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# Comments on the alcohol consumption section of the WHO's World Cancer Report 2014 by the International Scientific Forum on Alcohol Research

## Background

The International Agency for Research on Cancer (IARC), which is part of the World Health Organization (WHO), recently released its *World Cancer Report 2014*, which aims to provide a global view of cancer, including cancer patterns, causes, and prevention. The report includes a section on alcohol consumption as a factor in the causes of cancer (1).

The World Health Organization (WHO) is a specialised agency of the United Nations concerned with international public health. Its role includes providing leadership in the area of health, influencing health research, developing policies and monitoring health trends. While international governments are not bound to follow WHO positions on health issues, they certainly consider them when developing their own policies. Thus, when the WHO issues a report which includes the topic of alcohol consumption, it is in the wine industry's best interests to pay attention, and to assess the report carefully. Following the publication of this report, there was considerable media attention and some calls to restrict the availability of alcoholic beverages, increase prices, and ban alcohol marketing in Australia.

The International Scientific Forum on Alcohol Research (ISFAR) is a group of scientists of many disciplines who have research interests in the health risks and benefits of alcohol consumption. The AWRI's Health and Regulatory Manager, Creina Stockley, is a member of the group. The group's goal is to provide unbiased, scientifically accurate, up-to-date, and balanced critiques of emerging research reports and other publications related to alcohol consumption. Members receive no remuneration for their contributions to the Forum. Of the current 41 members, three are from institutes that are partly supported by the wine industry.

Following the release of the *World Cancer Report 2014*, ISFAR reviewed the section on alcohol consumption and compiled the following critique, which is reproduced with permission from ISFAR.

Creina Stockley, Health and Regulatory Information Manager, [creina.stockley@awri.com.au](mailto:creina.stockley@awri.com.au)

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## **Critique 134: Comments on Section 2.3, Alcohol Consumption, from the World Cancer Report 2014 issued by the World Health Organization – 11 February 2014**

The following is a critique by Members of the International Scientific Forum on Alcohol Research of the section on alcohol consumption (Section 2.3) included in the *World Cancer Report 2014*, (1) released on 3 February 2014 by the World Health Organization.

From reading this report, it is clear that the conclusion of the authors is that *all* alcohol consumption is harmful, regardless of the amount consumed, the type of beverage, or the pattern of drinking. Indeed, epidemiological data clearly show that heavy alcohol consumption and “binge” drinking are associated with many adverse effects (and would never be advised by responsible agencies). However, the WHO seriously undermines its credibility by publishing a report that seems to deliberately ignore overwhelming scientific evidence showing that light-to-moderate consumption of alcohol not only reduces overall mortality but is usually not associated with an increased risk of cancer. The casual reader of this report would assume that “alcohol” (not just heavy drinking) is the leading cause of death throughout the world, although the authors do state that malignant neoplasms attributable to alcohol represent less than 1% of all deaths (0.4% of all deaths of women and 0.8% of all deaths of men).

**Research cited in the WHO report:** It appears that the authors have been very selective in choosing the data upon which they base their conclusions, often citing their own work and ignoring thousands of scientific articles relating alcohol consumption to cancer rates and mortality. For example, while the authors of the WHO report cite alcohol as a factor for colorectal cancer, a recent analysis from the very large Women’s Health Study/Health Professional’s Study on alcohol and colorectal cancer(2) showed that after 1998, when dietary folate was increased in the USA, there has been no significant relation between alcohol and colorectal cancer. While the authors of the WHO report state that “Alcohol consumption is related to more than 200 ICD 10 code diseases...including diabetes and cardiovascular diseases,” they do not indicate that essentially all epidemiologic studies show a *decrease* in the incidence of Type 2 diabetes and essentially every type of vascular disease among moderate drinkers.

When references are given in the WHO report related to cancers for which the risk is *decreased* by alcohol (e.g., renal, lymphoid malignancies), the authors state: “These apparently protective observed effects should be interpreted with caution since the biological mechanisms are not understood and confounding and/or misclassification of abstainers may be responsible for the observations that have been made.” They do not indicate that similar caution may be warranted for epidemiologic studies showing adverse effects of alcohol.

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No mention is made in the WHO report of beverage-specific differences, although epidemiologic studies for many decades [e.g., Klatsky et al.(3); Grønbaek et al.(4)] have shown that cardiovascular disease risk is lower among consumers of wine than of other beverages. Further, Grønbaek et al.(5) and others have shown lower *cancer* mortality for wine consumers than for other drinkers. Hundreds of experimental studies [e.g., (6,7)] have demonstrated anti-cancer activity of the polyphenols in wine, adding plausibility to the epidemiologic results.

**Effects of alcohol on mortality:** The authors of the WHO report present little discussion of the relation of alcohol to mortality, either cancer related or all-cause mortality. In addition to the study by Grønbaek et al.(5) a recent report on more than 50,000 cancer deaths(8) showed *no* increase in the risk of cancer death for “moderate” drinkers (those reporting 1–3 drinks/day) when compared with non-drinkers, and significantly decreased risk of all-cause mortality. Indeed, almost all prospective studies have shown that non-drinkers, even lifetime abstainers, die at an earlier age than do moderate drinkers.

It is also surprising that the authors fail to mention another recent paper, co-authored by Rehm (the first author of the new WHO report), that presented data showing that the lowest total mortality risk over 12 years in the very large European Prospective Investigation into Cancer and Nutrition (EPIC) study was found among men and women who consumed moderate amounts of alcohol.(9) Further, in a recent study of women with invasive breast cancer, those who consumed alcohol *after* developing their cancer had no increased risk of dying of breast cancer, and a significantly lower risk of all-cause mortality;(10) the editorial accompanying this paper concluded: “Based on the best available evidence, including [the present report(10)], it appears that modest alcohol consumption after breast cancer diagnosis, up to approximately one drink per day on average, may be associated with optimal overall survival, without compromising breast cancer-specific survival.”(11)

**Need for a balanced message on alcohol and health:** Excessive and binge drinking in young people is a growing scourge in many parts of the world, and alcohol consumption (especially in conjunction with smoking) clearly increases the risk of upper aero-digestive cancers; further, even moderate consumption is associated with a slight increase in the risk of breast cancer in women. However, the scare tactics condemning all alcohol consumption in the WHO report tend to obscure those important messages. A more scientific and balanced opinion on the topic was recently published by Banks:(12); instead of focusing so completely on warning about the adverse health effects of abusive drinking, Banks presented a scientifically valid and balanced view that concluded: “The evidence ... indicates that, in later life, on average and bearing in mind the priorities and risks of specific individuals, drinking at least some alcohol, but not too much, is likely to minimize the overall risk of death.(12)”

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It is the opinion of our Forum that WHO, in the alcohol section of its new publication *World Cancer Report 2014*, has not provided an objective and balanced report on alcohol and cancer based on scientific data. Instead, it has issued paternalistic blanket condemnations against alcohol, and recommends approaches for reducing availability of alcohol to the general population rather than those that focus on binge drinkers and others who misuse alcohol. By doing so, WHO has lost credibility and, more importantly, has missed a key opportunity to convey important messages about alcohol and cancer that could lead to appropriate recommendations to help improve the health of the public.

## References for these comments

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