## Alcohol and Cancer - What's the Risk?

## Dr Sam Zakhari

Cancer is not an easy topic. Most of us will know, directly or indirectly, someone who has been affected by this terrible disease in its many forms.

And as a society we are desperately seeking both the cause and the cure for cancers with great advancements being made on both counts. But as our knowledge advances one thing is clear – to say that one thing causes cancer is oversimplification.

Unfortunately this week in Wellington a group of well-intentioned researchers made such a claim – and not for the first time. They said that moderate alcohol consumption causes cancer. While chronic abusive alcohol consumption is associated with a plethora of health problems including cancer, attributing cancer to social moderate drinking is simply incorrect and is not supported by the body of scientific literature.

I appreciate that the organizers of this conference are concerned about the negative health outcomes from alcohol abuse, as are we all. As a scientist, who spent over 25 years as a lead federal government researcher with the United States National Institute on Alcohol Abuse and Alcoholism (NIAAA), I have done a great deal of research in this area. In fact, my most recent books, "Alcohol and Cancer" and "Biological Basis of Alcohol-Induced Cancer were published in 2011 and 2014 by Springer. Cancers are caused by a multitude of factors and the key to managing the risk of getting cancer is knowing what those factors are and trying to manage exposure to them. And yes, harmful consumption of alcohol over an extended period of time does increase your risk of getting some cancers — as does lack of exercise, diet, genetics, age, gender, smoking, drug use and a range of other lifestyle-related factors.

In fact the New Zealand Ministry of Health reports that only about five percent of diagnosed cancers are associated with long term alcohol use, often at high levels of consumption. Does this mean you should ignore how much you drink? Of course not.

Globally there is recognition that moderate alcohol consumption can be part of a healthy lifestyle. There are many well-documented health benefits associated with moderate consumption — particularly in later life and associated with cardiovascular health. In fact, a 2011 study by the U.S. Centers for Disease Control and Prevention (CDC) concluded that moderate alcohol consumption is one of four healthy lifestyle behaviors that help people live longer.

The key to this statement is, of course, the word 'moderate'.

In New Zealand, the Government's Health Promotion Agency recommends that to reduce the long-term health impacts associated with alcohol, women should have no more than two standard drinks a day and men no more than three with both sexes having at least two non-drinking days a week.

How much we drink, as with many other things in life, should be all about making informed choices based on an appreciation of the risks associated with those choices. And in New Zealand over 80% of the drinking population are already making this choice and drinking in a 'non-hazardous' manner.

For the remainder there are programmes being run by government and the alcohol industry to try and provide advice, education and direct assistance to reduce harmful drinking behaviour.

The researchers who gathered in Wellington last week also made some other unfortunate claims which cannot go unchallenged. Headlines coming out from the conference included "More deadly cancers for moderate drinkers than heavy drinkers" and "Women drinking face higher risk of cancer than car crash."

Such claims appear to be, at best, counter-intuitive and at worst misleading and dangerous.

For example, the claim that moderate drinkers are more likely to get cancer than heavy drinkers is contrary to medical and scientific research. Worse — it leads to the dangerous and incorrect conclusion that drinking heavily would be better than drinking moderately.

To put the risks in some official context the New Zealand Ministry of Health in its 2006-2016 New Zealand Burden of Disease Study emphasises the importance of assessing the risks associated with the harmful use of alcohol against a broader context of other contributing risk factors to health. The study states that:

"...tobacco use (9.1%) was the leading risk to health in 2006, followed by high BMI (7.9%). Other important risk factor causes of health loss were high blood pressure (6.4%), low physical activity (4.2%), alcohol use [net of protective effects] (3.9%), high blood cholesterol (3.2%) and adverse health care events (3.2%)."

And according to the United States Dietary Guidelines for Americans:

"Alcohol consumption may have beneficial effects when consumed in moderation. Strong evidence from observational studies has shown that moderate alcohol consumption is associated with a lower risk of cardiovascular disease. Moderate alcohol consumption also is associated with reduced risk of all-cause mortality among middle-aged and older adults and may help to keep cognitive function intact with age."

Claim and counter-claim aside, perhaps I could be so bold to suggest that the reasonable person reading this, or indeed becoming aware of the coverage from Wellington this week would be saying to themselves "eat well, drink moderately, get active and enjoy life."

If this is so then perhaps this is the soundest advice we could give ourselves.

## **ENDS**

\* Dr. Samir Zakhari's expertise spans a wide range of biomedical and multidisciplinary fields, including alcohol metabolism and physiology, liver disease, cardiovascular disease, cancer, epigenetics, systems biology, fetal alcohol spectrum disorders, pharmacology, and toxicology. Dr. Zakhari was director of the Division of Metabolism and Health Effects (DMHE) before retiring from NIAAA in September 2012 and taking on a position as senior vice president of Science at the Distilled Spirits Council of the United States, Washington, DC, continuing his work in supporting and advancing research into the medical consequences of alcohol consumption