

S2 Table. General characteristics of the studies included in the final analysis to cancer mortality

Study	Country	Cohort	Enroll year	Population	Cancer type	Alcohol consumption amount (baseline)	RR (95% CI)
Oral cavity, pharyngeal cancer mortality							
1988 Garfinkel [122]	US	American Cancer Society's study	1959-1972	581,321 women	Oral cavity cancer mortality	None	1.00
						1 drink/day	0.40 (0.17 to 0.95)
						2 drinks/day	1.02 (0.54 to 1.94)
2010 Kim [123]	Korea	Korea National Health Insurance Corporation	2000-2005	919,199 men	Lip, oral cavity cancer mortality	Nondrinker	1
						1.0 to 14.9 g/day	1.7 (0.94 to 3.05)
						15.0 to 29.9 g/day	0.82 (0.38 to 1.80)
Esophageal cancer mortality							
1988 Garfinkel [122]	US	American Cancer Society's study	1959-1972	581,321 women	Esophageal cancer mortality	None	1.00
						1 drink/day	1.37 (0.81 to 2.30)
						2 drinks/day	1.61 (0.94 to 2.77)
1990 Boffetta [124]	US	American Cancer Society	1959-1972	276,802 men	Esophageal cancer mortality	Nondrinkers	1.00
						1 drink/day	1.37 (0.81 to 2.30)
						2 drinks/day	1.61 (0.94 to 2.77)
2005 Sakata [125]	Japan	JACC Study	1988-1994	46,465 men	Esophageal cancer mortality	Nondrinkers	1
						<1.0 units/day	1.47 (0.28 to 7.68)
						1.0-1.9 units/day	1.58 (0.65 to 3.86)
2010 Kim [123]	Korea	Korea National Health Insurance Corporation	2000-2005	919,199 men	Esophageal cancer mortality	Nondrinkers	1
						1.0 to 14.9 g/day	1.23 (0.82 to 1.85)
						15.0 to 29.9 g/day	1.43 (0.92 to 2.22)
2013 Shen [126]	Hong Kong	18 Elderly Health Centers of the Hong Kong Government	1998-2012	66,820 women/men	Esophageal cancer mortality	Never Social (<1/wk)	1 0.95 * 0.88 to 1.03)

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44,140 women	Wkly social (<10g/day)	1.12 (0.91 to 1.38)
	Moderate(≤30g/day for men, ≤20g/day for women)	1.11 (0.98 to 1.27)
	Never	1
22,680 men	Social (<1/wk)	2.20 (0.96 to 5.06)
	Wkly social (<10g/day)	NA
	Moderate(≤30g/day for men, ≤20g/day for women)	2.62 (0.35 to 19.60)
	Never	1
	Social (<1/wk)	1.00 (0.47 to 2.14)
	Wkly social (<10g/day)	0.80 (0.11 to 6.01)
	Moderate(≤30g/day for men, ≤20g/day for women)	2.94 (1.42 to 6.07)

Stomach cancer mortality

2010 Kim [123]	Korea	Korea National Health Insurance Corporation	2000-2005	422,194 women	Stomach cancer mortality	Nondrinkers	1
				919,199 men		1.0 to 14.9 g/day	0.65 (0.44 to 0.98)
						15.0 to 29.9 g/day	1.48 (0.85 to 2.57)
						Nondrinkers	1
						1.0 to 14.9 g/day	0.96 (0.83 to 1.11)
15.0 to 29.9 g/day	1.00 (0.85 to 1.18)						
2013 Shen [126]	HongKong	18 Elderly Health Centers of the Hong Kong Government Department of Health	1998-2012	66,820 women/men(2 2,680 men, 44,140 women)	Stomach cancer mortality	Never	1
				44,140		Social (<1/wk)	0.73 (0.50 to 1.05)
						Wkly social (<10g/day)	0.55 (0.17 to 1.73)
						Moderate (≤30g/day for men, ≤20g/day for women)	1.18 (0.71 to 1.95)
						Never	1

women	Social (<1/wk)	0.96 (0.50 to 1.85)
	Wkly social (<10g/day)	NA
	Moderate (\leq 30g/day for men, \leq 20g/day for women)	NA
22680 men	Never	1
	Social (<1/wk)	0.64 (0.41 to 1.00)
	Wkly social (<10g/day)	0.61 (0.19 to 1.94)
	Moderate (\leq 30g/day for men, \leq 20g/day for women)	1.21 (0.72 to 2.04)

Colorectal cancer mortality

1997 Camargo [127]	US	Physicians' Health Study	1981-1993	22,071 men	Colorectal cancer mortality	0	1
						1 to 6 drinks/wk	0.98 (0.56 to 1.72)
1997 Thun [128]	US	Cancer Prevention Study II	1982-1991	230,552 women	Colorectal cancer mortality	0	1
				226,871 men		less than daily	0.8 (0.7 to 1.0)
						0	1
						less than daily	1.0 (0.9 to 1.3)
						1 drink/day	1.0 (0.8 to 1.3)
2010 Kim [123]	Korea	Korea National Health Insurance Corporation	2000-2005	422,194 women	Colorectal cancer mortality	Nondrinkers	1
						1.0 to 14.9 g/day	0.99 (0.62 to 1.59)
						15.0 to 29.9 g/day	2.51 (1.31 to 4.82)
				919,199 men		Nondrinkers	1
						1.0 to 14.9 g/day	1.14 (0.90 to 1.45)
						15.0 to 29.9 g/day	1.06 (0.80 to 1.40)
2011 Breslow [129]	US	National Health Interview Survey	1988-2006	323,354 women/men	Colorectal cancer mortality	Never drinker	1
						Light (\leq 3 drinks/wk)	0.86 (0.67 to 1.10)
						Moderate (>3 to 7)	1.04 (0.78 to 1.39)

				184,764 women		drinks/wk for women, >3 to 14 drinks/wk for men) Never drinker	1
						Light (≤3 drinks/wk)	0.74 (0.53 to 1.03)
						Moderate (>3-7 drinks/wk for women, >3 to 14 drinks/wk for men)	0.99 (0.59 to 1.68)
				138,590 men		Never drinker	1
						Light (≤3 drinks/wk)	1.05 (0.66 to 1.67)
						Moderate (>3 to 7 drinks/wk for women, >3 to 14 drinks/wk for men)	1.22 (0.78 to 1.91)
2013 Shen [126]	HongKong	18 Elderly Health Centers of the Hong Kong Government Department of Health	1998-2012	66,820 women/men (22,680 men, 44,140 women)	Colorectal cancer mortality	Never	1
						Social (<1/wk)	0.96 (0.78 to 1.18)
						Wkly social (<10 g/day)	1.24 (0.75 to 2.06)
						Moderate(≤30 g/day for men, ≤20 g/day for women)	0.79 (0.54 to 1.16)
				44,140 women		Never	1
						Social (<1/wk)	0.98 (0.71 to 1.35)
						Wkly social (<10 g/day)	0.61 (0.15 to 2.47)
						Moderate(≤30 g/day for men, ≤20 g/day for women)	0.46 (0.11 to 1.83)
				22,680 men		Never	1
						Social (<1/wk)	0.98 (0.76 to 1.28)
						Wkly social (<10 g/day)	1.51 (0.87 to 2.61)
						Moderate(≤30 g/day for men, ≤20 g/day for women)	0.88 (0.59 to 1.33)
2000 Gaziano [130]	US	Physicians' Health Study	1982-1990	89,299 men	Colon cancer mortality	Never	1.0

1 to 3 drinks/mo	1.28 (0.61 to 2.69)
1 drinks/wk	0.88 (0.40 to 1.93)
2 to 4 drinks/wk	1.08 (0.55 to 2.11)
5 to 6 drinks/wk	0.84 (0.36 to 1.97)
1 drink/day	1.21 (0.66 to 2.20)

Liver cancer mortality

2010 Kim [123]	Korea	Korea National Health Insurance Corporation	2000-2005	422,194 women	Liver cancer mortality	Nondrinkers	1
				919199 men		1.0 to 14.9 g/day	0.74 (0.44 to 1.22)
						15.0 to 29.9 g/day	1.80 (0.90 to 3.57)
						Nondrinkers	1
						1.0 to 14.9 g/day	0.92 (0.80 to 1.05)
15.0 to 29.9 g/day	0.95 (0.82 to 1.11)						
2013 Shen [126]	HongKong	18 Elderly Health Centers of the Hong Kong Government Department of Health	1998-2012	66,820 women/men (22,680 men, 44,140 women)	Liver cancer mortality	Never	1
				44,140 women		Social (<1/wk)	0.81 (0.62 to 1.06)
						Wkly social (<10 g/day)	1.15 (0.63 to 2.12)
						Moderate(≤30 g/day for men, ≤20 g/day for women)	1.16 (0.79 to 1.71)
				22,680 men		Never	1
						Social (<1/wk)	0.70 (0.42 to 1.17)
						Wkly social (<10 g/day)	1.11 (0.28 to 4.54)
						Moderate(≤30 g/day for men, ≤20 g/day for women)	0.83 (0.20 to 3.34)
						Never	1
						Social (<1/wk)	0.86 (0.62 to 1.19)
						Wkly social (<10 g/day)	1.17 (0.59 to 2.32)
						Moderate(≤30 g/day for men, ≤20 g/day for women)	1.24 (0.82 to 1.88)

women)

Pancreatic cancer mortality

2000 Gaziano [130]	US	Physicians' Health Study	1982-1990	89,299 men	Pancreatic cancer mortality	Never	1
						1 to 3 drinks/mo	0.89 (0.40 to 1.97)
						1 drinks/wk	0.50 (0.20 to 1.25)
						2 to 4 drinks/wk	0.52 (0.23 to 1.15)
						5 to 6 drinks/wk	0.72 (0.30 to 1.72)
						1 drink/day	0.79 (0.42 to 1.49)
2010 Kim [123]	Korea	Korea National Health Insurance Corporation	2000-2005	422,194 women	Pancreatic cancer mortality	Nondrinkers	1
						1.0 to 14.9 g/day	0.66 (0.35 to 1.23)
						15.0 to 29.9 g/day	0.50 (0.12 to 2.05)
				919,199 men		Nondrinkers	1
						1.0 to 14.9 g/day	0.81 (0.61 to 1.06)
						15.0 to 29.9 g/day	0.98 (0.73 to 1.31)
2011 Gapstur [131]	US	Cancer Prevention Study II	1982-2006	1,030,467 women/men	Pancreatic cancer mortality	Nondrinkers	1
						1 drink/day	1.03 (0.91 to 1.16)
						2 drinks/day	1.04 (0.92 to 1.18)
2013 Shen [126]	HongKong	18 Elderly Health Centers of the Hong Kong Government Department of Health	1998-2012	66,820 women/men (22,680 men, 44,140 women)	Pancreatic cancer mortality	Never	1
						Social (<1/wk)	1.15 (0.77 to 1.71)
						Wkly social (<10 g/day)	1.49 (0.54 to 4.08)
						Moderate(\leq 30 g/day for men, \leq 20 g/day for women)	0.54 (0.20 to 1.48)
				44,140 women		Never	1
						Social (<1/wk)	0.75 (0.38 to 1.48)
						Wkly social (<10 g/day)	NA

22,680 men	Moderate(≤30 g/day for men, ≤20 g/day for women)	NA
	Never	1
	Social (<1/wk)	1.59 (0.93 to 2.73)
	Wkly social (<10 g/day)	2.58 (0.90 to 7.39)
	Moderate(≤30 g/day for men, ≤20 g/day for women)	0.74 (0.26 to 2.09)

GB cancer mortality

2008 Yagyu [132]	Japan	Japan Collaborative Cohort Study	1988-2003	113,496 women/men	GB cancer mortality	None	1
				Women		0 to 5.9 g/day	1.49 (0.59 to 3.74)
						6.0 to 11.9 g/day	1.14 (0.28 to 4.70)
						12.0 to 23.9 g/day	no mortality
				Men		None	1
						0 to 23.9 g/day	0.90 (0.25 to 3.20)
						24.0 to 47.9 g/day	1.60 (0.58 to 4.44)
						48.0 to 71.9 g/day	2.13 (0.74 to 6.15)

Lung cancer mortality

1997 Camargo [127]	US	Physicians' Health Study	1981-1993	22,071 men	Lung cancer mortality	< 1drink/wk	1
						1 to 6 drinks/wk	1.06 (0.56 to 2.00)
2000 Gaziano [130]	US	Physicians' Health Study	1982-1990	89,299 men	Lung cancer mortality	Never	1.0
						1-3 drinks/mo	0.50 (0.25- 1.01)
						1 drinks/wk	0.63 (0.34 to 1.16)
						2-4 drinks/wk	0.97 (0.60 to 1.57)
						5-6 drinks/wk	0.85 (0.48 to 1.52)
						1 drink/day	0.89 (0.58 to 1.36)

2009 Thun [133]	US	Cancer Prevention Study II	1982-2006	150,247 women	Lung cancer mortality	<1 drink/day	1.14 (0.95 to 1.35)
						1 drink/day	1.04 (0.76 to 1.43)
				72,969 men		Nondrinkers	1
						<1 drink/day	0.99 (0.78 to 1.26)
						1 drink/day	1.04 (0.71 to 1.53)
		2-3 drinks/day	0.99 (0.75 to 1.31)				
2010 Kim [123]	Korea	Korea National Health Insurance Corporation	2000-2005	422,194 women	Lung cancer mortality	Nondrinkers	1
						1.0 to 14.9 g/day	1.29 (0.91 to 1.83)
						15.0 to 29.9 g/day	0.94 (0.45 to 1.94)
				919,199 men		Nondrinkers	1
						1.0 to 14.9 g/day	0.75 (0.66 to 0.85)
		15.0 to 29.9 g/day	0.78 (0.68 to 0.90)				
2011 Breslow [129]	US	National Health Interview Survey	1988-2006	323354 women/men	Lung cancer mortality	Never drinker	1
						Light (≤ 3 drinks/wk)	0.79 (0.67 to 0.92)
						Moderate ($>3-7$ drinks/wk for women, $>3-14$ drinks/wk for men)	0.85 (0.72 to 1.01)
				184,764 women		Never drinker	1
						Light (≤ 3 drinks/wk)	0.70 (0.56 to 0.89)
						Moderate ($>3-7$ drinks/wk for women, $>3-14$ drinks/wk for men)	0.83 (0.61 to 1.12)
				138,590 men		Never drinker	1
	Light (≤ 3 drinks/wk)	0.81 (0.64 to 1.02)					
	Moderate ($>3-7$ drinks/wk for women, $>3-14$ drinks/wk for men)	0.85 (0.67 to 1.07)					
2013 Shen [126]	HongKong	18 Elderly Health Centers of the Hong Kong Government	1998-2012	66,820 women/men	Lung cancer mortality	Never	1
						Social (<1 /wk)	0.85 (0.74 to 0.98)

Department of Health	(22,680 men, 44,140 women)	44,140 women	Wkly social (<10 g/day)	0.83 (0.57 to 1.21)
			Moderate (≤ 30 g/day for men, ≤ 20 g/day for women)	0.93 (0.75 to 1.16)
			Never	1
			Social (<1/wk)	0.91 (0.73 to 1.14)
			Wkly social (<10 g/day)	NA
			Moderate (≤ 30 g/day for men, ≤ 20 g/day for women)	0.98 (0.55 to 1.75)
			Never	1
			Social (<1/wk)	0.82 (0.68 to 0.98)
			Wkly social (<10 g/day)	0.69 (0.43 to 1.10)
			Moderate (≤ 30 g/day for men, ≤ 20 g/day for women)	0.92 (0.73 to 1.16)
	22,680 men			

Breast cancer mortality

1988 Garfinkel [122]	US	American Cancer Society's study	1959-1972	581,321 women	Breast cancer mortality	None	1
						Occasional	0.96 (0.82 to 1.13)
						1 drink/day	1.18 (1.03 to 1.36)
						2 drinks/day	1.06 (0.86 to 1.30)
1995 Fuchs [134]	US	Nurses' Health Study	1980-1992	85,709 women	Breast cancer mortality	0	1
						0.1 to 1.4 g/day	0.67 (0.45 to 1.01)
						1.5 to 4.9 g/day	0.85 (0.61 to 1.16)
						5.0 to 14.9 g/day	0.96 (0.71 to 1.32)
1997 Thun [128]	US	Cancer Prevention Study II	1982-1991	230,552 women	Breast cancer mortality	0	1
						Less than daily	1.1 (0.9 to 1.3)
						1 drink/day	1.2 (1.0 to 1.6)
2000 Jain [135]	Canada	National Breast Screening	1980-1993	58,926	Breast cancer	0	1

		Study (NBSS)		women	mortality	>0 to ≤10 g/day	1.01 (0.99 to 1.03)
						>10 to ≤20 g/day	1.04 (1.01 to 1.07)
2010 Kim [123]	Korea	Korea National Health Insurance Corporation	2000-2005	422,194 women	Breast cancer mortality	Nondrinkers	1
						1.0 to 14.9 g/day	0.82 (0.42 to 1.62)
						15.0 to 29.9 g/day	1.33 (0.46 to 3.86)
2011 Breslow [129]	US	National Health Interview Survey	1988-2006	184,764 women	Breast cancer mortality	Never drinker	1
						Light (≤3 drinks/wk)	0.75 (0.57 to 0.98)
						Moderate (>3 to 7 drinks/wk for women, >3-14 drinks/wk for men)	1.02 (0.66 to 1.57)
2013 Shen [126]	HongKong	18 Elderly Health Centers of the Hong Kong Government Department of Health	1998-2012	44,140 women	Breast cancer mortality	Never	1
						Social (<1/wk)	0.87 (0.45 to 1.67)
						Wkly social (<10 g/day)	NA
						Moderate (≤30 g/day for men, ≤20 g/day for women)	NA
Uterine cancer mortality							
2010 Kim [123]	Korea	Korea National Health Insurance Corporation	2000-2005	422,194 women	Uterine cancer mortality	Nondrinkers	1
						1.0 to 14.9 g/day	1.09 (0.50 to 2.35)
						15.0 to 29.9 g/day	1.10 (0.25 to 4.79)
Prostate cancer mortality							
1997 Camargo [127]	US	Physicians' Health Study	1981-1993	22,071 men	Prostate cancer mortality	0	1
						1 to 6 drinks/wk	0.88 (0.49 to 1.60)
						1 drink/day	0.6 (0.4 to 0.8)
2000 Gaziano [130]	US	Physicians' Health Study	1982-1990	89,299 men	Prostate cancer mortality	Never	1
						1 to 3 drinks/mo	0.56 (0.21 to 1.50)
						1 drinks/wk	0.09 (0.01 to 0.71)

						2 to 4 drinks/wk	0.86 (0.42 to 1.78)
						5 to 6 drinks/wk	0.69 (0.27 to 1.76)
						1 drink/day	1.01 (0.55 to 1.85)
2010 Kim [123]	Korea	Korea National Health Insurance Corporation	2000-2005	919,199 men	Prostate cancer mortality	Nondrinkers	1
						1.0 to 14.9 g/day	1.32 (0.59 to 3.00)
						15.0 to 29.9 g/day	1.75 (0.72 to 4.22)
2011 Breslow [129]	US	National Health Interview Survey	1988-2006	138,590 men	Prostate cancer mortality	Never drinker	1
						Light (≤ 3 drinks/wk)	0.93 (0.66 to 1.30)
						Moderate (> 3 to 7 drinks/wk for women, > 3 to 14 drinks/wk for men)	1.22 (0.86 to 1.72)
2013 Shen [126]	HongKong	18 Elderly Health Centers of the Hong Kong Government Department of Health	1998-2012	22,680 men	Prostate cancer mortality	Never	1
						Social (< 1 /wk)	0.92 (0.61 to 1.39)
						Wkly social (< 10 g/day)	0.83 (0.26 to 2.64)
						Moderate (≤ 30 g/day for men, ≤ 20 g/day for women)	0.87 (0.46 to 1.63)
Kidney cancer mortality							
2010 Kim [123]	Korea	Korea National Health Insurance Corporation	2000-2005	919,199 men	Kidney cancer mortality	Nondrinkers	1
						1.0 to 14.9 g/day	0.63 (0.35 to 1.12)
						15.0 to 29.9 g/day	0.46 (0.23 to 0.93)
Hematologic malignancy mortality							
2000 Gaziano [130]	US	Physicians' Health Study	1982-1990	89,299 men	Hematologic malignancy mortality	Never	1.0
						1 to 3 drinks/mo	1.09 (0.59 to 2.04)
						1 drinks/wk	1.08 (0.60 to 1.96)
						2 to 4 drinks/wk	0.87 (0.49 to 1.53)
						5 to 6 drinks/wk	0.70 (0.33 to 1.45)
						1 drink/day	0.67 (0.38 to 1.15)

2010 Kim [123]	Korea	Korea National Health Insurance Corporation	2000-2005	919,199 men	Hematologic malignancy (leukemia) mortality	Nondrinkers	1
						1.0 to 14.9 g/day	0.76 (0.48 to 1.20)
2013 Shen [126]	HongKong	18 Elderly Health Centers of the Hong Kong Government Department of Health	1998-2012	66,820 women/men (22,680 men, 44,140 women)	Hematologic malignancy (leukemia) mortality	Never	1
						Social (<1/wk)	1.14 (0.68 to 1.94)
						Wkly social (<10g/day)	2.45 (0.88 to 6.82)
						Moderate (≤30 g/day for men, ≤20 g/day for women)	1.70 (0.76 to 3.84)
						Never	1
						Social (<1/wk)	0.95 (0.43 to 2.07)
				44,140 women		Wkly social (<10 g/day)	3.26 (0.79 to 13.48)
						Moderate (≤30 g/day for men, ≤20 g/day for women)	NA
						Never	1
						Social (<1/wk)	1.51 (0.70 to 3.26)
						Wkly social (<10 g/day)	2.25 (0.51 to 9.91)
						Moderate (≤30 g/day for men, ≤20 g/day for women)	2.45 (1.00 to 6.00)
2010 Kim [123]	Korea	Korea National Health Insurance Corporation	2000-2005	919,199 men	Laryngeal cancer mortality	Nondrinkers	1
						1.0 to 14.9 g/day	1.31 (0.60 to 2.85)
						15.0 to 29.9 g/day	0.87 (0.32 to 2.35)