

## Alcohol & Cancer

### *An Underappreciated Risk Factor for a Deadly Disease*

Alcohol use is one of the leading preventable causes of cancer, yet many Americans, including health professionals, are not aware of this or are underinformed.<sup>1</sup> According to a 2017 American Institute for Cancer Research (AICR) survey, only 39% of Americans recognize this link.<sup>2</sup>

### Facts about the Alcohol-Cancer link

- Alcohol consumption is a causal risk factor for several types of cancer, including cancers of the head and neck, female breast, stomach, liver, and colorectum.<sup>3</sup>
- Every high-level cancer research body – including the WHO’s International Agency for Research on Cancer (IARC),<sup>4</sup> the American Institute for Cancer Research (AICR),<sup>5</sup> the American Cancer Society,<sup>6</sup> the American Society for Clinical Oncology (ASCO),<sup>7</sup> and the National Cancer Institute (NCI)<sup>8</sup> – has determined that alcohol beverages are causal risk factors for cancer.
- The U.S. National Toxicology Program (the U.S. agency charged with officially identifying carcinogens) has identified “alcoholic beverage consumption” as “known to be a human carcinogen” – its highest category of carcinogenicity, indicating that there is “sufficient evidence of cancer from human studies showing a cause-and-effect relationship between exposure to the substance and human cancer.”<sup>9</sup> **Other examples of human carcinogens include: arsenic, asbestos, formaldehyde, Hepatitis B and C viruses, and tobacco.**<sup>10</sup>

Percentage of  
Cancer Deaths  
which are  
Alcohol-Related

Cancer Site	Alcohol-related %
Mouth, pharynx, & larynx	27
Esophagus	34
Liver	15
Colorectum	5
Female Breast	11

Source: WCRF/AICR<sup>11</sup>

- Alcohol is a risk factor for three of the deadliest cancers in terms of recalcitrance: those of the **liver** (18% 5-year relative survival rate), **esophagus** (21%), and **stomach** (31%).<sup>12</sup>

<sup>1</sup> LoConte et al. (2017); AICR (2017); Oh, Kumar, & Cruz (2008)

<sup>2</sup> AICR (2017)

<sup>3</sup> AICR (n.d.)

<sup>4</sup> IARC (2010)

<sup>5</sup> AICR (n.d.)

<sup>6</sup> Islami et al. (2017)

<sup>7</sup> LoConte et al. (2017)

<sup>8</sup> National Cancer Institute (2013)

<sup>9</sup> National Toxicology Program (2014)

<sup>10</sup> American Cancer Society (n.d.)

<sup>11</sup> WCRF/AICR (2009)

<sup>12</sup> Deadliest Cancers Coalition (n.d.)

- Even low-to-moderate levels of consumption confer risk for some of these cancers. In fact, there is no completely “safe” level of alcohol use with regard to cancer risk, with risk for some cancers (most notably female breast cancer) beginning at just one drink a day.<sup>13</sup> Accordingly, AICR offers the following recommendation regarding alcohol use and cancer:

*Even small amounts of alcohol pose some cancer risk, so for lowest risk, AICR recommends not drinking alcohol at all. However, if you do drink alcohol, limit your intake to no more than two drinks a day for men and one drink a day for women.<sup>14</sup>*

- Furthermore, no specific type of alcohol (beer, wine, or hard liquor) is more associated with the risk of cancer than others.<sup>15</sup>
- There is a growing body of research on alcohol’s link with cancers of the pancreas,<sup>16</sup> prostate,<sup>17</sup> and skin.<sup>18</sup>

## The Truth about Alcohol’s “Health Halo”

While some past studies have shown a relationship between red wine and other alcohol consumption and decreased heart disease risk and reduced overall death rates, a growing number of researchers believe this relationship has been overstated.<sup>19</sup>

The improved health outcomes may be better explained (or at least partially explained) by other healthy behaviors and advantages enjoyed by light-moderate drinkers – like regular exercise, better diet, and access to preventive health care.<sup>20</sup> Regardless, the American Heart Association does not recommend that anyone drink for heart health. Moreover, binge and heavy drinking can cause serious heart problems, including alcoholic cardiomyopathy<sup>21</sup> and arrhythmias.<sup>22</sup>

An in-depth meta-analysis of studies about effects of moderate drinking on mortality backs up the contention that many of the studies finding health benefits from drinking are not carefully designed. The researchers found that “low-volume alcohol consumption [that is, regular, moderate drinking] has **no net mortality benefit** compared with lifetime abstention or occasional drinking.”<sup>23</sup>

Furthermore, there have been misleading claims circulating about red wine because of the presence of resveratrol, an anti-oxidant. In reality, the (carcinogenic) ethanol in a glass of wine is **over 100,000 times** more potent than the resveratrol.<sup>24</sup>

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<sup>13</sup> AICR/WCRF (2017)

<sup>14</sup> AICR (n.d.)

<sup>15</sup> LoConte et al. (2017)

<sup>16</sup> Naudin et al. (2018)

<sup>17</sup> Michael et al. (2018)

<sup>18</sup> Gandini et al. (2018)

<sup>19</sup> Wisconsin Cancer Council (n.d.)

<sup>20</sup> Barefoot et al. (2002); Naimi et al. (2005)

<sup>21</sup> Maisch (2018)

<sup>22</sup> Brunner et al. (2018)

<sup>23</sup> Stockwell et al. (2016). Emphasis added.

<sup>24</sup> Lachenmaier et al. (2014)

## The Nebraska Experience

The cancers for which alcohol consumption is a risk factor (in shaded cells, below) are among the most deadly to Nebraskans, both in terms of numbers of deaths and recalcitrance (five-year survival rate).

Cancer site	Est. number of deaths, Nebraska, 2017
Lung/Bronchus	900
<b>Colorectum</b>	330
Pancreas	250
<b>Female Breast</b>	230
Prostate	180
Leukemia	150
<b>Liver</b>	130

Source: American Cancer Society<sup>25</sup>

The Nebraska Comprehensive Cancer Control Program has identified the need to address excessive alcohol consumption in order to reduce alcohol-related cancers. The Nebraska Cancer Plan (2017-2022) includes objectives to reduce binge drinking, as well as raise awareness of the alcohol-cancer link among medical professionals and the general public.<sup>26</sup>

## Solutions

The most effective way to reduce alcohol-related cancers is through the implementation of population-level alcohol control policies. These policies include:<sup>27</sup>

- Increasing the price of alcohol through taxation;
- Reducing the availability of retail alcohol through regulation of alcohol outlet density;
- Restricting alcohol advertising and marketing.

The American Society of Clinical Oncology – America’s cancer doctors – also calls for the elimination of **pinkwashing**:

... Pinkwashing is a form of cause marketing in which a company uses the color pink and/or pink ribbons to show a commitment to finding a cure for breast cancer. Given the consistent evidence that shows the link between alcohol consumption and an increased risk of breast cancer, alcoholic beverage companies should be discouraged from using the symbols of the battle against breast cancer to market their products.<sup>28</sup>

For more on alcohol-related cancer prevention from the CDC:

[https://www.cdc.gov/cancer/dcpc/prevention/policies\\_practices/alcohol/index.htm](https://www.cdc.gov/cancer/dcpc/prevention/policies_practices/alcohol/index.htm)

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<sup>25</sup> American Cancer Society (2017)

<sup>26</sup> Nebraska DHHS (2017)

<sup>27</sup> WHO (2017); The Community Guide (2017)

<sup>28</sup> LoConte et al. (2017)

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