

Alcohol-Related Cancers in New York State, 2016-2020

Introduction

Excessive alcohol consumption and cancer are major public health issues in New York State.¹ Some residents of New York may not be aware of the connection between the two.² This report outlines the rates of cancer incidence and death for cancer types associated with alcohol consumption.

Association Between Alcohol Use and Cancer

- Alcohol is a human carcinogen (something that causes cancer in humans). Alcohol consumption increases the risk of certain cancers including cancers of the lip/oral cavity/pharynx, esophagus, colon and rectum, liver, larynx, and female breast.³ The list of alcohol-related cancers is likely to grow, with melanoma, prostate, and pancreatic cancers to be potentially added at some point.⁴
- While the highest risks are observed with heavy, long-term use of alcohol, even light use may increase the risk of certain cancers.⁴
- The associations between alcohol drinking and cancer risk have been observed consistently regardless of the specific type of alcoholic beverage. In other words, consumption of wine, beer, and liquor all contribute to an increased cancer risk.⁴
- One type of heavy alcohol use is binge drinking (consuming 4 or more drinks for women and 5 or more drinks for men on a single occasion). Binge drinking is the most common form of excessive drinking.⁴
- More than half of adults in New York State (54.9%) drink alcohol.⁶ Along with obesity and tobacco use, alcohol use is one of the most avoidable risk factors for cancer and New Yorkers can lower their risk of cancer by limiting the amount of alcohol they drink.⁷ However, 1 in 6 New Yorkers (17%) are unaware drinking alcohol increases a person's risk of cancer.²
- In a recently published review, where scientists from the International Agency for Research on Cancer analyzed existing literature on alcohol consumption and cancer, sufficient evidence was found for up to a 50% reduction of risk of esophageal and oral cancer after long term cessation of alcohol consumption.⁹

Alcohol Attributable Cancer Incidence and Mortality, New York State, 2016-2020^{*,†,‡}

- It is important to note that not all cases of these cancer types are caused by alcohol consumption, but that alcohol could be a contributor to these cases. Cancer occurs due to a combination of many factors including genetic risk, personal/family history of cancer, and other cancer risk factors, which, along with age, health status, the length of time a person has been consuming alcohol, and how much alcohol a person drinks (i.e., their total lifetime exposure), will all influence their risk for developing cancer.^{4,10}
- According to the Centers for Disease Control and Prevention data, an estimated 3.2 percent of all cancer deaths in New York State are attributable to or caused by alcohol consumption.¹¹ This equates to approximately 1,082 cancer deaths each year in New York State.

Cancer Incidence and Mortality Rates (per 100,000 persons) for Sites Most Closely Related to Alcohol Use, New York State, 2016-2020^{*,†,‡}

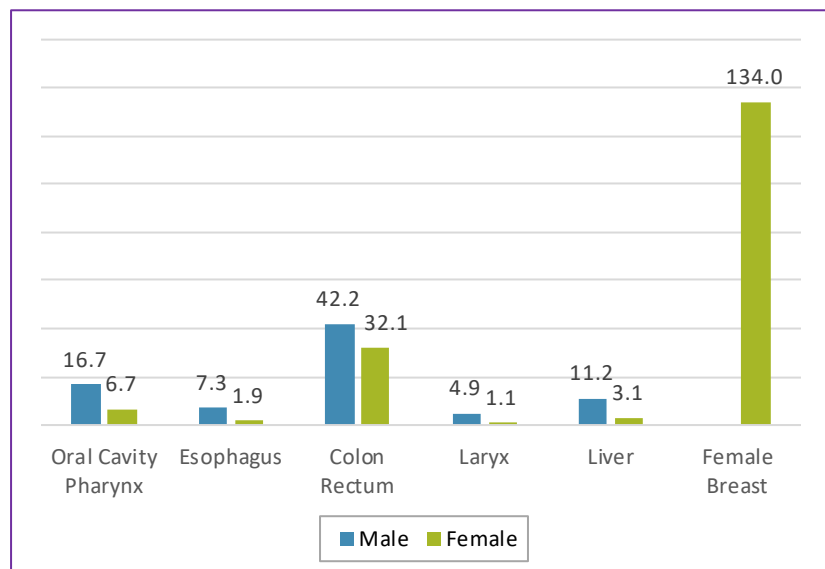
- On average, 31,790 New York State residents were diagnosed with an alcohol-related cancer each year between 2016 and 2020.
- Almost 8,000 individuals died from an alcohol-related cancer each year in New York State.

Cancer Site/Type	Incidence		Mortality	
	Cases ¹	Rate	Deaths ²	Rate
All Alcohol-Related Cancers	31,790	133.6	7,919	31.8
Lip, Oral Cavity, and Pharynx	2,773	11.3	541	2.1
Female Breast	16,688	134.0	2,486	18.2
Esophagus	1,080	4.3	829	3.3
Colorectal	8,793	36.6	2,889	11.6
Larynx	706	2.8	198	0.8
Liver	1,750	6.8	976	3.8
All Cancers	114,869	474.4	33,807	135.3

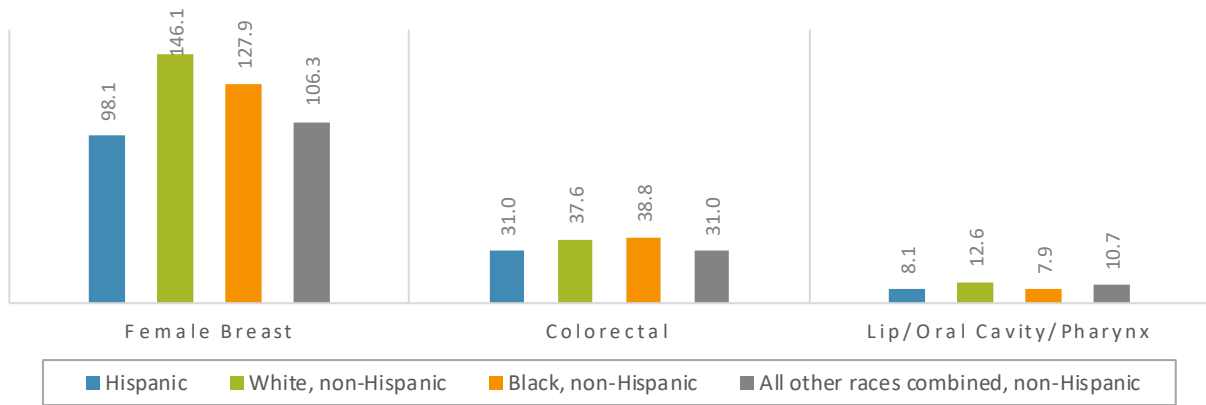
¹ Average number of new cases per year; ² Average number of deaths per year

Cancer Incidence Rates (per 100,000 persons) for Sites Most Closely Related to Alcohol Use, by Sex, New York State, 2016-2020^{*,†,‡}

- Males are more likely than females to be diagnosed with an alcohol-related cancer in New York State. [§]
- The prevalence of binge drinking is higher in males than in females, 20.8% and 13.0%, respectively (data not shown in figure). ^{12,13}



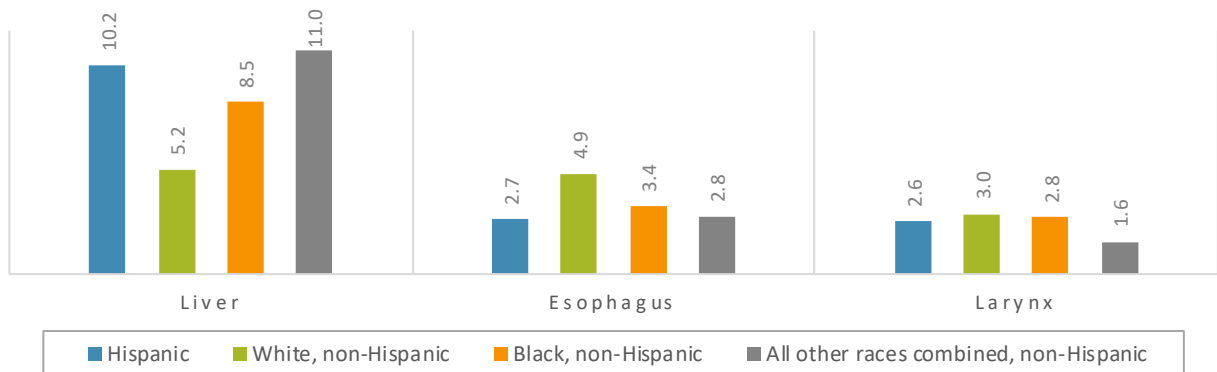
Cancer Incidence Rates (per 100,000 persons) for Sites Most Closely Related to Alcohol Use, by Race/Ethnicity, New York State, 2016-2020^{*,†,‡}



White, non-Hispanic New Yorkers had the highest incidence rates for female breast cancer. [§]

White, non-Hispanic and **Black, non-Hispanic** New Yorkers had similar colorectal cancer incidence rates, which were higher than the other groups. [§]

White, non-Hispanic New Yorkers had the highest lip/oral cavity/pharynx cancer incidence rates. [§]



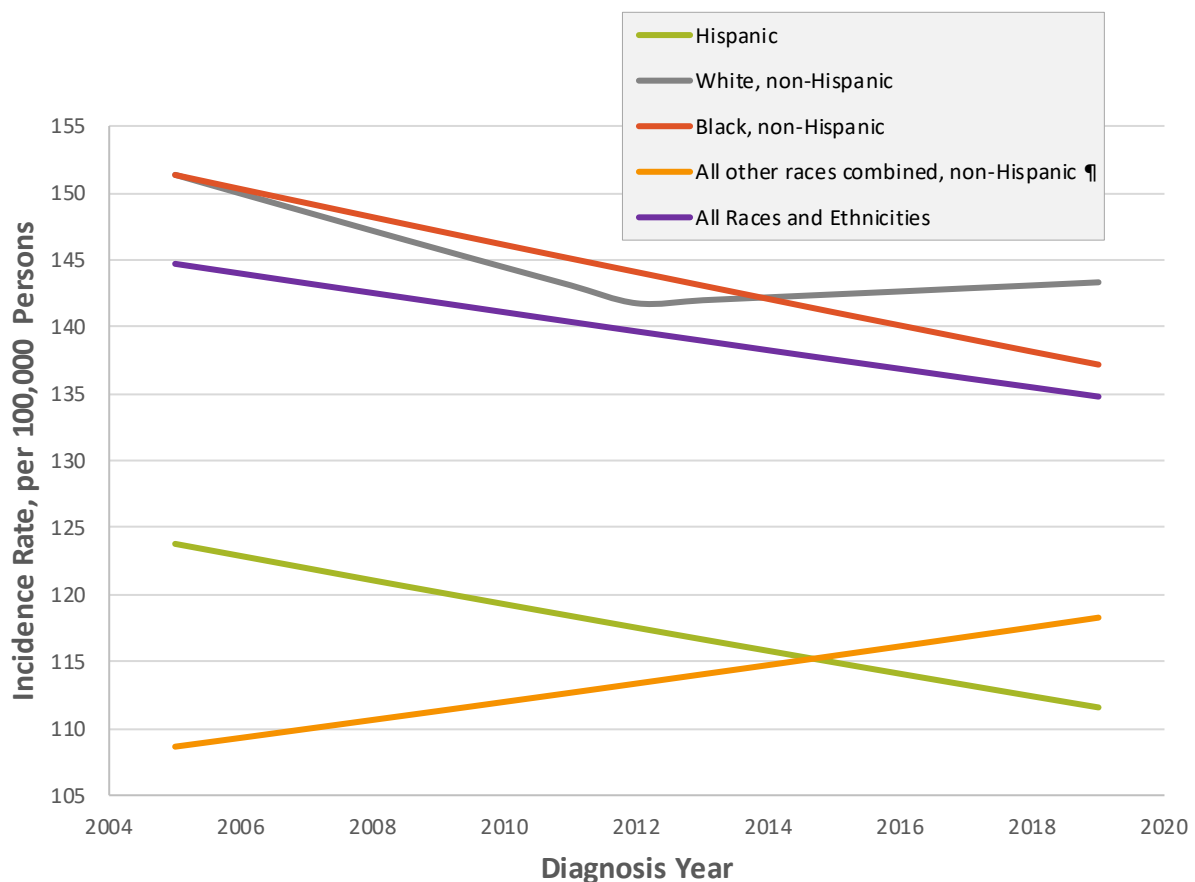
All other races combined, non-Hispanic New Yorkers had the highest liver cancer incidence rates. ^{§,¶}

White, non-Hispanic New Yorkers had the highest incidence rates for esophagus cancer. [§]

All other races combined, non-Hispanic New Yorkers had the lowest larynx cancer incidence rates, while the other groups had higher, but similar rates. ^{§,¶}

Trends in Cancer Incidence (per 100,000 persons) for Sites Closely Related to Alcohol, by Race/Ethnicity, New York State, 2005-2020 ^{*,†,‡,#}

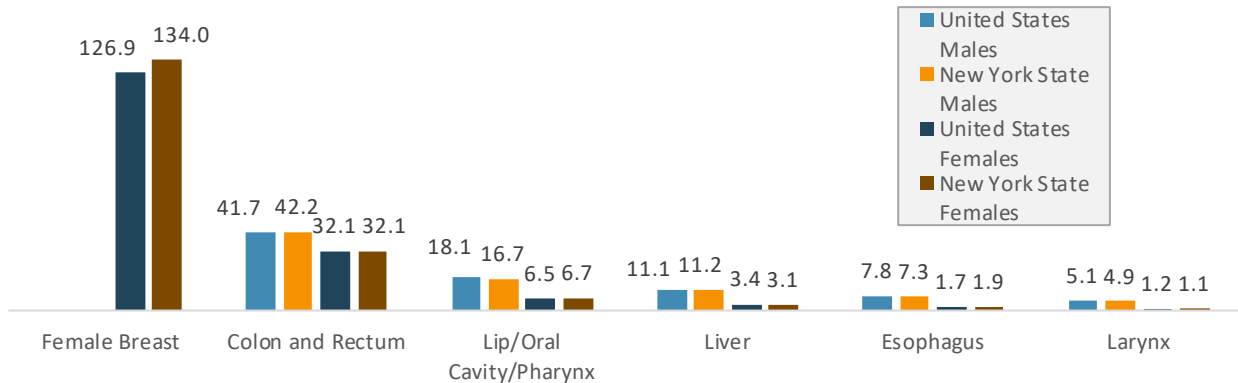
- For all sites combined, incidence rates for all races and ethnicities have been decreasing by 0.5% each year from 2005-2019. Data for 2020 was excluded from the trend line due to the impact of COVID-19 on cancer incidence rates. ^{||,**}
- The rates among individuals who are all other races combined, non-Hispanic[¶] are trending upwards for cancer incidence. ^{**}
- There is a decrease in cancer incidence rates for persons who are Black non-Hispanic and Hispanic. ^{**}
- Individuals who are White non-Hispanic did not have a significant trend.



[¶] All other races combined, non-Hispanic refers to non-Hispanic Asian, Pacific Islander, and American Indian/Alaskan Native persons. Due to low case counts, they were included in an aggregated race/ethnicity category.

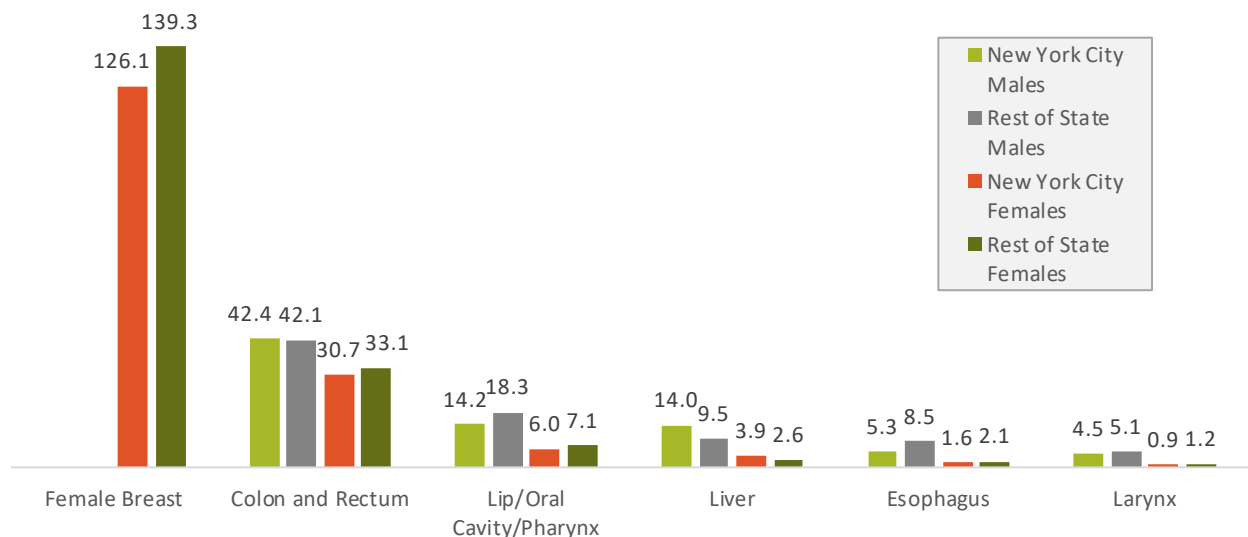
Cancer Incidence Rate (per 100,000 persons) by Cancer Site and Sex, New York State* vs. United States^{†,‡}, 2016-2020^{†,‡}

- Among New York State females, the incidence rates for lip/oral cavity/pharynx, esophagus, colorectal and larynx cancers were similar to those for the United States. However, compared to the United States, the breast cancer incidence rate was higher in New York State, while the liver cancer incidence rate was lower in New York State. [§]
- Among New York State males, colorectal, larynx, and liver cancer incidence rates were similar to those for the United States while lip/oral cavity/pharynx and esophagus cancers had lower rates in New York State compared to the United States. [§]

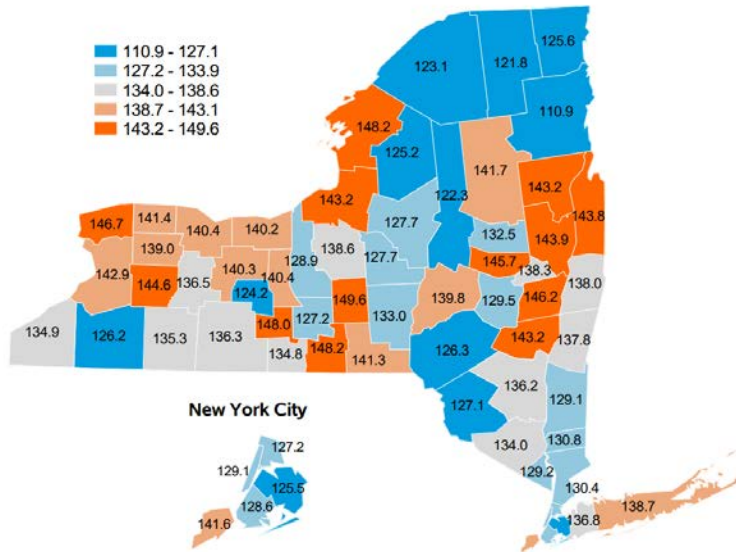


Cancer Incidence Rates (per 100,000 persons) by Cancer Site, Sex, and Region, 2016-2020^{*,†,‡}

- For females, incidence rates for alcohol-associated cancers were higher in the rest of the state, when compared to New York City, except for liver cancer which was lower in the rest of the state. ^{§,‡}
- For males, incidence rates for alcohol-associated cancers were higher in the rest of the state than in New York City, except for liver cancer and colorectal cancer. ^{§,‡} Males in the rest of the state had a lower incidence rate for liver cancer and similar incidence rate for colorectal cancer, when compared to New York City. ^{§,‡}

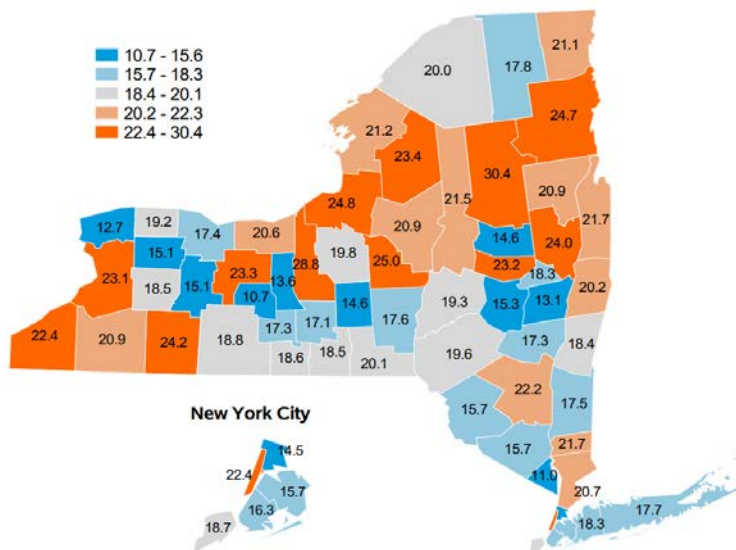


Cancer Incidence Rates (per 100,000 persons), by County, 2016-2020*†‡



- In this map, alcohol-related cancer five-year average incidence rates are displayed for diagnosis years 2016-2020. The rates vary across counties from 110.9 to 149.6 (per 100,000 persons).
- There are five levels of shading in the map with the darker blue representing lower rates and the darker orange representing higher rates. The different shade levels do not represent statistical differences between counties.

Alcohol Binge Drinking Percentages, by County, 2016¹², §§



- This map shows binge drinking (the most common type of excessive drinking) percentages by county.²
- Binge drinking percentages^{§§} vary by county from 10.7-30.4%.¹⁴
- There are five levels of shading in this map, with the darker blue counties having the lowest binge drinking percentages and darker orange counties with the highest binge drinking percentage.

Conclusion

- Of the 114,869 cancer cases diagnosed in New York State each year, 31,790 were alcohol-associated cancers, making up to 28% of the total cancer burden. While this does not reflect the percent of cancers caused by alcohol use, it does demonstrate an important need to address alcohol use as a significant risk factor.
- The public health burden of alcohol use and its effects on cancer risk call for a robust response such as efforts to adopt policies that are shown to reduce excessive use, like increasing alcohol taxes to deter purchasing (especially among youth) and regulating the times and places alcohol can be sold.
- The [New York State Cancer Consortium](#) identifies alcohol as a risk factor for cancer and has outlined objectives and strategies for action in the [New York State Comprehensive Cancer Control Plan](#).
- In September 2021, the New York State Alcohol Surveillance and Epidemiology Program was established. Program goals include monitoring and sharing data on excessive alcohol use and its related harms to inform prevention efforts, developing partnerships with state and local entities to collaborate on prevention efforts, increasing awareness about the public health impact of excessive alcohol use among partners and public, and building support for population-based policy and environmental changes to reduce excessive alcohol use.¹⁵

Footnotes

- * Source of data: New York State Cancer Registry and Cancer Statistics. Data provisional, November 2022. <https://www.health.ny.gov/statistics/cancer/registry/>
- † Because cancer registries do not routinely collect information about alcohol use, the data for alcohol-associated cancers are based only on cancer type and we do not have information on how many of these cancers would be attributable to alcohol use.
- ‡ Some inherent limitations in cancer registry data that may affect the interpretation of findings discussed in this report are described here: <https://www.cdc.gov/cancer/uscs/public-use/cautionary-notes.htm>
- § Indicates statistical significance
- ¶ All other races combined, non-Hispanic refers to non-Hispanic Asian, Pacific Islander, and American Indian/Alaskan Native persons. Due to low case counts, they were included in an aggregated race/ethnicity category.
- # Trend analysis was conducted using the Join point Regression Program, Version 4.9.1.0, April 2022; Statistical Research and Application Branch, National Cancer Institute. <https://surveillance.cancer.gov/joinpoint>
- || Diagnosis year 2020 is not used in the fit of the trend lines, due to an unusual drop in cancer incidence that year, due to COVID-19.
- ** Indicates that the AAPC (average annual percent change) is significantly different from zero at the alpha=0.05 level. The observed values are indicated on the line graph as a point only, whereas the modeled values are indicated with a trend line.
- †† Source of data: Centers for Disease Control and Prevention (CDC). U.S. Cancer Statistics Public Use Research Database, 2022 submission (2001–2020). United States Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute. Released June 2023. https://www.cdc.gov/cancer/uscs/public-use/?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fpublic-use%2Findex.htm

- ‡‡ The rest of the state encompasses all of New York State except for New York City.
- §§ The binge drinking rates were sourced from the 2016 New York State Behavioral Risk Factor Surveillance System Health Indicators by County and Region data. Due to the latency of cancer, (amount of time between the exposure and diagnosis), 2016 binge drinking data was used in lieu of more recent data.

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