

Addressing Alcohol and Tobacco and Alcohol Co-use for Cancer Prevention and Control

David Berrigan, Ph.D.
Health Behavior Research Branch
Behavioral Research Program
Division of Cancer Control and Population Sciences
National Cancer Institute

Outline

- Where I am coming from
- Alcohol (Mostly), and tobacco as targets for cancer prevention and control
- A momentous time for alcohol and cancer
- Three recent reports
- The Surgeon General's Advisory on Alcohol and Cancer Risk
- NCI efforts to address alcohol for cancer prevention and control



Conflicts of Interest and Acknowledgements

- I have nothing to disclose
- Acknowledgements
 - Surgeon General and his office: Vivek Murthy, Atul Nakhasi, Thomas Quinoja, Priyanka Athalya, Hanna Kim, Noelle Harada, Noelle Chen, Max Lesko and more
 - NCI: Bill Klein, Neal Freedman, Rachel Grana Mayne, Carolyn Reyes-Guzman, Paul Han, Robin Vanderpool, Christian Abnet, Katherine McGlynn, Jill Reedy, Denise Lewis, Nadia Howlader AND MORE
 - And many folks from CDC, NIAAA, HHS

Where I am coming from

- Department of Health and Human Services
- National Institutes of Health
- National Cancer Institute
- Division of Cancer Control and Population Sciences
- Behavioral Research Program
Primary: Health Behavior Research Branch
Secondary: Tobacco Control Branch

2024 Funding

DCCPS Grants – \$583 Million

BRP Grants - \$187 Million

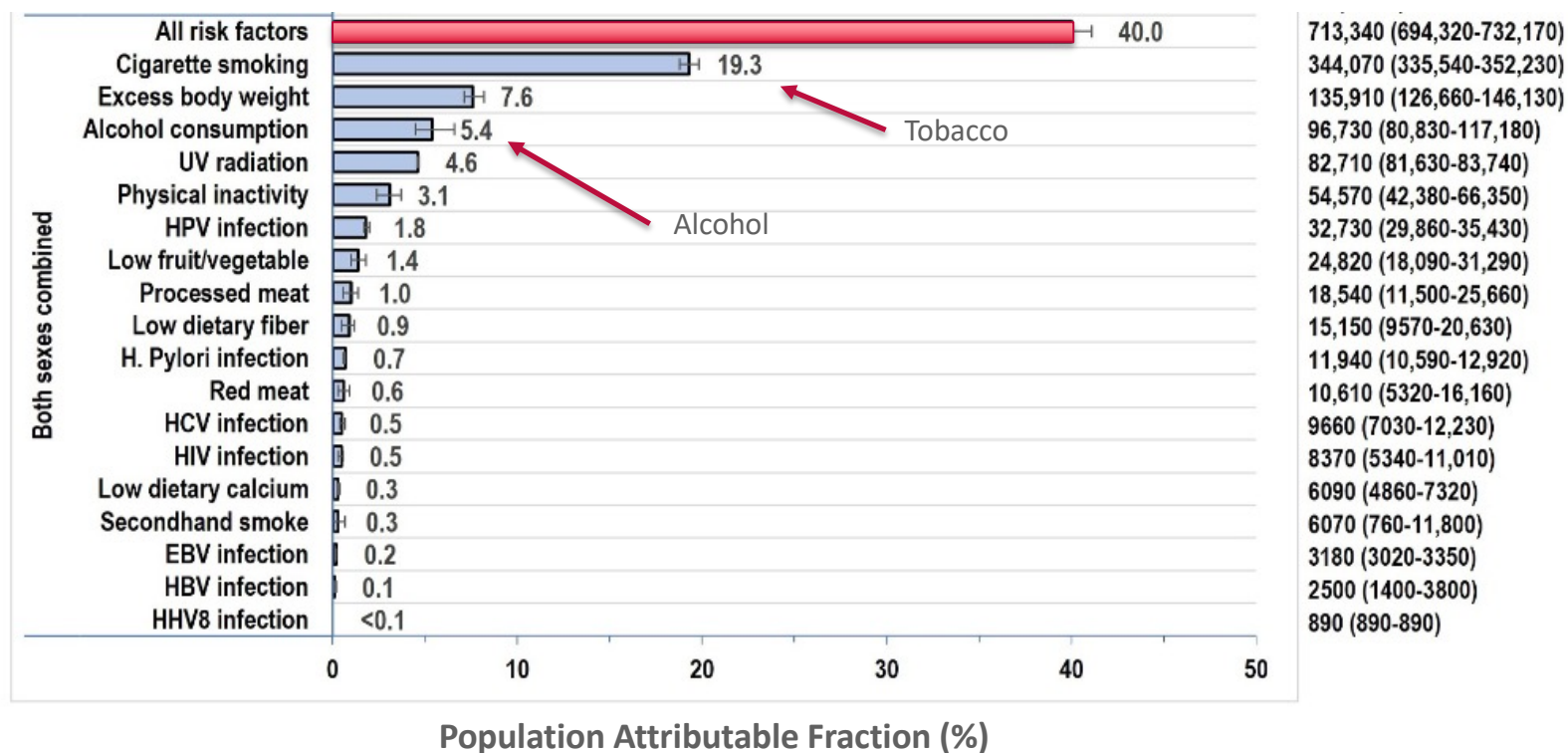


Tobacco and alcohol cause cancer at multiple overlapping sites

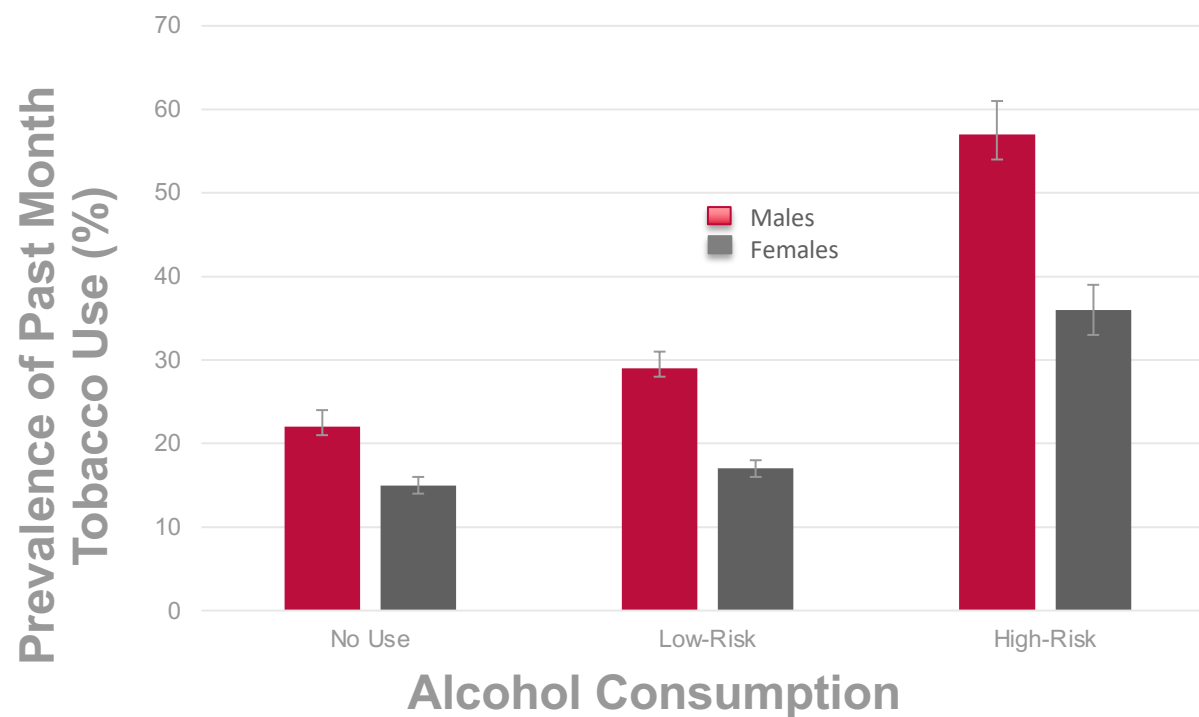
Disease site	Caused by tobacco	Caused by alcohol
Esophagus	Yes	Yes
Larynx	Yes	Yes
Oral/pharynx	Yes	Yes
Colon and rectum	Yes	Yes
Liver	Yes	Yes
Stomach	Yes	Yes
Bladder	Yes	-
Blood	Yes	-
Myeloid leukemia	Yes	-
Hodgkin lymphoma	-	-
Myeloma	-	-
Non-Hodgkin lymphoma	-	Protective
Cervix	Yes	-
Kidney and renal pelvis	Yes	Protective
Lungs, bronchi, trachea	Yes	-
Pancreas	Yes	-
Breast	-	Yes
Thyroid	-	Protective

- Alcohol may also cause lung, pancreas, prostate, and skin cancer
- Synergistic increases in risk have been documented for co-use of alcohol and tobacco and risk of head and neck cancers

Tobacco and alcohol are the number 1 and 3 modifiable risk factors for cancer in the US



Co-use of tobacco and alcohol is very high in people who drink above the US guidelines (NSDUH 2019)



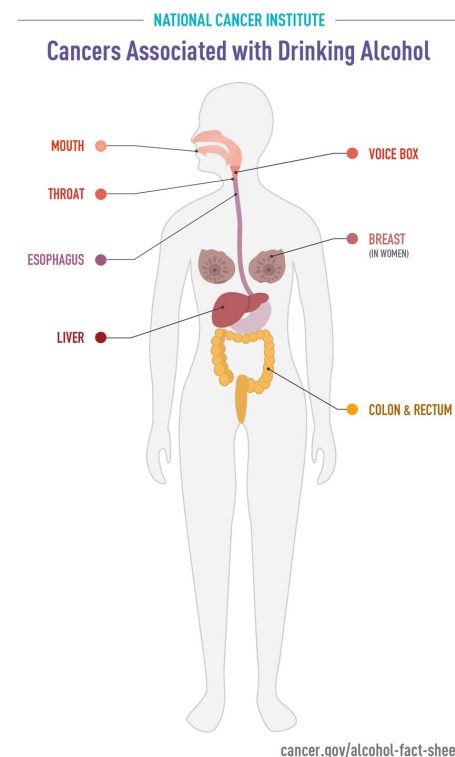
Comparing the State of Tobacco and Alcohol Use, Awareness, and Policy

Comparison	Tobacco in 1965-66	Alcohol in 2019-2022	Tobacco in 2019-2022
Awareness of the link with cancer	40%	32-54%	~90%
Tobacco and Alcohol use in the past month	52% Men 34% Women	Male: ~60% Female ~42%	Regular Smoking 14% Men 11% Women Past Month - 26%
Physician use	50% in 1953	~65% report more than 1-2 drinks a week	2% in 2011 7 % of Nurses
Taxes	Federal – 8 Cents a pack Local ~ same?	Per drink average state and federal taxes were \$0.87 in 1965, and \$0.20 in 2011.	Federal – \$1.01 per pack State \$0.17 - 4.25 per pack

Burns 2014 Am. Thor. Soc.; Cummings and Proctor 2014 Burns 2013 ATS; Siedenberg 2022 Burns 2013 ATS; Kerr 2013 AJPM;

A Critical time for Alcohol and Health

- October 21, 2020 Public health and consumer groups petition for changes to US Alcohol Container Labels
- Pandemic changes in alcohol related policy and behavior
- 2023 Canadian Low Risk Drinking Guidelines Update
- 2025 Dietary Guidelines Update
- Republic of Ireland to introduce alcohol and cancer warning labels



Three Recently Released Documents

Document	Lead	Approach	Outputs
December 2024: Review of Evidence on Alcohol and Health	NASEM	Meta-analyses of associations between moderate consumption and 8 health outcomes	Relative Risk Estimates and Strength of Evidence
January 2025: Alcohol and Cancer Risk	Surgeon General	Expert Commentary on evidence for a causal relationship between alcohol and cancer	Summary of evidence and action items
January 2025: Alcohol Intake & Health Study	ICCPUD*	Models predicting morbidity and mortality related to any level of alcohol use	Lifetime cumulative risk

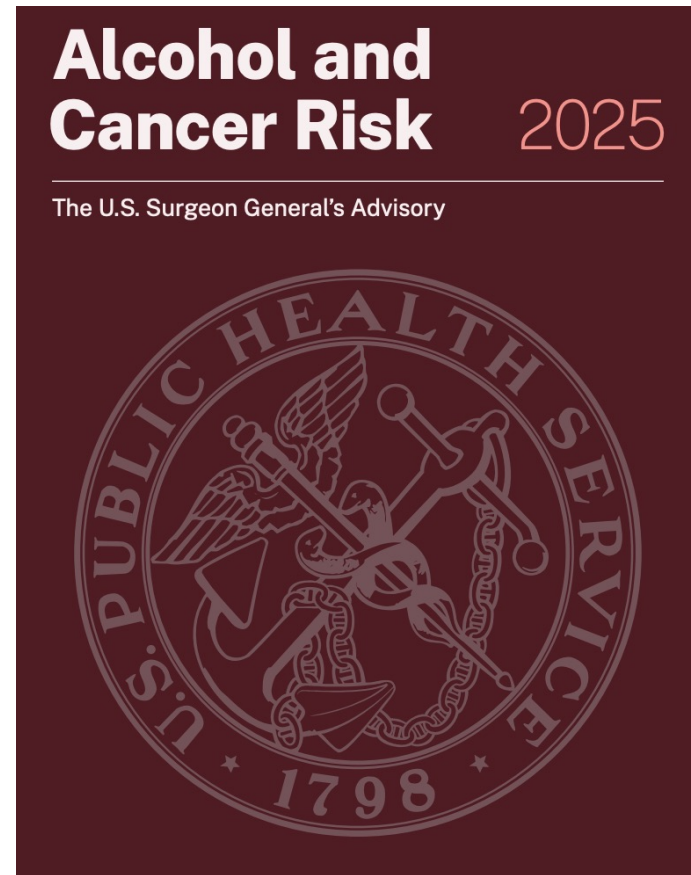
NCI's Growing Efforts to Address Alcohol for Cancer Prevention and Control

- Alcohol and Cancer Workgroup; 2020 Workshop; Webinar Series; Funding Opportunities; Survey Data....
- SG Advisory expert input
Bill Klein, David Berrigan, Neal Freedman, Rachel Grana, Carolyn Reyes Guzman, Paul Han, Robin Vanderpool, Christian Abnet, Katherine McGlynn and others
- ICCPUD SAMSHA Report and Dietary Guidelines Process
Jill Reedy, David Berrigan
- IARC Alcohol Cessation/Reduction Review - **N Engl J Med 2023;389:2486-2494**
Christian Abnet, Katherine McGlynn

The Surgeon Generals Advisory

Contents

1. Summary
2. Alcohol is a Leading Preventable Cause of Cancer
3. The Causal Relationship Between Alcohol Consumption and Cancer
4. We Can Take Action



Origins and Timeline of the Surgeon General's Advisory

- **Fall 2020:** Petition to the Alcohol and Tobacco Tax and Trade Bureau (TTB) kicks off renewed attention to labeling in the US
- **2022:**, TTB (from the Department of the Treasury) reaches out to SG Office, CDC, NIAAA, NCI for input on the petition
- **2022-2023:** Development of memo addressing and supporting petition
- **2023:** Advisory under consideration
- **Spring/Summer 2024:** Advisory work begun; Berrigan detailed to SG office
- **January 2025:** Advisory released

Summary and topline messages of the SG Advisory

Summary: This advisory highlights alcohol use as a leading preventable cause of cancer in the United States, contributing to nearly 100,000 cancer cases and about 20,000 cancer deaths each year.

1. Alcohol consumption is the third leading preventable cause of cancer in the United States, after tobacco and obesity.
2. The causal relationship between alcohol and cancer was established using the same types of rigorous evidence and review as used for tobacco.
3. The SG highlighted actions that can be taken to begin reducing alcohol-related cancers in the U.S.

Some Takeaways From the Advisory Process

Development

1. Importance of vivid graphics

Aside: Rigorous selection and matching of assertions and sources

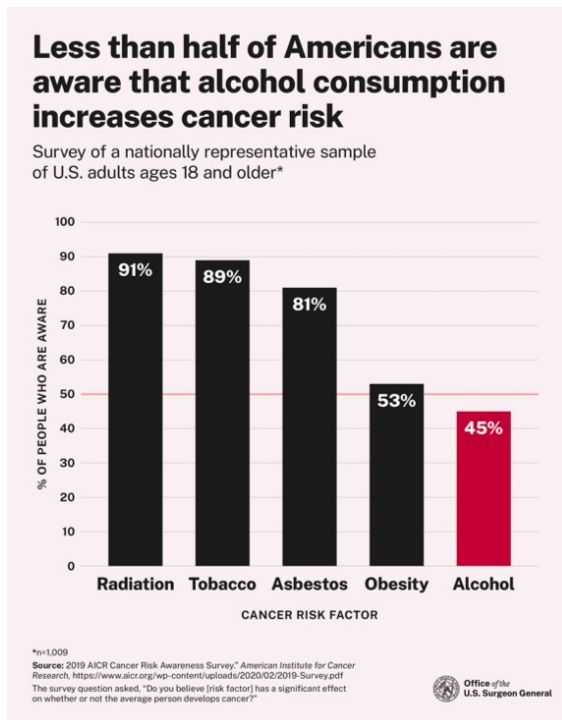
Scope

2. Alcohol and Cancer vs other health outcomes
3. Comparisons with other risks, especially tobacco

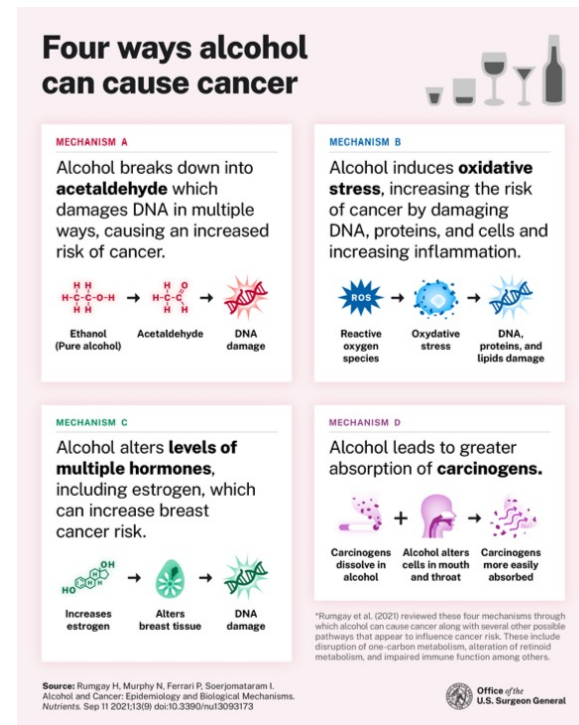
Challenges

4. Communicating about relative and absolute risk
5. Positive and negative effects and need for cumulative absolute risk estimates

1. Importance of vivid infographics



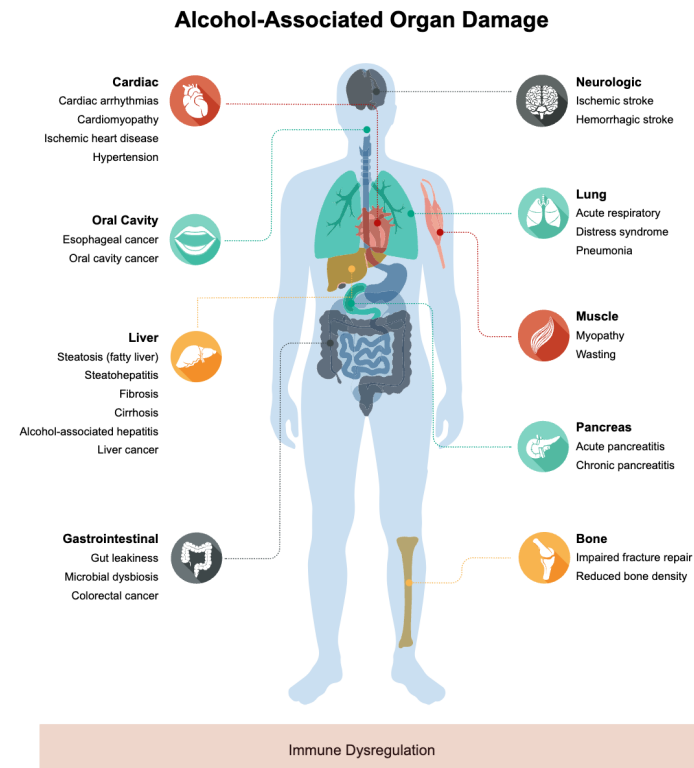
Data from AICR



Based on Cancer Council Victoria Graphics

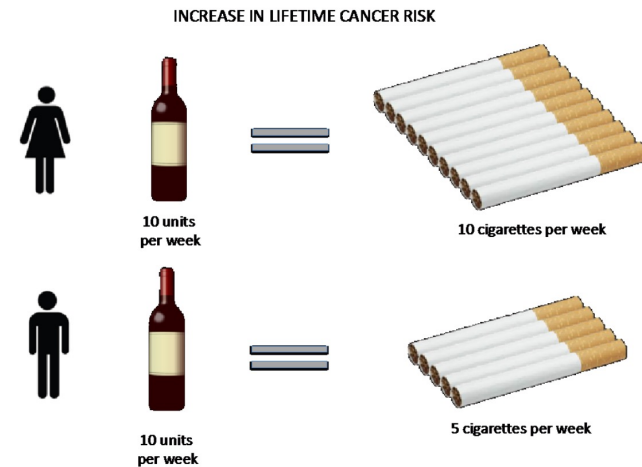
2. Focusing on cancer vs other health outcomes

- Cancer is just a fraction of the harms of alcohol in the US
- But awareness of the risk of cancer because of alcohol is low
- Cancer is a distinct and vivid fear for many
- Past attention has focused on AUD, accidents, and pregnancy



3. Comparisons with other risks, especially tobacco

- We really wanted to compare alcohol to tobacco
- Strong pushback
- Comparison implies a little smoking not that risky
- The larger picture of progression to addiction and heavier use
- Difficulty in finding accurate comparison data sets for specific countries

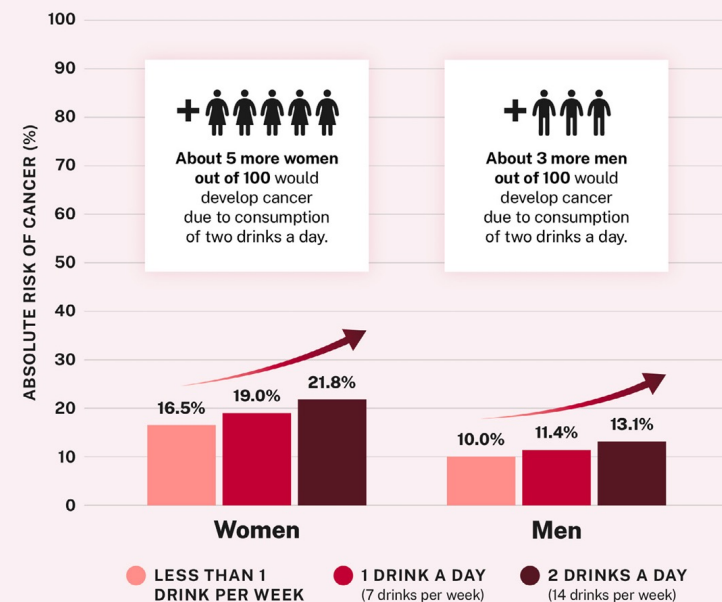


“This study by no means detracts from the substantive risks of smoking.” Hydes 2019

4. Relative and absolute risk

- Extensive literature on difficulties in understanding relative risk
- Yet most epidemiological studies report it
- Last fall we could not find cumulative lifetime risk data related to alcohol for the US – used Australia data
- US numbers now available in ICCPUD report
- Answer: Reported both, included a call out box contrasting absolute and relative risk

Higher alcohol consumption increases alcohol-related cancer risk in women and men

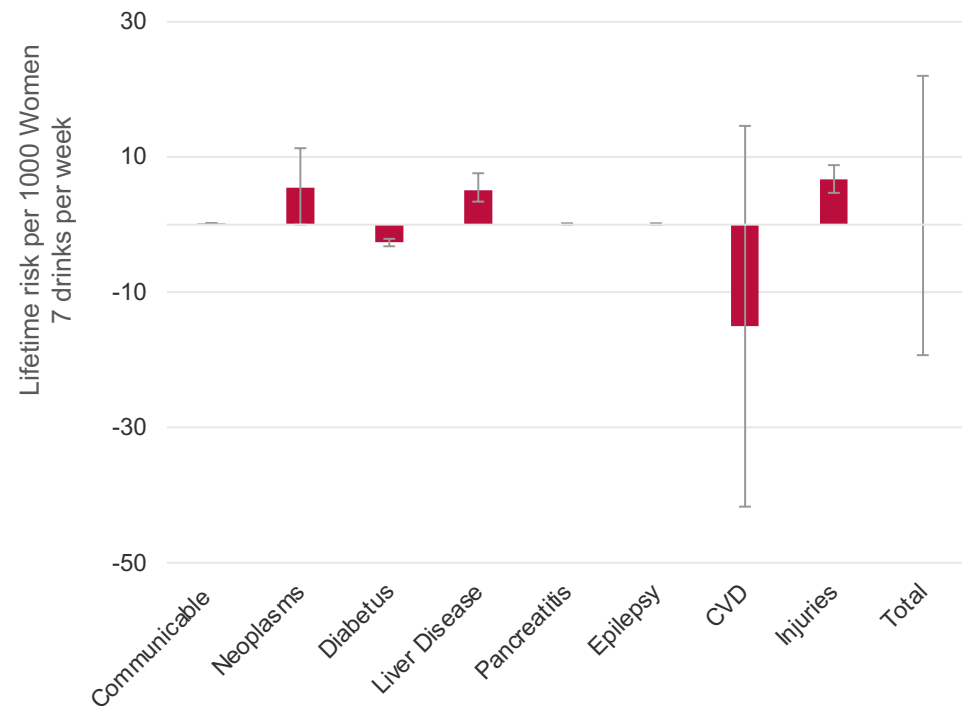


This graph represents the cumulative absolute risk of alcohol-related cancer in women and men over the lifespan by age 80. Alcohol-related cancer includes breast, colorectum, esophagus, liver, mouth, throat, and voice box cancers.

Source: Calculated with data from Sarich, P., Canfell, K., Egger, S., Banks, E., Joshy, G., Grogan, P., & Weber, M. F. (2021). Alcohol consumption, drinking patterns and cancer incidence in an Australian cohort of 226,162 participants aged 45 years and over. British journal of cancer, 124(2), 513–523. <https://doi.org/10.1038/s41416-020-01101-2>

5. Risk increases vs decreases

- Alcohol consumption increases risk of cancer at 7+ sites as well as risks of many other health outcomes
- But decreases risk of kidney and maybe thyroid and NH Lymphoma
- Dose-dependent CVD and Diabetes benefits?
- How to address these plusses and minuses?



Alcohol Intake and Health Study 2025

Assessing the Impact of the SG Advisory

- Huge Press Coverage
 - Surgeon General Cachet
 - January timing
 - Clear Message
- Surge in Google Searches for Alcohol and Cancer
- Motivating Policy?
 - “Connecticut, Alaska Mull Bills to Expand Alcohol Health Warnings”
 - “Pennsylvania Lawmaker Proposes Cancer Warning Labels for Alcohol”
- **Identifying Research Needs**
 - AICR/WCRF is fielding its awareness of cancer risk survey again – will it show increase in awareness? [Brockton Pers. Comm.]
 - Clearly better data needed on health effects of moderate alcohol consumption and on the effects of cessation



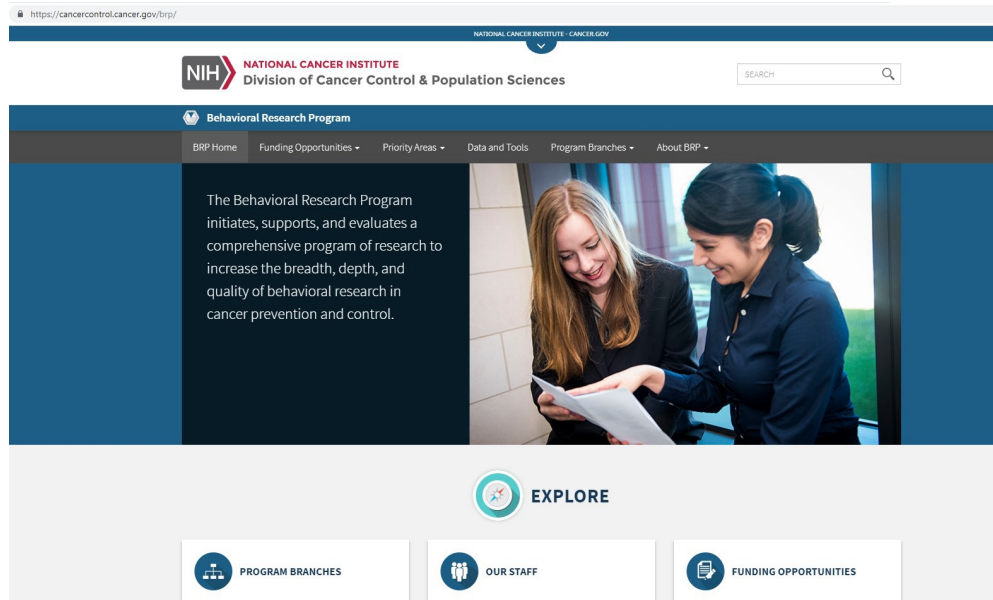
Conclusions

- A very exciting time for addressing alcohol and tobacco and alcohol co-use for cancer prevention and control
- Addressing labeling and the dietary guidelines involve both complex science and some intensely competing interests and perspectives
- Co-use of Tobacco and Alcohol merits greater attention
 - mechanisms of their joint effects on cancer
 - developing interventions that address both together
- Researchers, including epidemiologists, could be encouraged to think about the uses of their results and how they might contribute more directly to the evidence needed for changing specific policies

NCI Resources and Contacts

- NIAAA, NIDA, NCI and other Institutes and Offices create resources and fund research related to alcohol
- NCI resources related to alcohol - <https://cancercontrol.cancer.gov/brp/hbrb/alcohol-and-cancer>
- There are several alcohol and cancer relevant funding opportunities from NCI and NIAAA - [NOT-AA-23-018](#) [PAR-25-221](#)
- A December 2020 NCI workshop “**Alcohol and cancer: Identifying evidence gaps and research challenges across the cancer continuum**”
 - Webinar - <https://cancercontrol.cancer.gov/brp/events/alcohol-cancer-workshop>
 - Summary Paper – [Gapstur et al.](#) - Cancer Epidemiol Biomarkers Prev 2022 Jan;31(1):5-10.
- Alcohol and Cancer Webinar Series: <https://cancercontrol.cancer.gov/brp/events/alcohol-and-cancer>
- [HINTS Survey data](#) on awareness of the link between Alcohol and Cancer and other issues
- NCI Program Staff: David Berrigan, Tanya Agurs-Collins, Chipper Dean, Rachel Grana, Carolyn Reyes-Guzman, Annette Kaufman, Margaret Mayer

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Next Steps – 1: Labels and Guidelines

Labels

- Update the existing Surgeon General's health warning label on alcohol-containing beverages to include a warning about the risk of cancer associated with alcohol consumption.
- Pursue changes to label characteristics to make the warning label more visible, prominent, and effective in increasing awareness about cancer risks associated with alcohol consumption.

Guidelines

- Reassess recommended limits for alcohol consumption to account for the latest evidence on alcohol consumption and cancer risk.

Next Steps – 2: Education and Awareness

- Strengthen and expand education efforts to increase general awareness that alcohol consumption causes cancer.
- Inform patients in clinical settings about the link between alcohol consumption and increased cancer risk. Promote the use of alcohol screening and provide brief intervention and referral to treatment as needed
- Highlight alcohol consumption as a leading modifiable cancer risk factor and incorporate proven alcohol reduction strategies into population-level cancer prevention initiatives and plans.
- For individuals, be aware of the relationship between alcohol consumption and increased cancer risk when considering whether or how much to drink. Cancer risk increases as you drink more alcohol.