Cancer Society
Te Kāhui Matepukupuku o Aotearoa

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"Submission to the Alcohol Reform Bill"

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The Cancer Society would like to make an oral submission on this topic

Thank you for the opportunity to present a submission on the Alcohol Reform Bill.
The Cancer Society welcomes this opportunity and considers it of the utmost importance that the legislation on alcohol in New Zealand is strengthened to minimise the dangers of this Group 1 Carcinogen and the growing body of evidence that links alcohol with many types of cancer. The Society supported the general direction of legislative proposals suggested in the Law Commission report that aimed to bring about change in alcohol consumption and related behaviours in New Zealand. We consider that the proposed changes to Alcohol legislation are not strong enough to effect the change needed to reduce the number of unnecessary deaths and the increasing costs to the country that alcohol use causes.

The guidance the Cancer Society gives on Individual alcohol use is set out in Appendix 1, with key messages below.

We are concerned that the current New Zealand environment supports youth to drink to excess and does not support individuals to limit their alcohol intake. The Cancer Society considers legislative changes must demonstrate strong Government stewardship and protection of the rights of New Zealanders, especially children and young people.

Cancer Society of New Zealand Guidance on Alcohol and Cancer Risk

Key Messages

Alcohol is a known risk factor for cancer. Besides cancer, heavy use of alcohol can cause short-term and long-term health problems, such as cirrhosis of the liver, alcohol dependence, strokes, suicide, injury, car accidents and foetal alcohol spectrum disorder.

There is convincing evidence that alcohol is associated with an increased risk of cancers of the mouth, pharynx, larynx, oesophagus, colorectum (in men) and breast. Alcohol probably increases the risk of colorectal cancer in women and liver cancer.

Unlike cardiovascular disease, there is no evidence that alcohol at any level has any protective effect against cancer. The Cancer Society recommends that people limit drinking alcohol.

For people who drink alcohol, the recommended amounts are an average of no more than 2 standard drinks a day for men, and an average of no more than 1 standard drink a day for women. A standard drink contains 10g alcohol, and is equal to 285mL full strength beer, 450mL of low alcohol (light) beer, 100mL wine and 30mL spirits.

People should also avoid binge drinking (excessive drinking in one session), and have one or two alcohol-free days per week.

Smoking and alcohol together have a synergistic effect on cancer risk. This means the combined effects of smoking and alcohol are significantly greater than the risk from the individual risks added together. Therefore, messages about alcohol should be targeted at smokers in particular.

Pregnant women are advised to avoid alcoholic drinks because of the risk to the foetus. There is no known safe level of consumption of alcohol for pregnant women. Drinking at any time during pregnancy may affect the foetus. The harms that result from pre-natal exposure to alcohol are not related to cancer but range from mild intellectual and behavioural issues to profound disabilities.

The Cancer Society has grave concerns that alcohol consumption is being promoted to the detriment of the health of New Zealanders.

This submission is supported by the evidence on alcohol and cancer risk (see references in the Cancer Society Guidance on Alcohol Risk document) and makes recommendations as to how legislation should be changed to provide an environment that is supportive of individuals to reduce their personal alcohol consumption and associated cancer risk.

Evidence of effective policy change can be found in the World Cancer Research Fund & American Institute for Cancer Research. *Policy and Action for Cancer Prevention Report: Food, Nutrition and Physical Activity: a Global Perspective*, report published in 2009

As with other consumer goods that are linked to cancer risk, for example tobacco, businesses with vested interest in increasing sales of the product ignore the detrimental effects on the individual and the population. Currently alcohol advertising behaviour is supported by legislation. This situation must be changed.

Alcohol is a toxic drug that has been used in New Zealand Society for many generations. It has become part of our culture. However the cultural norm has not developed on its own. Just as tobacco companies marketed their product with desirable images of "how we would like our lives to be" in the face of evidence of long term illness and increased risk of harm and death, so too have alcohol companies. This has resulted in the New Zealand drinking culture being linked to sport, youth and subsequently violence, abuse, traffic crashes, unlawful behaviours and high impact consequences for all involved.

We support many of the recommendations made by the Law Commission and the solutions proposed by Alcohol Action NZ.

We consider **the most important legislation that it required is the restriction of marketing and advertising**.

As with the measures that were required to tackle Tobacco use in New Zealand it is essential that the aggressive marketing of alcohol, including sponsorship of sporting and cultural events is diminished. Other measures we consider are needed are:

- Marketing of alcohol at youth must be explicitly prohibited in all forms including sponsorship, the internet, all other electronic forms of communication and by clubs and pubs in games and deals that incentivise alcohol drinking.
- No alcohol promotion permitted through television, radio, cinema, billboard or internet advertising
- Limited advertising in printed media permitted only for messages that provide information directly related to the product rather than 'selling' values or lifestyle

We also consider it essential that the **price of alcohol is addressed to reduce accessibility**, especially to youth. Towards this end the bill needs to include:

- The Introduction of a minimum price per unit of alcohol. The aim is to ensure alcohol can no longer be used as a 'loss leader' to attract customers and provide low cost products. This action would also bring the Ready to Drink (RTD) products aimed to introduce youth to alcohol though a vehicle that tastes like a non alcoholic beverage into a higher and less accessible price bracket for the target market.
- Increase the current level of excise tax on alcohol. Primarily to compensate for the harm and cost to New Zealand tax payer.

We support the attempt to alter the growing acceptability of a culture of youth initiation to heavy alcohol use by supporting improved parental supervision and to **restore the minimum age for purchasing alcohol from any licensed premises to 20 years**. While this will probably mean those younger than 20 will access alcohol current legislation supports very young and therefore more vulnerable, teenagers to be able to purchase and consume alcohol with little restriction.

We further consider that currently alcohol is accessible at too many retail outlets which supports a culture of impulse drinking leading to heavy alcohol use. We therefore consider the bill needs to **return supermarkets as well as convenience stores to being alcohol free**.
We further consider all local bodies should be required to develop local liquor plans in consultation with local communities, without the undue influence of liquor licence holders, with the aim of restricting the number and location of retail outlets and limiting licensed premises.

We consider the only way to effectively monitor restrictions on sales of alcohol is to limit the availability of the product. Reducing the number of premises that are able to sell alcohol will also reduce the advertising of branded product.

We also consider that the hours **of alcohol sales outlets need to be restricted** as follows:

- Restrict the opening hours of all off-licenses on a nationwide basis from 10am to 10pm
- Restrict on-license premises from selling alcohol after 1am on a nationwide basis
- Provide for a standing extension to serve alcohol until 3am if the premises operates a one-way door policy whereby patrons can remain on the premises, but new patrons cannot enter the premises after 1am

Other restrictions that we consider essential to reduction of harm and work to change the drinking culture are to **increase drink-driving counter-measures by lowering the Blood Alcohol Level limit** from 0.08 to 0.05 for those 20 years and over and lowering the Blood Alcohol Level limit to zero for those under 20 years.

It is acknowledged that there is currently a culture of drinking that will be difficult to change and will require:

- education to ensure awareness is raised of the widespread risk of heavy alcohol use and how it is portrayed as a desirable part of youth culture.
- general awareness raising about the toxicity of alcohol, for example warning labels on products.
- media action to reduce the number of stories of youth drinking that advertise excessive alcohol and result in glorifying resulting injuries and death. A change to positive non alcohol smoke free life styles that includes sport and other activity is one image that the media should be encouraged to portray.
- Tertiary Education institutional action to change the culture of attracting students to an environment of drinking rather than learning.
- parental support to think and take action on what they are doing as role models, suppliers and supporters of a culture that leads to harm rather than being safe for their children.

The responsibility of changing New Zealand Society will need to be led by a strong government willing to change legislation that will impact on business in the interests of public health.

Alcohol needs to be treated in the same way as Tobacco Control with a focus on youth initiation initiatives to reduce the numbers of young people starting the habit. Support for those that want to quit harmful alcohol abuse will need to include appropriate health services to ensure those that have alcohol addictions are able to change behaviours that are harmful and costly to themselves and New Zealand Society.

Appendix 1.

Cancer Society of New Zealand Guidance on Alcohol and Cancer Risk

Background

Alcohol is a known risk factor for cancer. In human studies there is no evidence that the consumption of any alcoholic beverage provides any protection against cancer.

Since 1988, alcohol has been recognised as a **Group 1 carcinogen** (highest rating for carcinogens) by the International Agency for Research on Cancer (IARC), for cancers of the mouth, pharynx, larynx, oesophagus and liver.[i]

The misuse of alcohol is a major preventable cause of death and hospitalisation in New Zealand. Besides cancer, heavy use of alcohol can cause short-term and long-term health problems such as cirrhosis of the liver, alcohol dependence, strokes, intentional and unintentional injuries including those resulting from motor vehicle crashes. Alcohol is frequently drunk in excess by young people and is responsible for many lost years of life. The health burden falls inequitably on Mäori...[ii]

The pattern of drinking is very important in determining positive or negative health effects of alcohol consumption and there are no benefits in drinking alcohol before middle age.[2]

Epidemiological Evidence

There is no evidence in human population studies that any alcohol consumption provides protection against cancer. Alcohol is a significant risk factor for some cancers, particularly those of the mouth, pharynx, larynx, oesophagus, breast, colorectum and liver. [iii, ivv]

The most recent major report by the World Cancer Research Fund (WCRF 2007) on food and the prevention of cancer concluded there was *convincing* evidence that alcohol was associated with an increased risk of cancer of the mouth, pharynx, larynx, oesophagus, colorectum (in men) and breast.[4] Alcohol *probably* increases the risk of colorectal cancer in women and liver cancer.[4] The report also concluded that it is *unlikely* that alcohol affects kidney cancer risk.[4]

Alcohol has been estimated to cause between 3 and 12 percent of breast cancer cases. [vi, vii]A large meta-analysis of 53 epidemiological studies showed that the relative risk of breast cancer increased with increasing intake of alcohol.[viii] The relative risk of breast cancer was 1.32 (95 percent CI= 1.19-1.45, $p<0.00001$) for an intake of 35-44g alcohol per day, and 1.46 (95 percent CI= 1.33-1.61, $p<0.00001$) for > 45g alcohol per day, compared with women who reported drinking no alcohol.[8] The relative risk of breast cancer increased by 7.1 percent (95 percent CI= 5.5-8.7, $p<0.00001$) for each additional 10g per day intake of alcohol, i.e. for each extra standard drink of alcohol consumed on a daily basis. [8]

The approximately 30-40 percent higher risk of breast cancer in women consuming at least 30g/day of alcohol versus non drinkers is similar to or slightly stronger than associations observed for several reproductive factors (early menarche, late natural menopause, not bearing children and late (over 30) first pregnancy) and a positive family history. [8] Unlike these other risk factors, alcohol intake is potentially modifiable.

Burden of Disease Related to Alcohol

A 2005 report [ix] estimated that 3.9 percent of all deaths (around 1040 deaths) in New Zealand in 2000 were attributable to alcohol consumption. Of these 24 percent (around 250) were alcohol related cancer deaths.

The New Zealand Cancer Registry[x] indicates there were 18,610 new registrations for cancer and 7970 recorded deaths from cancer in 2005 (see Table 1 for actual figures).

Cancer of the colorectum was the most commonly registered cancer and the second in the causes of death. In women, breast cancer was both the most commonly registered and the most common cause of death.

Table 1: Registration and death rates for type of cancer 2005 [10]

Type of Cancer	Registrations 2005			Deaths 2005		
	male	female	total	male	female	total
Mouth and pharynx	195	90	285	88	38	126
Oesophagus	148	71	219	130	66	196
Liver	149	74	223	95	45	140
Colorectal and anus	1331	1385	2716	608	614	1222
Breast	21	2458	2479	5	647	652
Total	**1844**	**4078**	**5922**	**926**	**1410**	**2336**

Note: Cancer of the larynx figures are not specified in New Zealand statistics...

Two different methods of estimating the amount of disease caused by alcohol, based on any alcohol consumption or only unsafe alcohol consumption, have been reported in Australia. These two methods produce very different results as shown in Table 2...

One method compared unsafe levels of alcohol consumption with moderate or no consumption, recognising the benefits of moderate alcohol consumption for heart disease.[6] This is consistent with public health policy on alcohol consumption, which is not to achieve zero alcohol intake in the population but to achieve harm minimisation. In contrast, the other approach estimated the full attributable effect of alcohol consumption, including the apparent benefits of moderate consumption.[7] The rationale for this method was to take into account the fact that alcohol even at low levels of consumption can raise the risk of some conditions, such as cancer.

Table 2: Cancer site and percentage attributable to alcohol

Cancer Site	English et al (1995) [5]		Ridolfo & Stevenson (2001) [7]	
	Males percent	Females percent	Males percent	Females percent
Breast	-	3	-	12
Larynx	21	13	51	46
Liver	18	12	39	35
Oesophagus	14	6	46	40
Oropharynx	21	8	40	31

Other Considerations for Alcohol

Alcohol is one dietary factor where there is conflict between risks and benefits for different chronic diseases. While alcohol is a risk factor for cancer, the evidence in relation to cardiovascular disease is mixed. A high intake of alcohol is associated with higher blood pressure and death from stroke; however, a small amount of alcohol, such as red wine, taken regularly may be protective against coronary heart disease in middle aged people.[2, xi] Thus, from a cancer point of view, alcohol consumption is undesirable; whereas from a heart disease point of view, low alcohol consumption may be beneficial.[xii]

The effect on cancer risk is from ethanol, irrespective to the type of alcoholic beverage.[3] Red wine, which has some health benefits for conditions such as heart disease, has been associated with increased cancer risk.

Smoking and alcohol together have a synergistic effect on upper gastrointestinal and aero-digestive cancer risk...[12] This means the combined effects of smoking and alcohol greatly exceed the risk from either one of these factors alone.[12] Alcohol and tobacco interact in a multiplicative way on the risk of cancers of the upper aero-digestive tract. For example, compared with the risk for non-smoking non-drinkers, the approximate relative risks for developing mouth and throat cancer are 7 times greater for those who use tobacco, 6 times greater for those who use alcohol, and 38 times greater for those who use both tobacco and alcohol.[xiii]

This synergistic effect of alcohol and smoking has been estimated to be attributable for over 75percent of cancers of the upper aero-digestive tract in developed countries.[13] Alcohol has an independent effect on the risk of oral, pharyngeal, laryngeal and oesophageal cancers, but it is its synergistic effect with smoking that is most significant.

Potential Mechanisms of Action

Several hypotheses have been proposed for how alcohol consumption affects cancer risk. Both local and systemic effects may explain the biological mechanisms for how alcohol influences cancer risk. These hypotheses include:

- Ethanol may cause cancer through the formation of acetaldehyde.[11] The first step in alcohol metabolism is the oxidation of alcohol to acetaldehyde, via the enzyme alcohol dehydrogenase. Acetaldehyde is the primary metabolite of ethanol, which has been shown to be mutagenic by binding to DNA.[11] Therefore alcohol can be regarded more as a co-carcinogen, facilitating tumour initiation or acting as a tumour promoter rather than a tumour initiator itself.
- Alcohol may play an important role in anatomical sites where it comes into direct contact with the tissue, by irritating the epithelium or increasing the penetration of carcinogens across the mucosa. This may be through increasing the solubility of carcinogens entering the oral mucosa or perhaps increasing the permeability of the oral mucosa.[11] In addition, a decrease in salivary flow would lead to a decreased clearing of mucosal surfaces, which could lead to accumulation of carcinogens.[11]
- Alcoholic drinks may contain carcinogenic contaminants such as nitrosamines, polycyclic aromatic hydrocarbons, and mycotoxins, as well as a wide variety of esters, phenols and other compounds derived from interaction between the original plant material and the production processes.[3]
- Alcohol may have systemic effects as well as local effects. Firstly it is known that heavy drinkers are frequently malnourished and chronic alcohol consumption may affect the liver's ability to deal with toxic or potentially carcinogenic compounds.[11] Secondly, it has been suggested that alcohol may have an immunosuppressive effect.[11] However, the systemic effects of alcoholic beverages are thought to weaker than the local effects.[xiv, xv] If alcohol was truly having an immunosuppressive effect, it would be expected that there would be a higher incidence of specific cancers where infection is a causal factor in heavy drinkers.
- Alcohol may increase the risk of breast cancer because acute ingestion of high doses can increase serum estradiol concentrations...[xvi]

  Further studies are needed to determine causal pathways.

Factors Influencing Alcohol Consumption

Alcohol consumption can be influenced by environmental factors, such as advertsing and promotion, host responsibility, price, availability of non-alcoholic beverages and food, provision of entertainment venues that do not serve alcohol and safe transport options.[10]

Heavy drinkers often drink in bars where alcohol service is the focus, and there seems to be a higher level of harm associated with nightclubs, hotels and taverns compared to restaurants and clubs where food service is the primary focus or attraction.[xvii] However, this difference may be due to the nature of the customers that visit these sites.[17] Wine drinkers are more likely to drink socially at private homes.[10]

Alcohol Consumption in New Zealand

Alcohol consumption data in New Zealand is very limited and most of the data relates to harmful consumption (in terms of risks such as injury and violence, not cancer risk.) This reflects both Ministry of Health targets and current policy which focus on harm minimisation. So while there is data on the overall prevalence of alcohol consumption much of the more specific data relates to hazardous consumption in terms of drunkenness, drunk driving and binge drinking.

Consumption data from the ALAC website[xviii] shows that:

- an estimated 81.2 percent (95 percent confidence interval: 80.1-82.3) of New Zealanders aged 12-65 years had consumed alcohol in the last 12 months.
- males were significantly more likely to have consumed alcohol in the last 12 months (82.5 percent; 80.9-84.0) than females (78.4 percent; 76.8-80.0).
- non- Māori were significantly more likely to have consumed alcohol in the last 12 months (81.3 percent; 80.0-82.6) than Māori (74.2 percent; 72.8-75.7).
- 1.8 percent (1.4-2.2) of people aged 12-65 years had produced home-made alcohol (beer, wine and/or spirits) in the last 12 months.
- among people who had travelled overseas in the last 12 months, 63.0 percent (60.2-65.9) had bought duty-free alcohol into New Zealand at least once in the last 12 months.

Among New Zealanders aged 12-65 years who had consumed alcohol in the last 12 months, it has been found:

- 14.7 percent (13.6-15.7) consumed large amounts of alcohol at least once a week (for males this represents more than six standard drinks on one drinking occasion; for females this represents more than four standard drinks on one drinking occasion) males were significantly more likely to have consumed large amounts of alcohol at least once a week (19.7 percent; 18.1-21.4) compared to females (11.1 percent; 9.7-12.5).
- 96 percent have tried alcohol at some stage or other and most of these (96percent) have had a 'full' glass
- 88 percent of those who had ever had a 'full' glass define themselves as current drinkers, with 37 percent drinking at least two or three times a week or daily
- 74 percent report having ever drunk five or more drinks on one occasion and of these, 36 percent have done so in the last two weeks. (53 percent more than once)
- one-quarter (25 percent) of all adults (drinkers and non-drinkers) engage in risky drinking on a relatively frequent basis.

Other alcohol statistics [18] include:

- in 2004 New Zealand ranked 24th in the world out of 50 countries in terms of per capita consumption of pure alcohol
- nearly half the population thinks it is 'OK' to get drunk
- 1.2 million drinkers are 'OK' with binge drinking, accept binge drinking and regularly binge drink themselves
- alcohol is estimated to cost the public health sector $655 million per year (2004 figures)
- ALAC estimates alcohol harm costs New Zealand somewhere between $1billion and $4 billion a year.

Recommendations

Unlike cardiovascular disease, there is no evidence that alcohol at any level has any protective effect against cancer. In addition, alcohol contains a lot of energy so it can easily contribute to weight gain. Excessive body fat is also a risk factor for developing certain types of cancer.

Therefore, the Cancer Society recommends people limit drinking alcohol. For people who drink alcohol, the recommended amounts are an average of no more than 2 standard drinks a day for men, and an average of no more than 1 standard drink a day for women.

A standard drink contains 10g alcohol. These are all equal to one standard drink:

- 100mL of wine (one bottle of wine contains around 7 standard drinks)
- 30mL (one nip) of spirits
- 60mL (two nips) of sherry
- 285mL (one half pint) of normal strength beer
- 450mL (one pint) of low alcohol (light) beer
- 220-250mL ready to drink alcoholic sodas (alco-pops) (around 2/3 bottle)

Women are advised to drink less alcohol than men, because of their smaller body size and because of the potential to increase the risk of breast cancer. Women with a family risk of breast cancer, in particular, should abstain from alcohol. Women who are at high risk of breast cancer and low risk of heart disease may benefit from reducing to light or moderate alcohol consumption.

People should also avoid binge drinking (excessive drinking in one session), and have one or two alcohol-free days per week. It is important not to save up drinks per day and have them all in one drinking session. It is also a good idea to avoid heavy drinking with little food intake.

The combined effects of smoking and alcohol are significantly greater than the risk from the individual risks added together. Messages about alcohol should, therefore, be targeted at smokers in particular.

Behaviours such as increased exercise, smoking cessation and a healthy eating pattern should be encouraged to prevent heart disease instead of the promotion of any level of alcohol consumption. The antioxidants found in red wine and other alcoholic beverages can also be obtained from fruits and vegetables.

Pregnant women are advised to avoid alcoholic drinks because of the risk to the foetus. There is no known safe level of consumption of alcohol for pregnant women and drinking at any time during pregnancy may affect the foetus. The harms that result from pre-natal exposure to alcohol range from mild intellectual and behavioural issues to profound disabilities.[xix] Evidence does not show the effects are related to cancer.

Future Research

In the future, there is a need for more studies that:

- verify the corresponding level of risk associated with different patterns of drinking
- investigate further potential mechanisms of action
- establish the effect of lowering alcohol consumption on cancer risk
- determine effective strategies for reducing alcohol consumption in populations with a high intake.

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