

Supplementary Table 1 | Study demographics for the European Prospective Investigation into Cancer and Nutrition (EPIC) study (N cases=2,341) (N controls=341, 082)

	Controls		Cases	
	n	(%)	n	(%)
Sex				
Female	232,699	68.2	1,031	44.0
Male	108,383	31.8	1,310	56.0
Age at recruitment (mean±sd)	51.3 (10.04)		58.1 (7.5)	
Education level				
Basic/elementary	109,219	32.0	1,101	47.0
Up to high school graduate	147,406	43.2	946	40.4
Some postsecondary and higher	84,457	24.8	294	12.6
Missing or unspecified				
Race/ethnicity				
White	341,082	100.0	2,341	100.0
Black, African-American	0		0	
Asian	0		0	
Hispanic	0		0	
Other unknown	0		0	
Smoking groups				
Never	165,114	48.4	221	9.4
Current				
1-15 cig/day	36,649	10.7	467	19.9
16-25 cig/day	20,482	6.0	564	24.1
26+ cig/day	7,206	2.1	258	11.0
Former				
Quit ≤10 years	33,797	9.9	298	12.7
Quit 11<20 years	30,234	8.9	145	6.2
Quit 20+ years	29,171	8.6	111	4.7
Other/unknown smoking	18,429	5.4	277	11.8

Supplementary Table 2 | Web Table – Study Description – See accompanying excel table

Supplementary Table 3 | Web Table – Alcohol Questionnaire descriptions – See accompanying excel table

Supplementary Table 4 |Sensitivity analyses of associations with categories of grams of alcohol consumption combined, adjusted for occupational exposures combined in the International Lung Cancer Consortium and Synergy Consortium Study population. Effect estimates from random effects models across studies.

	n studies	n cases	n controls	OR ¹	95% CI
No adjustment for occupation					
0 g/day	6	1,291	1,576	1.00	REF
0-4.9 g/day	6	776	1,261	0.73	0.64-0.83
5-9.9 g/day	6	723	1,026	0.85	0.74-0.97
10-19.9 g/day	6	1,139	1,482	0.83	0.73-0.94
20-29.9 g/day	6	759	735	1.06	0.91-1.23
30-44.9 g/day	6	737	789	0.89	0.77-1.04
≥45 g/day	6	969	758	0.92	0.80-1.07
Adjustment for List A					
0 g/day	6	1,291	1,576	1.00	REF
0-4.9 g/day	6	776	1,261	0.73	0.64-0.83
5-9.9 g/day	6	723	1,026	0.84	0.74-0.97
10-19.9 g/day	6	1,139	1,482	0.83	0.73-0.94
20-29.9 g/day	6	759	735	1.05	0.91-1.22
30-44.9 g/day	6	737	789	0.89	0.77-1.04
≥45 g/day	6	969	758	0.92	0.79-1.06
Adjustment for List B					
0 g/day	6	1,291	1,576	1.00	REF
0-4.9 g/day	6	776	1,261	0.73	0.64-0.83
5-9.9 g/day	6	723	1,026	0.85	0.74-0.97
10-19.9 g/day	6	1,139	1,482	0.83	0.73-0.94
20-29.9 g/day	6	759	735	1.05	0.91-1.22
30-44.9 g/day	6	737	789	0.89	0.77-1.04
≥45 g/day	6	969	758	0.92	0.79-1.06

¹Models adjusted for sex, age group, pack-years, education, ethnicity and study. Examined in a combined model for those studies where standardized occupational data was available (CE, Toronto, Montreal, EAGLE, ICARE and CAPUA).

Supplementary Table 5 | Evaluation of potential confounding by presence of Tuberculosis in subjects from Central European study

	Average lifetime alcohol intake (g/day)							
	0g n (%)	0-4.9 n (%)	5-9.9 g n (%)	10-19.9g n (%)	20-29.9g n (%)	30-44.9g n (%)	45-89g n (%)	90+g n (%)
Ever reporting a history of Tuberculosis at diagnosis or interview								
No TB	1131 (22.76)	782 (15.73)	633 (12.74)	799 (16.08)	479 (9.64)	422 (8.49)	427 (8.59)	297 (5.98)
TB	80 (22.41)	55 (15.41)	45 (12.61)	50 (14.01)	35 (9.8)	34 (9.52)	32 (8.96)	26 (7.28)
Self-reported TB more than 10 years prior to diagnosis or interview								
No TB	1141 (22.72)	790 (15.73)	641 (12.77)	803 (15.99)	487 (9.7)	426 (8.48)	432 (8.6)	301 (5.99)
TB	67 (22.79)	45 (15.31)	36 (12.24)	44 (14.97)	27 (9.18)	28 (9.52)	26 (8.84)	21 (7.14)

TB, tuberculosis

Supplementary Table 2 | International Lung Cancer Consortium and Synergy Study Details

Study abbreviation	Study name	Principal Investigator(s)	Reference	Country/Continent	Study Period*	Study Design/Control type	Cases	Controls
NCI-Maryland	National Cancer Institute Lung Cancer Study	C.C. Harris	Meinhold CL et al., 2011, <i>Int J Cancer</i> 128 :1404.	U.S.A./North America	1998-2009	Pop. & Hosp. C-C	1082	1532
HSPH	Harvard School of Public Health Lung Cancer Study	D. Christiani	Miller DP et al., 2002, <i>Cancer Res</i> 62 :2819.	U.S.A./North America	1992-2008	Hosp. C-C	1092	200
NELCS	New England Lung Cancer Study	E. Duell	Heck JE et al., 2009, <i>Environ Health Perspect</i> 117 :1718.	U.S.A./North America	2005-2008	Pop. C-C	240	235
MSK	Memorial Sloan-Kettering Cancer Centre	I. Orlow, B Park	NA	U.S.A./North America	2003-2006	Hosp. C-C	80	76
WELD	Women's Epidemiology of Lung Disease	A.G. Schwartz	Schwartz AG et al., 2009, <i>J thorac Oncol</i> 4 :291.	U.S.A./North America	2001-2005	Pop. C-C	570	566
UCLA	UCLA-USC Health Study	ZF. Zhang	Cui Y et al., 2006, <i>Int J Cancer</i> 118 :714.	U.S.A./North America	1999-2004	Pop. C-C	610	1039
Moffitt	Moffitt study of lung cancer	P. Lazarus	Gallagher CJ et al., 2007, <i>Cancer Epidemiol Biomarkers Prev</i> 16 :823.	U.S.A./North America	1999-2003	Hosp. C-C	497	885
FHS	Family Health Study III	A.G. Schwartz	Cote ML et al., 2005, <i>JAMA</i> 293 :3036.	U.S.A./North America	1990-2003	Pop. C-C	532	706
Toronto	Greater Toronto Area Lung Cancer Study (Toronto)	J. McLaughlin	Brenner DR et al., 2010, <i>BMC Cancer</i> 10 :285.	Canada/North America	1997-2002	Pop. & Hosp. C-C	251	633
Montreal	Montreal case-control study of environmental causes of cancer	J. Siemiatycki	Benedetti A et al., 2006, <i>Cancer Causes Control</i> 17 :469.	Canada/North America	1996-2002	Pop. C-C	1090	1458
Hawaii	Study of Diet and Cancer (University of Hawaii)	L. LeMarchand	Le Marchand L et al., 2000, <i>J Natl Cancer Inst</i> 92 :154.	U.S.A./Hawaii/ North America	1992-1997	Pop. C-C	340	454
CAPUA	Cancer de Pulmon en Asturias	A. Tardon	López-Cima MF et al., 2012, <i>BMC Cancer</i> 12 :433.	Spain/Europe	2000-2010	Hosp. C-C	584	630
Spain	Spain Lung Cancer Study	Barros-Dios	Barros-Dios JM et al., 2012, <i>Cancer Epidemiol Biomarkers Prev</i> 21 :951.	Spain/Europe	2005-2007	Hosp. C-C	441	548
Israel	Molecular Epidemiology of Lung Cancer	G. Rennert	NA	Israel/Europe	2005-	Pop. C-C	341	332
ICARE	Investigation of occupational and environmental causes of respiratory cancers	I. Stucker	Luce D et al., 2011, <i>BMC Public Health</i> 11 :928.	France/Europe	2001-2007	Pop. C-C	2584	3335
EAGLE	Environment and Genetics in Lung Cancer Study Etiology	M.T. Landi	Landi MT et al., 2008, <i>BMC Public Health</i> 8 :1471.	Italy/Europe	2002-2005	Pop. C-C	1720	2058
ESTHER	ESTHER Study	H. Brenner	Truong T et al., 2010, <i>J Natl Cancer Inst</i> 102 :959.	Germany/Europe	2001-2003	Pop. C-C	206	206
CE	INCO Central Europe Health Study	P. Boffetta, P. Brennan	Brennan, P et al., 2006 <i>Am J Epidemiol</i> 164 :1233.	Europe/ Multi-country	1998-2002	Pop. & Hosp. C-C	2615	2689
EPIC	European Prospective Investigation of Cancer	P. Vineis	Riboli E. et al., 1992, <i>Ann Oncol</i> 3 :783.	Europe/ Multi-country	1993-1998	Cohort	2341	341082
INSERM	INSERM	I. Stucker	NA	France/Europe	2001-	Hosp. C-C	139	168
Seoul	Seoul Study of lung cancer	Y.C. Hong	Kim JH et al., 2013, <i>Environ Health Toxicol</i> 28 :e2013012.	Korea/Asia	2001-2008	Hosp. C-C	376	675
Aichi	Aichi Cancer Centre	K. Matsuo	Ito H et al., 2013, <i>Ann Oncol</i> 24 :2870.	Japan/Asia	2001-2005	Hosp. C-C	1418	2833

Supplementary Table 3 | Alcohol data availability and details across studies

Study name	Ever drinker definition	Current drinker definition	Duration variables	Intensity variables
NCI-Maryland	"more than 12 bevs per year ever"	none - can calculate	yes	yes
HSPH	did you ever drink	do you drink now	yes	yes
NELCS	two years ago how often did you drink...?	two years ago how often did you drink	no	yes
MSK	"ever had a glass of .."	none - can calculate	yes	yes
WELD	at least once a month for six months or more	none	yes	yes
UCLA	one alcoholic drink per month for at least 6 months	none - can calculate	yes	yes
Moffitt	"at least once a week for one year"	"do you still drink...?"	yes	yes
FHS	at least once a month for six months or more	none	yes	yes
Toronto	only asks two years ago	two years ago	no	yes
Montreal	"ever drink.... Regularly?"	do you still drink it regularly...?	yes	yes
Hawaii	ever drinker on a weekly basis	do you currently drink...?	yes	yes
CAPUA	only asks two years ago	past five years	no	yes
Spain	ever drink	none - can calculate	yes	yes
Israel	at least once a week for one year	none	yes	yes
ICARE	none - can calculate	regular alcohol consumption everyday (at least 1/2 litre of wine per day)	yes	yes

EAGLE	yes	"during the last year"	yes	yes
ESTHER	none - can calculate	how many days per week have you drunk alcohol in the last 12 months	yes	yes
CE	"Have you ever consumed alcoholic drinks?"	one year ago	yes	yes
EPIC	multiple time variables	drinks at recruitment	yes	yes
Seoul	none - can calculate	"how often do you drink more than two cups of soju or beer?"	no	yes
Aichi	do you drink...		yes	yes

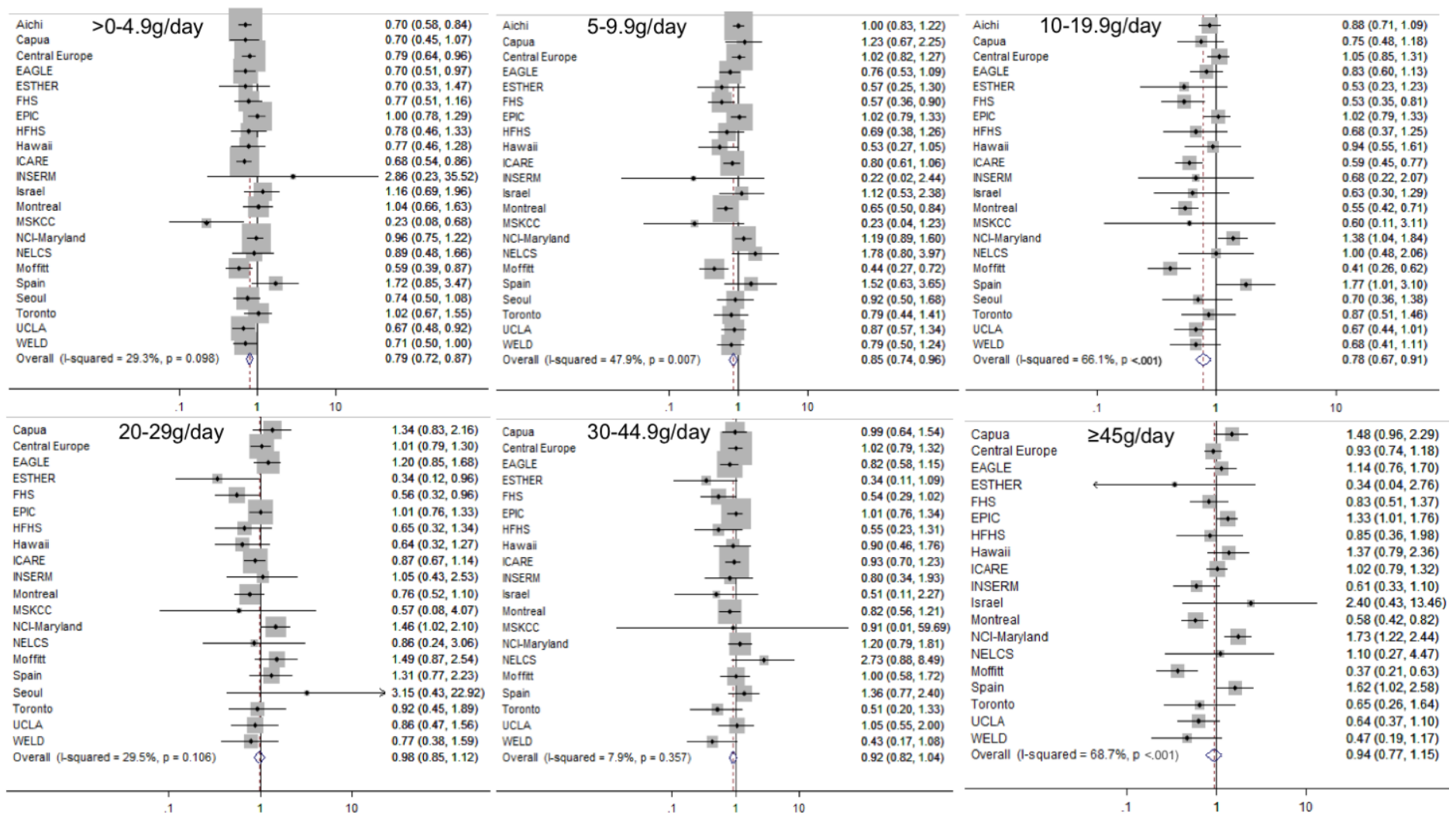
Wine Detail	Other Beverages included	Beer size	wine size	liquor size	other size
no	no	cans, bottles or 12oz glass	4oz glass	1.5 oz shots	
no	no	bottles/cans	glasses	ounces	
yes	no				
no	no				
no	no	12 oz cans or bottles	4oz glass	1oz shots	
no	no	cans or pints or glasses	glasses, bottle, 375, 750	drinks or ounces or shots	
yes	other/liquor	12 oz beer	3.6 oz glass	shots	
no	no	12 oz cans or bottles	4oz glass	1oz shots	
yes	port	12 oz bottle	5 oz glass	1.5 oz shots	3 oz shots sherry, port, liqueur
no	no	drinks	drinks	drinks	
no	no	12 oz can	4 oz glass	1.5 oz shots	
yes	champagne, cider, brandy	in 200ml increments	in 100ml increments d/w/m	in 50ml increments d/w/m	champagne or cider 25ml/d/w/m
yes		glasses	glasses	glasses	brandy, jerez, aguardiente
yes	other/liquor	beer, can	wine, glass	shot glass	
no	aperitif	nombre de verres	nombre de verres	nombre de verres	

no	aperitif	cans or bottles of beer	glasses of wine	glasses of hard liquor, bitters, liqueurs	
no	no	beer .33L	wine .25L	.02L	
no	no	bottles	glasses	grams	
no	fortified wine	glasses	glasses	glasses	fortified wine - glasses
no	sake, sochu	soju - bottles			
no	sake, sochu				

notes

pints x1.5
cans

average bottle
of soju is 375
ml



Supplementary Figure 1 | Study-specific effect estimates across alcohol intake categories. All comparisons are relative to 0g/day consumption categories. Effect estimates (OR/RR/HR) and 95% confidence intervals estimated within studies and overall summary effects estimated from random-effects models.