

Appendix 1 (as supplied by the authors): Supplementary tables

Supplementary Table S1. Observed cancer cases in Alberta (2012) and proportions attributable to alcohol consumption, adjusted for recorded consumption

Age at Exposure (years)	Age at Outcome (years)	Larynx			Colorectum			Liver		
		Total Obs. Cases ^b	PAR % ^c (95%CI)	EAC ^d (95%CI)	Total Obs. Cases ^b	PAR % ^c (95%CI)	EAC ^d (95%CI)	Total Obs. Cases ^b	PAR % ^c (95%CI)	EAC ^d (95%CI)
Men	Men									
20-34	30-44	<5	44.4 (40.1-49.1)	<5	37	17.2 (10.6-28.7)	6 (4-11)	<5	17.3 (12.2-24.8)	0
35-49	45-59	18	29.5 (26.7-32.6)	5 (5-6)	276	13.2 (8.2-21.5)	36 (23-59)	58	11.9 (8.5-16.9)	7 (5-10)
50-64	60-74	37	28.1 (25.5-30.9)	10 (9-11)	454	11.6 (7.2-19.0)	53 (33-86)	54	11.7 (8.3-16.4)	6 (7-9)
≥ 65	≥ 75	7	19.2 (17.4-21.2)	1 (1-1.5)	338	9.8 (6.0-16.3)	33 (20-55)	34	7.7 (5.4-10.8)	3 (2-4)
Total	Total	<67		<21	1105		128	<151		16
Women	Women									
20-34	30-44	-	-	-	35	6.4 (3.9-10.7)	2 (1-4)	<5	5.3 (3.8-7.4)	0
35-49	45-59	<5	12 (10.8-13.4)	0	193	6.4 (3.9-10.7)	12 (8-21)	17	4.8 (3.4-6.8)	1 (1-1)
50-64	60-74	6	11.6 (10.5-12.9)	1 (1-1)	292	4.8 (3.0-7.9)	14 (9-23)	32	4.7 (3.3-6.7)	1 (1-2)
≥ 65	≥ 75	5	7.6 (6.9-8.5)	0 (0-0)	326	2.9 (1.8-4.7)	9 (6-15)	18	3 (2.1-4.3)	1 (0-1)
Total	Total	<16		1	846		37	<72		3

a. Alcohol consumption in Alberta by age-sex group assessed using data from the Canadian Community Health Survey, adjusted for survey under-coverage using Statistics Canada alcohol sales data.

b. Number of observed cancer cases in Alberta in 2012 at individual cancer sites.

c. Population attributable risk of individual cancers related to alcohol consumption.

d. Number of cancer cases at individual cancer sites that can be attributed to alcohol consumption.

Supplementary Table S1 ctd. Observed cancer cases in Alberta (2012) and proportions attributable to alcohol consumption, adjusted for recorded consumption

Age at Exposure (years)	Age at Outcome (years)	Esophagus			Oral Cavity and Pharynx			Breast		
		Total Obs. Cases ^b	PAR % ^c (95%CI)	EAC ^d (95%CI)	Total Obs. Cases ^b	PAR % ^c (95%CI)	EAC ^d (95%CI)	Total Obs. Cases ^b	PAR % ^c (95%CI)	EAC ^d (95%CI)
Men	Men									
20-34	30-44	<5	42.1 (39.3-45.0)	<5	24	62.8 (58.9-66.9)	15 (14-16)			
35-49	45-59	41	31.7 (29.7-33.9)	13 (12-14)	119	48.2 (44.9-51.8)	57 (53-62)			
50-64	60-74	69	27.8 (26.0-29.8)	19 (18-21)	96	42.8 (39.6-46.2)	41 (38-44)			
≥ 65	≥ 75	37	24.9 (23.1-26.8)	9 (9-10)	34	40.4 (37.0-44.1)	14 (13-15)			
Total	Total	<152		<46	273		127			
Women	Women									
20-34	30-44	<5	15.8 (14.8-17.0)	0	12	25.1 (23.1-27.4)	3 (3-3)	257	8 (6.3-10.2)	21 (16-28)
35-49	45-59	9	16.3 (15.1-17.6)	1 (1-2)	22	27.2 (24.8-30.0)	6 (5-7)	798	8 (6.2-10.3)	64 (49-82)
50-64	60-74	15	11.5 (10.8-12.3)	2 (2-2)	34	17.6 (16.4-19.0)	6 (6-6)	840	6 (4.8-7.6)	50 (40-64)
≥ 65	≥ 75	7	6.9 (6.4-7.4)	0 (0-1)	32	10.5 (9.7-11.4)	3 (3-4)	427	3.6 (2.8-4.5)	15 (12-19)
Total	Total	<36		4	100		18	2322		150

Supplementary Table S2. Summary of cases and proportions of cancer in Alberta adults in 2012 attributable to recorded alcohol consumption^a

Cancer Site ^b	Total			Men			Women		
	Observed Cases ^c	Excess Attributable Cases ^d	% Attributable ^e	Observed Cases	Excess Attributable Cases	% Attributable	Observed Cases	Excess Attributable Cases	% Attributable
Breast	2322	150	6.5				2322	150	6.5
Larynx	76	19	25.2	64	18	28	12	1	10
Colorectum	1951	167	8.5	1105	128	16.5	846	38	4.5
Liver	217	19	8.8	148	16	10.9	69	3	4.3
Esophagus	183	47	25.6	151	43	28.5	32	4	12
Oral Cavity/Pharynx	373	146	39	273	127	46.6	100	18	18.4
All Associated Cancers^f	5122	547	10.7	1741	333	22.2	3381	214	6.3
All Cancers^g	15836	547	3.5	8155	333	4.7	7681	214	2.8

^a Alcohol consumption in Alberta by age-sex group assessed using data from the Canadian Community Health Survey, adjusted for survey under-coverage using Statistics Canada alcohol sales data.

^b Cancer incidence data obtained from the Alberta Cancer Registry. Data from 2012 was used for observed cancer cases for all cancer sites.

^c Number of observed cancer cases in Alberta in 2012 at individual cancer sites.

^d Number of cancer cases at individual cancer sites that can be attributed to alcohol consumption.

^e Proportion of cancers at individual cancer sites attributable to alcohol consumption. Calculated as excess attributable cases/observed cases.

^f Represents all cancers with a known association with alcohol consumption, as listed in table.

^g Represents all incident cancers in Alberta in 2012 in all age groups.

Supplementary Table S3 Observed cancer cases in Alberta (2012) and proportions attributable to alcohol consumption, adjusted for recorded and unrecorded consumption

Age at Exposure (years)	Age at Outcome (years)	Larynx			Colorectum			Liver		
		Total Obs. Cases ^b	PAR % ^c (95%CI)	EAC ^d (95%CI)	Total Obs. Cases ^b	PAR % ^c (95%CI)	EAC ^d (95%CI)	Total Obs. Cases ^b	PAR % ^c (95%CI)	EAC ^d (95%CI)
Men	Men									
20-34	30-44	<5	54.2 (49.1-59.5)	<5	37	20.8 (12.8-34.6)	8 (5-13)	<5	21.1 (14.7-30.5)	0
35-49	45-59	18	36.1 (32.6-40.0)	6 (6-7)	276	16.0 (9.9-26.1)	44 (27-72)	58	14.3 (10.1-20.4)	8 (6-12)
50-64	60-74	37	34.0 (30.9-37.3)	13 (11-14)	454	14.0 (8.7-23.1)	64 (39-105)	54	14.1 (10.0-19.8)	8 (5-11)
≥ 65	≥ 75	7	23.5 (21.3-26.1)	2 (1-2)	338	11.9 (7.2-20.3)	40 (24-69)	34	9.3 (6.5-13.4)	3 (2-5)
Total	Total	<67		<27	1105		156	<151		19
Women	Women									
20-34	30-44	-	-	-	35	7.8 (4.8-13.0)	3 (2-5)	<5	6.4 (4.5-9.1)	0
35-49	45-59	<5	14.9 (13.4-16.6)	0	193	7.8 (4.8-13.2)	15 (9-25)	17	5.8 (4.1-8.3)	1 (1-1)
50-64	60-74	6	14.3 (12.9-15.9)	1 (1-1)	292	5.8 (3.6-9.5)	17 (11-28)	32	5.6 (4.0-8.0)	2 (1-3)
≥ 65	≥ 75	5	9.5 (8.5-10.7)	0 (0-1)	326	3.5 (2.2-5.8)	11 (7-19)	18	3.6 (2.5-5.2)	1 (0-1)
Total	Total	<16		1	846		46	<72		4

^a. Alcohol consumption in Alberta by age-sex group assessed using data from the Canadian Community Health Survey, adjusted for survey under-coverage using Statistics Canada alcohol sales data and unrecorded alcohol consumption as an additional 19.5% of recorded consumption, as estimated in Ontario by Macdonald *et. al.*[27].

^b. Number of observed cancer cases in Alberta in 2012 at individual cancer sites.

^c. Population attributable risk of individual cancers related to alcohol consumption.

^d. Number of cancer cases at individual cancer sites that can be attributed to alcohol consumption.

Supplementary Table S3 ctd. Observed cancer cases in Alberta (2012) and proportions attributable to alcohol consumption, adjusted for recorded and unrecorded consumption

Age at Exposure (years)	Age at Outcome (years)	Esophagus			Oral Cavity and Pharynx			Breast		
		Total Obs. Cases ^b	PAR % ^c (95%CI)	EAC ^d (95%CI)	Total Obs. Cases ^b	PAR % ^c (95%CI)	EAC ^d (95%CI)	Total Obs. Cases ^b	PAR % ^c (95%CI)	EAC ^d (95%CI)
Men	Men									
20-34	30-44	<5	51.5 (48.2-55.0)	<5	24	74.5 (70.5-78.4)	18 (17-19)			
35-49	45-59	41	39.0 (36.4-41.7)	16 (15-17)	119	59.2 (55.3-63.4)	70 (66-75)			
50-64	60-74	69	34.3 (32.0-36.8)	24 (22-25)	96	53.3 (49.4-57.6)	51 (47-55)			
≥ 65	≥ 75	37	31.4 (29.0-34.1)	12 (11-13)	34	52.0 (47.6-56.7)	18 (16-19)			
Total	Total	<152		<57	273		157			
Women	Women									
20-34	30-44	<5	19.8 (18.3-21.3)	0	12	32.4 (29.6-35.5)	4 (4-4)	257	9.7 (7.6-12.5)	25 (20-32)
35-49	45-59	9	20.8 (19.1-22.6)	2 (2-2)	22	36.3 (32.8-40.2)	8 (7-9)	798	9.8 (7.6-12.8)	78 (61-102)
50-64	60-74	15	14.2 (13.2-15.2)	2 (2-2)	34	22.0 (20.4-23.9)	7 (7-8)	840	7.3 (5.7-9.2)	61 (48-77)
≥ 65	≥ 75	7	8.5 (7.9-9.1)	1 (1-1)	32	13.1 (12.1-14.2)	4 (4-5)	427	4.3 (3.4-5.5)	19 (15-23)
Total	Total	<36		5	100		24	2322		183

Supplementary Table S4. Summary of cases and proportions of cancer in Alberta adults in 2012 attributable to recorded and unrecorded alcohol consumption^a

Cancer Site ^b	Total			Men			Women		
	Observed Cases ^c	Excess Attributable Cases ^d	% Attributable ^e	Observed Cases	Excess Attributable Cases	% Attributable	Observed Cases	Excess Attributable Cases	% Attributable
Breast	2322	183	7.9				2322	183	7.9
Larynx	76	23	30.6	64	22	34.1	12	1	12.4
Colorectum	1951	202	10.3	1105	156	14.1	846	46	5.5
Liver	217	23	10.6	148	19	13.2	69	4	5.2
Esophagus	183	58	31.8	151	53	35.3	32	5	15
Oral Cavity/Pharynx	373	181	48.5	273	157	57.6	100	24	23.6
All Associated Cancers^f	5122	670	13.1	1741	407	23.4	3381	262	7.8
All Cancers^g	15836	670	4.2	8155	407	5.0	7681	262	3.4

^{a.} Alcohol consumption in Alberta by age-sex group assessed using data from the Canadian Community Health Survey, adjusted for survey under-coverage using Statistics Canada alcohol sales data and unrecorded alcohol consumption as an additional 19.5% of recorded consumption, as estimated in Ontario by Macdonald *et. al.*, 1999 [27].

^{b.} Cancer incidence data obtained from the Alberta Cancer Registry. Data from 2012 was used for observed cancer cases for all cancer sites.

^{c.} Number of observed cancer cases in Alberta in 2012 at individual cancer sites.

^{d.} Number of cancer cases at individual cancer sites that can be attributed to alcohol consumption.

^{e.} Proportion of cancers at individual cancer sites attributable to alcohol consumption. Calculated as excess attributable cases/observed cases.

^{f.} Represents all cancers with a known association with alcohol consumption, as listed in table.

^{g.} Represents all incident cancers in Alberta in 2012 in all age groups.