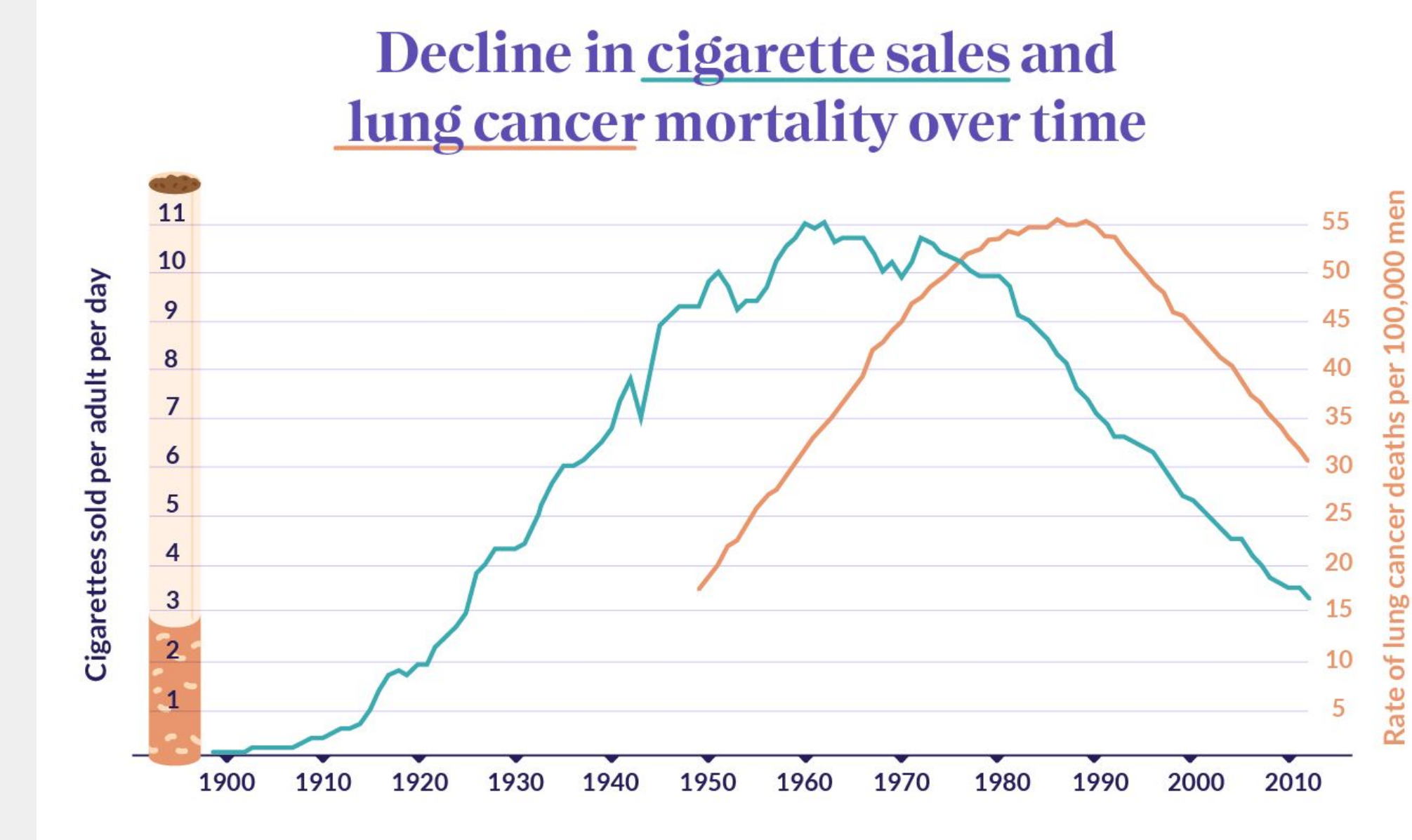
In conclusion, the convergence of tobacco, vaping, and the escalating cancer risk among teenagers underscores the critical importance of addressing this multifaceted public health challenge. Efforts to combat the vaping epidemic must prioritize comprehensive tobacco control measures, targeted education campaigns, and policies aimed at reducing youth access to nicotine products. By raising awareness, promoting cessation efforts, and advocating for evidence-based interventions, we can mitigate the future cancer burden and safeguard the health of today's youth. Furthermore, advocacy for evidence-based interventions at the local, national, and international levels is essential to enact policies that prioritize public health over industry interests. This includes advocating for higher taxes on tobacco and vaping products, implementing smoke-free policies in public spaces, and increasing funding for research on vaping-related health effects and cancer prevention strategies.

### Tobacco-related cancers and prevention



Tobacco-related cancers and prevention. Tobacco-related cancers and prevention – Cancer Prevention.

<https://cancerprevention.euro.iaarc.fr/european-code-against-cancer/tobacco-related-cancers-and-prevention/>



Ltd., H. P. (2021, July 29). Smoking and lung cancer. HealthMatch.

<https://healthmatch.io/blog/smoking-and-lung-cancer-how-big-is-the-problem-today>

# Reflection:

## 1. Discuss how you choose your topic?

We had a tone of topics to choose from, we narrowed it down to cancer. We then decided to learn about lung cancer focused on teen vaping. Lung cancer is one of the leading causes of cancer-related deaths worldwide, and vaping has been linked to various respiratory health issues, including lung cancer. Raising awareness about this connection helps educate people, especially teenagers, about the potential risks of vaping and encourages them to make healthier choices.

## 2. What led you to your approach?

We did research and read articles about lung cancer and teen vaping. We also had to search very specific for our data and diagrams. Overall, leading research on lung cancer and vaping awareness requires a combination of personal motivation, scientific curiosity, and a commitment to public health and social responsibility. Leaders in this field play a crucial role in protecting individuals from the harmful effects of vaping and reducing the burden of lung cancer and other vaping-related diseases.

## 3. What challenges did you encounter along the way?

Facing the challenge of other students copying our poster was frustrating and demotivating. Constantly changing our topic might seem like the right solution to prevent others from copying, but it kept happening and it can also hinder our progress and cause unnecessary stress. We were able to get assistance from our teacher who encouraged us to keep going forward in our poster.

## 4. What assistance did you receive?

We received tons of encouragement from our teacher Mrs. Gamache she showed us the correct way to find our resources, helped us improve, and help us get through our challenges with our classmates. Mrs. Gamache's dedication to our academic growth and well-being exemplifies the role of a supportive and nurturing educator. Her mentorship not only helped us excel in your project but also fostered a sense of confidence, resilience, and lifelong learning that will serve you well in future endeavors.