

Table 2.1. Cohort studies of consumption of alcoholic beverages and cancer in the general populations

Country Name of study	Date of cohort sampling	References	Maximum years of follow-up	Cohort sample and age at beginning of follow-up	Collection of information	Cases/deaths	Cancers analysed	Comments
Asia/Oceania								
<i>Australia</i>								
Melbourne Collaborative Cohort Study	1990–94	Baglietto <i>et al.</i> (2005, 2006)	1990–2003	Cohort of 41 528 men and women, aged 27–75 years	Interview	Cases/deaths	Breast, prostate	
Numbour Skin Cancer Study	1992–1996	Ansems <i>et al.</i> (2008)	1992–2002	1 360 randomly selected adult residents of Nambour, Queensland, Australia participating in the Nambour Skin Cancer Prevention Trial	Self-administered questionnaire	Cases	Basal cell carcinoma and squamous cell carcinoma of skin	Relative risk reported by type of alcoholic beverage
<i>China</i>								
Zoucheng/ Shandong Study	1982	Zhang <i>et al.</i> (1997)	1982–94	7809 men and 7994 women from probabilistic sample of general population in three counties, aged ≥20 years	Baseline questionnaire		Lung	No dose–response found for frequency, amount or duration of drinking; lung cancer mortality found in crude analyses
Linxian Nutrition Intervention Trial	1986	Guo <i>et al.</i> (1994); Tran <i>et al.</i> (2005)	1986–2001	Nested case–control study; a cohort of 29 584 adults in a randomized intervention trial, aged 40–69 years	Structured interview	Cases	Oesophagus, stomach	Drinking alcoholic beverages was relatively uncommon in Lin Xian residents, but was reported by 22% of the cancer patients.

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Shanghai Men's Study, also Shanghai Cohort Study	1986–89	Yuan <i>et al.</i> (1997); Fan et al. (2008)	1986–95	18 244 male residents of Shanghai, aged 45–64 years	Structured interviewed	Deaths	Upper aerodigestive tract, oesophagus, stomach, colon, rectum, liver, lung	Joint effects of alcohol and smoking examined. Relative risk reported by type of alcoholic beverage Fan et al. (2008)
Jiashan County Screening Study	1989–90	Chen <i>et al.</i> (2005)	1989–2001	31 087 men and 33 256 women screened for colorectal cancer in 1989–90, aged ≥30 years	Interviewer- administered standardized questionnaire	Deaths	Colon, rectum	No differences in risk for men and women; among only one case among former drinkers
Yunnan Tin Corporation Miners Cohort	1992	Lu <i>et al.</i> (2000)	1992–97	7965 miners, aged ≥40 years; 10 years of high-risk professional activity	Interviewer- administered questionnaire		Lung	
<i>Japan</i>								
Japanese Physicians' Study	1965	Kono <i>et al.</i> (1985, 1986, 1987)	1965–83	5130 male Japanese physicians, aged 27–89 years	Self-administered questionnaire	Deaths	Upper aerodigestive tract, oesophagus, stomach, large bowel, liver, lung	Joint effects of alcohol and tobacco examined

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Six Prefecture Study	1965	Hirayama (1989, 1992); Kinjo <i>et al.</i> (1998)	1966–82	122 261 male and 142 857 female, Japanese adults aged 40–69 years at the baseline of 1965, from 29 public health districts in six prefectures of Japan	Interviewer- administered standardized questionnaire	Deaths	Mouth, pharynx, oesophagus, stomach, proximal colon, rectum, sigmoidcolon, upper and lower digestive tract, liver, prostate	Joint effect of alcohol and tobacco examined
Life Span Study	1979–81	Goodman <i>et al.</i> (1997a)	1979–89	Analytical cohort of 22 000 residents of Hiroshima and Nagasaki in 1945 [age range not stated]	Self-administered questionnaire	Cases	Breast	No association in women who drank beer, sake or other alcoholic beverages
Chiba Center Association Study	1984	Murata <i>et al.</i> (1996)	1984–93	Nested case–control study; cohort of 17 200 men part of a gastric mass screening survey	Self-administered questionnaire	Cases	Oral cavity, pharynx, oesophagus, stomach, colon, rectum, liver, pancreas, biliary tract, larynx, lung, prostate urinary bladder	The effect of tobacco smoking was examined.
Aichi Cancer Center Hospital Study	1985	Kato <i>et al.</i> (1992a)	1985–89	3 914 subjects who underwent gastroscopic examination	Self-recorded questionnaire, cancer registry and death certificate	Cases	Stomach	Non-significant increase for risk in stomach cancer among past and daily drinkers

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Aichi Prefecture Study	1985–89	Kato <i>et al.</i> (1992b); Takezaki <i>et al.</i> (2003)	1985–99	9 753 Japanese men and women, aged ≥ 40 and ≥ 30 years, respectively	Baseline survey using a mailed questionnaire; death certificate	Cases	Stomach, lung	Association between alcohol intake and stomach cancer slightly weakened when smoking status, diet and family history of stomach cancer were included in the multivariate analysis.
Japanese Collaborative Cohort Study (JACC)	1988–90	Lin <i>et al.</i> (2002, 2005); Sakata <i>et al.</i> (2005), Wakai <i>et al.</i> (2005); Nishino <i>et al.</i> (2006); Ozasa (2007); Ide <i>et al.</i> (2008)	1988–99	110 792 (46 465 men, 64 327 women), aged 40–79 years	Self-administered questionnaire	Cases/deaths	Oral cavity, pharynx oesophagus, stomach, colon, rectum, liver, gall bladder, pancreas, lung, breast, cervix uteri, prostate, kidney, urothelial tract, non-Hodgkin lymphoma, multiple myeloma, myeloid leukaemia,	Relative risks by smoking status reported. Mean follow-up in Ide <i>et al.</i> (2008) was 12.5 years (end of follow-up not reported)

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Hospital-Based Epidemiologic Research Program at the Aichi Chiba Center (HERPACC)	1988–99	Inoue <i>et al.</i> (2003)	1988–2000	Nested case–control study of 78 755 hospital patients, aged 32– 85 years	Self-administered questionnaire	Cases	Pancreas	Increased risk in men and women, separately; the increased risk in former drinkers may be due to ill-health
Japan Public Health Center Study Cohort I	1990	Sasazuki <i>et al.</i> (2002) Shimazu <i>et al.</i> (2008); Ishiguro <i>et al.</i> (2009)	1990–2004	27 063 men, 27 435 women born in 1930–49, aged 40–59 years at baseline	Self-administered questionnaire, death certificates, cancer registry	Cases	Oesophagus, stomach, lung	Data for women collected but not presented (Sasazuki <i>et al.</i> (2002). Relative risks reported by smoking status (Shimazu <i>et al.</i> (2008); Ishiguro <i>et al.</i> (2009)
Takayama City Cohort	1992	Shimizu <i>et al.</i> (2003)	1993–2000	Analytic cohort of 13 392 men and 15 695 women, aged ≥ 35 years	Self-administered standardized questionnaire	Cases	Colon, rectum	Significant dose–response relationship between alcohol consumption and colon cancer in both sexes

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Japan Public Health Center Study Cohort II	1993	Otani <i>et al.</i> (2003); Ishihara <i>et al.</i> (2007); Shimazu <i>et al.</i> (2008); Ishiguro <i>et al.</i> (2009)	1993–2004	42 540 male and 47 464 female Japanese, aged 40–69 years	Self-administered standardized questionnaire	Cases	Oesophagus, colon, rectum, lung	In men, no interaction of smoking with alcoholic beverage consumption for colon, rectal or colorectal cancer; no associations for colorectal cancer in women. Relative risks reported by smoking status (Shimazu <i>et al.</i> (2008); Ishiguro <i>et al.</i> (2009)
Adult Health Study longitudinal cohort of atomic bomb survivors	1958	Ohishi <i>et al.</i> (2008)	1970–2002	20,000 atomic bomb survivors and inhabitants not present in the cities at the time of bombings in Hiroshima and Nagasaki, Japan	Self-administered questionnaire	Cases	Liver	
Miyagi Cohort Study	1990	Nakaya <i>et al.</i> (2005); Akhter <i>et al.</i> (2007)	1990–2003	47 605 participants living in 14 municipalities of Miyagi Prefecture in rural northern Japan; aged 40–64 years	Self-administered questionnaire	Cases	Colon, rectum, lung	Relative risks reported by smoking status

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Korea (Republic of)								
Elderly Pharmaco- epidemiologic Cohort (KEPEC)	1993–1998	Lim & Park (2008)	1993–2002	Analytical cohort of 14 304 (4 834 men, 9 470 women) residents of the Busan region who were beneficiaries of Medial Insurance Corporation; aged ≥ 65 years	Self-administered questionnaire	Cases	Colorectum	Relative risks reported by type of alcoholic beverage
Korean MultiCenter Cancer Cohort (KMCC)	1993–2004	Gwack <i>et al.</i> (2007)	1993–2002	Multi-centre cohort in Haman County, Choongju City, Uljin County and Pohang City; aged over 30 years	Interviews	Cases/deaths	Liver	Relative risks reported by status of HBsAg serology and fasting serum glucose levels
The National Health Insurance Corporation Study (NHICS Cohort)	1996	Sung <i>et al.</i> (2007)	1996–2002	669 570 men who were insured by the Korea National Health Insurance programme; aged 30 years or over	Self-administered questionnaire	Cases/deaths	Stomach	Relative risks reported by smoking status
India								
[name not given] Trivandrum oral cancer cohort	1995–1998	Muwonge <i>et al.</i> (2008)	1996–2004	Cohort of participants in a randomized control trial within the Trivandrum Oral Cancer Screening study in Trivandrum district, India	Interviews	Cases/deaths	Oral cavity	Relative risks reported by tobacco smoking and chewing status and by type of alcoholic beverage

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<i>Philippines</i>								
[name not given] Manila screening trial cohort	1995–97	Gibson <i>et al.</i> (2009)	1995–2001	Cohort of 151 168 women participating in a randomized controlled trial of screening for breast cancer; aged 35–64 years	Interviews	Cases	Breast	Nested case-control design.
<i>Singapore</i>								
Singapore Chinese Health Study	1993–98	Friborg <i>et al.</i> (2007); Tsong <i>et al.</i> (2007)	1993–2005	63 257 ethnic Chinese men and women living in Singapore within randomly selected government-built housing estates; aged 45–74 years	Interviews	Cases	Nasopharynx and oropharynx, colon, rectum	Relative risks reported by smoking status
North America								
<i>Canada</i>								
Nutrition Canada Survey Cohort	1970–72	Ellison (2000)	1970–93	12 795 respondents to a population survey, aged 50–84 years	Interviews	Cases	Prostate	
National Breast Screening Study	1980–85	Friedenreich <i>et al.</i> (1993); Jain <i>et al.</i> (2000a,b); Rohan <i>et al.</i> (2000); Navarro Silvera <i>et al.</i> (2005); Kabat <i>et al.</i> (2008)	1980–99	Total 89 835 women, aged 40–59 years; 56 837 women, aged 40–59 years	Self-administered lifestyle questionnaire	Cases	Breast, endometrium, thyroid, lung, colorectum	

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<i>USA</i>								
American Registry of Radiologic Technologists	1926–82	Boice <i>et al.</i> (1995); Freedman <i>et al.</i> (2003)	1926–89	146 022 radiologic technologists, aged 23–90	Self-administered questionnaire	Cases	Melanoma, breast	Nested case– control study
University of Pennsylvania Alumni Study	1931–40	Whittemore <i>et al.</i> (1985)	1931–78	13 356 male and 4 076 female students examined at the University of Pennsylvania in 1931–40	College physical examination, questionnaires	Cases/deaths	Buccal cavity, oesophagus, stomach, small intestine, colon, rectum, liver, biliary tract, pancreas, larynx, trachea, bronchus, lung, melanoma, other skin, breast, urogenital organs, prostate, testis, urinary bladder, kidney, brain, thyroid, Hodgkin disease, non- Hodgkin lymphoma, leukaemia, other cancer	Data on collegiate alcohol consumption limited

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Minnesota Breast Cancer Family Study	1944–52	Vachon <i>et al.</i> (2001)	1944–90	Breast cancer patients from the Tumor Clinic of the University of Minnesota; 544 families representing 4418 family members	Telephone interviews (surrogate and self- reported)	Cases	Breast	Higher risk in first-degree relatives for daily versus never drinkers; validation study verified 136 of 138 breast cancers through medical and pathology records
US Army Veterans Study	1944–45	Robinette <i>et al.</i> (1979)	1946–74	4401 chronic alcoholic male veterans, hospitalized in 1944–45	Death certificates	Deaths	Buccal cavity, pharynx, nasopharyngitis, oesophagus, stomach, large intestine, rectum, pancreas, larynx, trachea, bronchus, lung, prostate, testis, penis, urinary bladder, kidney, malignant lymphoma, lymphatic and haematopoietic leukaemia, ureter	Compared with age-matched male veterans hospitalized for nasopharyngitis; no individual exposure data; no information on potential confounders

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Framingham Study (1948) and Framingham Offspring (1971)	1948, 1971	Gordon & Kannel (1984); Zhang <i>et al.</i> (1999); Djoussé <i>et al.</i> (2002, 2004)	1948–present	In 1948, 5209 subjects, aged 28–62 years at first examination; in 1971, 5124 children of the original cohort participated	Questionnaire, physical examination	Cases	Colon, lung, breast, urinary bladder	
Western Electric Company Cohort Study	1957	Garland <i>et al.</i> (1985)	1957–76	1954 men, aged 40–55 years, employed for at least 2 years at the Western Electric Company	28-day diet history and interview	Cases	Colorectal	Compared alcoholic beverage intake reported at initial examination; no information regarding the exposure or relative risk given
American Cancer Society Prevention Study I (CPSI)	1959–60	Garfinkel <i>et al.</i> (1988); Boffetta & Garfinkel (1990)	1960–72	Analytical cohort of 581 321 women across the USA, aged >30 years; 276 802 white men, aged 40–59 years, volunteers for the American Cancer Society in 25 states	Self-administered questionnaire	Deaths	Buccal cavity, oesophagus, larynx, breast,	Based on mortality only
Tecumseh Community Health Study	1959–60	Simon <i>et al.</i> (1991)	1959–87	Analytical cohort of 1954 women, aged >21 years	Interview- administered questionnaire	Cases	Breast	No difference in risk by menopausal status (but low numbers)

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Harvard Alumni Study	1962, 1966	Whittemore <i>et al.</i> (1985); Sesso <i>et al.</i> (2001)	1988–93	7612 male Harvard alumni	Questionnaire	Cases/deaths	Buccal cavity, oesophagus, stomach, small intestine, colon, rectum, liver, biliary tract, pancreas, larynx, trachea, bronchus, lung, melanoma, other skin, breast, prostate, testis, urogenital organs, urinary bladder, kidney, thyroid, Hodgkin disease, non-Hodgkin lymphoma, leukaemia, brain, other cancer	Relative risk adjusted for smoking.
Kaiser Permanente Medical Care Program Study	1964–1985	Klatsky <i>et al.</i> (1981, 1988); Hiatt <i>et al.</i> (1988, 1994); Iribarren <i>et al.</i> (2001); Efrid <i>et al.</i> (2004); Li <i>et al.</i> (2006, 2009b); Klatsky <i>et al.</i> (2009)	1964–2006	Original cohort contained 182 357 Kaiser Foundation Health Plan members	Self-administered questionnaire	Deaths/cases	Colon, rectum, pancreas, breast, prostate, brain, thyroid, Hodgkin disease, non- Hodgkin lymphoma, multiple myeloma, lymphocytic leukaemia, myelocytic leukaemia	Relative risks for breast cancer reported by histological type Li <i>et al.</i> (2006) and receptor status Li <i>et al.</i> (2009b)

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American Men of Japanese Ancestry Study/ Honolulu Heart Study	1965–68	Pollack <i>et al.</i> (1984); Kato <i>et al.</i> (1992c); Nomura <i>et al.</i> (1990, 1995); Stemmermann <i>et al.</i> (1990); Chyou <i>et al.</i> (1993, 1995, 1996)	1965–93	6701 American men of Japanese ancestry, born from 1900–19, and residing on the Hawaiian island of Oahu, 8 006 subjects for the Honolulu Heart Study	Structured interview	Cases	Oral cavity, pharynx, oesophagus, upper aerodigestive tract, stomach, colon, rectum, liver, biliary tract, pancreas, larynx, lung, prostate, urogenital organs, urinary bladder, renal, lymphoma, leukaemia	SEER Registry used as a reference
Lutheran Brotherhood Insurance Study	1966	Hsing <i>et al.</i> (1990, 1998a); Kneller <i>et al.</i> (1991); Chow <i>et al.</i> (1992); Zheng <i>et al.</i> (1993)	1966–86	17 633 male white policy holders, aged ≥ 35 years, of the Lutheran Brotherhood Insurance Society	Questionnaire	Deaths	Stomach, colorectum, pancreas, lung, prostate	Relative risk for total alcoholic beverage consumption and risk for lung cancer not available
[name not given] Hawaiian Cohort Study	1968	Le Marchand <i>et al.</i> (1994)	1968–89	41 400 persons in the State of Hawaii, (20 316 men), aged >18 years	Lifestyle questionnaire	Cases	Prostate	Data recorded on current drinking status, age when drinking started, amount and frequency of intake of beer, wine, saké and hard liquor.

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[name not given] US Veterans Affairs Study	1969–1996	Brinton <i>et al.</i> (2010)	1969–1996	Analytical cohort of 4 501 578 men in the Veterans medical care system; aged 18–100 years	Medical records	Cases	Male breast	
NHANES I Epidemiologic Follow-up Study	1971–75	Schatzkin <i>et al.</i> (1987); Yong <i>et al.</i> (1997); Breslow <i>et al.</i> (1999); Su & Arab (2004)	1971–93	14 407 men and women, aged 25–74 years, who completed a medical examination	Interviewer- administered questionnaire	Cases	Colon, lung, breast, prostate	Joint effects of tobacco and alcohol examined Yong <i>et al.</i> (1997)
Nurses' Health Study	1976	Willett <i>et al.</i> (1987a,b); Fuchs <i>et al.</i> (1995); Garland <i>et al.</i> (1999); Colditz & Rosner (2000); Michaud <i>et al.</i> (2001); Chen, W.Y. <i>et al.</i> (2002a); Wei <i>et al.</i> (2004); Lee <i>et al.</i> (2006)	1976–2004	121 700 female nurses aged 30–55; cohort size after exclusions: 80 253	Questionnaire	Cases	Colon, rectum, pancreas, breast, renal	Relative risk adjusted for smoking; joint effects of tobacco and alcohol examined

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Breast Cancer Detection and Demonstration Project (BCDDP)	1979–81, 1987–89	Flood <i>et al.</i> (2002)	1993–98	45 264 women, aged 40–93 years, participated in a breast cancer screening programme	Mailed, self-administered standardized questionnaire	Cases	Colon, rectum	Interaction with smoking where the association of alcoholic beverages with colorectal cancer observed only in nonsmokers
New York State Cohort	1980	Bandera <i>et al.</i> (1997)	1980–87	27 544 men and 20 456 women long-term residents of New York State	Mailed questionnaire	Cases	Lung	Relative risk adjusted for smoking
Leisure World Study	1981–83, 1985	Shibata <i>et al.</i> (1994)	1982–90	Analytical cohort of 13 976 men and women 65–80 years	Self-administered questionnaire	Cases	Pancreas	
	1981–82	Wu <i>et al.</i> (1987)	1981–85	11 888 residents of a retirement community	Mailed, self-administered standardized questionnaire	Cases	Colorectum	For men, results similar for right and left colon, but with lower statistical significance for left colon; for women, association was apparent but not significant for the left colon.

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American Cancer Society, Cancer Prevention Study-II (CPS II)	1982	Boffetta <i>et al.</i> (1989); Thun <i>et al.</i> (1997); Coughlin <i>et al.</i> (2000); Feigelson <i>et al.</i> (2003); Thun <i>et al.</i> (2009)	1982–2006	Analytical cohort of 1.2 million men and women, recruited 1982, aged >30 years	Self-administered questionnaire	Cases/deaths	Mouth, pharynx, oesophagus, colon, rectum, liver, pancreas, larynx, lung, breast, multiple myeloma, lymphatic and/or haematopoietic	Cases not verified, nested case–control design Boffetta <i>et al.</i> (1989). Relative risks for lung cancer reported among non-smokers Thun <i>et al.</i> (2009)
Iowa 65+ Rural Health Study	1982	Cerhan <i>et al.</i> (1997)	1982–93	3673 residents (1420 men), aged >65 years, from two rural counties in Iowa	Interview	Cases	Prostate	
Second Cancers Following Oral and Pharyngeal Cancers Study	1984–85	Day <i>et al.</i> (1994a)	1984–89	1090 first primary cancers of the oral cavity and pharynx included in a multicentre population-based case–control study from 4 areas of the USA	Interviewer-administered questionnaire	Cases	Oral cavity, pharynx, oesophagus, larynx, lung	Information on alcoholic beverage type and cessation of alcoholic beverage drinking

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Iowa Women's Health Study	1985–86	Potter <i>et al.</i> (1992); Gapstur <i>et al.</i> (1993); Harnack <i>et al.</i> (1997, 2002); Chiu <i>et al.</i> (1999); Kushi <i>et al.</i> (1999); Folsom <i>et al.</i> (2003); Kelemen <i>et al.</i> (2004)	1986–2001	99 826 randomly selected women, aged 55–69 years, from Iowa driver's licence list	Mailed questionnaire	Cases	Colon, rectum, pancreas, lung, breast, endometrium, ovary, kidney, non- Hodgkin lymphoma, lymphatic/haemato- poietic cancers	Nested case– control study; odds ratio for total alcoholic beverage consumption not available; joint effect of smoking and alcohol examined Potter <i>et al.</i> (1992)
Cohort of Iowa Men	1986–89	Cantor <i>et al.</i> (1998) Putnam <i>et al.</i> (2000)	1986–1995	Analytical cohort of 1572 men, aged ≥65 years	Mailed, self- administered standardized questionnaire and supplemental telephone interview	Cases	Prostate, urinary bladder	

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Health Professionals Follow-up Study (HPFS)	1986	Giovannucci <i>et al.</i> (1995); Michaud <i>et al.</i> (2001); Platz <i>et al.</i> (2004); Wei <i>et al.</i> (2004); Lee <i>et al.</i> (2006); Sutcliffe <i>et al.</i> (2007); Thygesen <i>et al.</i> (2008)	1986–2002	HPFS: 51 529 men, aged 40–75 years	Self-administered standardized questionnaire at baseline 1986, and also in 1990, 1994 and 1998	Cases	Colon, rectum, pancreas, prostate, renal	Combined analysis of NHS and HPFS, performed by Lee <i>et al.</i> (2006), Wei <i>et al.</i> (2004), Michaud <i>et al.</i> (2001), relative risk adjusted for smoking. Relative risks reported by type of alcoholic beverage Sutcliffe <i>et al.</i> (2007)
Study of Osteoporotic Fractures	1986–88	Lucas <i>et al.</i> (1998)	1986–89	Analytical cohort of 8015 white women, aged ≥ 65 years	Self-administered questionnaire	Cases	Breast	No association in women with a positive family history, but few cases ($n=20$)
National Health Interview Survey (NHIS)	1987	Breslow <i>et al.</i> (2000)	1987–95	Sub-cohort of 20 195 adults, aged 18 years or older, who completed the Cancer Epidemiology Supplement	Cancer Epidemiology Supplement questionnaire (in- home interview)	Cases	Lung	Deaths arising within the first year of follow- up excluded; relative risk adjusted for smoking

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The β -Carotene and Retinol Efficacy Trial (CARET)	1988	Omenn <i>et al.</i> (1996)	1988–1995	4060 male asbestos workers and 14 254 smokers	Questionnaire	Cases	Lung	Intervention trial
Campaign Against Cancer and Heart Disease (CLUE II)	1989	Visvanathan <i>et al.</i> (2007)	1989–2002	In CLUE II study, 32 898 individuals in Washington County donated a blood sample and completed a brief questionnaire. This study is nested within the cohort comprised of the 14 625 women.	Self-administered questionnaire	Cases	Breast	Nested case-control design. Relative risks reported by menopausal and estrogen receptor status.
Women's Health Study	1992–2004	Zhang <i>et al.</i> (2007)	1992–2004	Analytical cohort of 39 876 female health professionals recruited in a randomised trial; aged 45 and older	Self-administered questionnaire	Cases	Breast	Relative risks for breast cancer reported by several factors, including smoking status Zhang <i>et al.</i> (2007)
Multiethnic Cohort Study	1993–96	Setiawan <i>et al.</i> (2009)	1993–2005	Analytical cohort of 215,000 individuals living in Hawaii and California identified through driver's license files, voter registration lists, and Health Care Financing Administration data files; aged 45–75 years	Self-administered questionnaire	Cases	Breast	Results for breast cancer are based on a cohort of 84 427 women. Relative risks for breast cancer reported by receptor status

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Women's Health Initiative (WHI)– Observational Study	1993–98	Duffy <i>et al.</i> (2009)	1993–2002	Analytical cohort of 88 530 women; aged 50–79 years,	Self-administered questionnaire	Cases	Breast	A part of Women's Health Initiative Study. Relative risk adjusted for smoking. Relative risks reported by folate intake levels
Women's Health Initiative Study	1990s	Chlebowski <i>et al.</i> (2007)	Not reported	Analytical cohort of 147 916 women (83 348 from WHI– observational study cohort; 64 568 from four randomized controlled trials); aged 50–79 years	Self-administered questionnaire	Cases	Breast	Relative risks reported by estrogene resceptor status
Prostate Lung, Colorectal and Ovarian Cancer Screening Trial (PLCOCT)	1993–2001	Stolzenberg- Solomon <i>et al.</i> (2006)	1993–2003	Analytical cohort of 25 400 women, aged 55–74 years	Self-administered questionnaire	Cases	Breast	
Prostate Cancer Prevention Trial Cohort	1994–97	Gong <i>et al.</i> (2009)	1994–2003	Analytical cohort of 10 920 men with normal digital rectal examination and PSA \leq 3.0 ng/mL participating in Prostate Cancer Prevention Trial; aged \geq 55 years	Self-administered questionnaire	Cases	Prostate	Relative risks reported by tumour grade

Table 2.1. Cohort studies of consumption of alcoholic beverages and cancer in the general populations

Country Name of study	Date of cohort sampling	References	Maximum years of follow-up	Cohort sample and age at beginning of follow-up	Collection of information	Cases/deaths	Cancers analysed	Comments
California Teachers Study	1995–96	Horn-Ross <i>et al.</i> (2004); Chang <i>et al.</i> (2007)	1995–2003	Analytical cohort of 103 460 women, aged 21–84 years	Self-administered questionnaire	Cases	Breast, ovary	
NIH-AARP Diet and health study cohort	1995–96	Freedman <i>et al.</i> (2007a, 2007b); Lim <i>et al.</i> (2007); Brinton <i>et al.</i> (2008); Jiao <i>et al.</i> (2009); Lew <i>et al.</i> (2009)	1995–2003	Analytical cohort of 492 960 members of AARP, formerly known as the American Association of Retired Persons; aged 50 year or more	Self-administered (mailed) questionnaire	Cases	Oral cavity, pharynx, larynx, oesophagus, pancreas, breast, Hodgkin lymphoma, non-Hodgkin lymphoma	Relative risks reported by histological type and by smoking status
Veterans Health Administration	1998–2004	Khurana <i>et al.</i> (2007)	1998–2004	Cohort of 483,733 veterans who had been seen in the Veterans Health Administration clinics in Florida, Alabama, Mississippi, Louisiana, Arkansas, Missouri, Oklahoma, and Texas in the past 24 months or had a hospital admission	Data obtained from clinical provider	Cases	Pancreas	Nested case-control design.
Vitamins and Lifestyle (VITAL) Cohort Study	2000–2002	Velicer <i>et al.</i> (2006)	2000–2004	77,738 men and women living in the Puget Sound area of western Washington State, USA; aged 50–76	Self-administered questionnaire	Cases	Prostate	Relative risks reported by type of alcoholic beverage
California Men's Health Study (CMHS)	2000–03	Chao <i>et al.</i> (2008); Chao <i>et al.</i> (2010)	2000–07	Multiethnic cohort of 84 170 men aged 45–69 years	Self-administered questionnaire	Cases	Lung, prostate	Relative risk by type of alcoholic beverage reported

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Country Name of study	Date of cohort sampling	References	Maximum years of follow-up	Cohort sample and age at beginning of follow-up	Collection of information	Cases/deaths	Cancers analysed	Comments
Scandinavia								
<i>Denmark</i>								
Copenhagen City Heart Study	1976–78	Prescott <i>et al.</i> (1999); Petri <i>et al.</i> (2004); Nielsen & Grønbaek (2008); Thygesen <i>et al.</i> (2007, 2008); Rod <i>et al.</i> (2009)	1964–2002	Analytical cohort of 13 074 women, aged 20–91 years. Second examination in 1981–1983. Prescott <i>et al.</i> (1999) included the Copenhagen City Heart Study, the Centre of Preventive Medicine (started in 1964; formerly the Glostrup Population Studies), and the Copenhagen Male Study (cardiovascular study set up in 1970)	Self-administered questionnaire	Cases	Upper aerodigestive tract, breast, lung	Relative risk adjusted for smoking (Prescott <i>et al.</i> , 1999; Nielsen & Grønbaek, 2008); Thygesen <i>et al.</i> (2008); Rod <i>et al.</i> (2009)
Glostrup Population Study	1964–86	Høyer & Engholm (1992); Petri <i>et al.</i> (2004)	1964–90	Analytical cohort of 5207 women; aged 30–80 years	Self-administered questionnaire	Cases	Breast	
Copenhagen Male Study	1970	Gyntelberg (1973); Hein <i>et al.</i> (1992); Suadicani <i>et al.</i> (1993)	1970–88	Cohort of 5249 men aged 40–59 years	Danish Central Population Register and Quetsionnaire		Colon, rectum, lung	
Danish Diet, Cancer and Health Study	1993–97	Tjønneland <i>et al.</i> (2003, 2004)	1993–2000	Analytical cohort of 23 778 women; aged 50–64 years	Self-administered questionnaire	Cases	Breast	
Danish Nurse Cohort Study	1993	Mørch <i>et al.</i> (2007)	1993–2001	Analytical cohort of 17 647 women, aged 44 years or above	Self-administered questionnaire	Cases	Breast	

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Country Name of study	Date of cohort sampling	References	Maximum years of follow-up	Cohort sample and age at beginning of follow-up	Collection of information	Cases/deaths	Cancers analysed	Comments
<i>Finland</i>								
α -Tocopherol β Carotene Cancer Prevention (ATBC) Study	1985–88	Glynn <i>et al.</i> (1996); Woodson <i>et al.</i> (1999); Stolzenberg- Solomon <i>et al.</i> (2001); Mahabir <i>et al.</i> (2005); Lim <i>et al.</i> (2006); Weinstein <i>et al.</i> (2006)	1985–2002	29 133 white male smokers, aged 50– 69 years in southwestern Finland	Self-administered questionnaire	Cases/deaths	Colon, rectum, pancreas, lung, renal, non-Hodgkin lymphoma, Hodgkin lymphoma, multiple myeloma, prostate	Relative risk by type of alcoholic beverage and by smoking categories reported Woodson <i>et al.</i> (1999); Mahabir <i>et al.</i> (2005)
Findrink Study	1984–89	Toriola <i>et al.</i> (2008, 2009)	1984–2005	2 267 middle aged men living in Kuopio and its surrounding rural communities, Finland	Self-administered questionnaire		Colorectum, lung	Relationship between binge drinking and lung cancer Toriola <i>et al.</i> (2009). Relative risk by smoking categories reported Toriola <i>et al.</i> (2009)

Table 2.1. Cohort studies of consumption of alcoholic beverages and cancer in the general populations

Country Name of study	Date of cohort sampling	References	Maximum years of follow-up	Cohort sample and age at beginning of follow-up	Collection of information	Cases/deaths	Cancers analysed	Comments
<i>Norway</i>								
Norwegian Cohort of Waitresses	1932–1978	Kjaerheim & Andersen (1994)	1959–91	5314 waitresses organized in the Restaurant Workers Union	Employers lists from Restaurant Workers Union	Cases	Tongue, mouth, pharynx, oesophagus, stomach, colon, rectum, liver, gall bladder, pancreas, larynx, lung, melanoma, breast, cervix uteri, other female genital, urinary bladder, kidney, brain, leukaemia	No individual exposure data. Estimates not adjusted for smoking.
Norwegian Cohort	1960	Heuch <i>et al.</i> (1983)	1960–73	Analytical cohort of 16 713 men and women, aged 45–74 years	Self-administered questionnaire	Cases	Pancreas	Joint effects of tobacco and alcohol examined
	1968	Kjaerheim <i>et al.</i> (1998)	1968–92	10 960 men born in 1893–1929	Mailed survey	Cases	Oral cavity, pharynx, oesophagus, larynx	Relative risk adjusted for smoking
	1984–86	Lund Nilsen <i>et al.</i> (2000)	1984–96	22 895 men (≥ 40 years) with no history of any cancer	Questionnaire	Cases	Prostate	Relative risks adjusted for smoking
HUNT-1 Cohort Study	1984–1986	Sjödahl <i>et al.</i> (2007)	1984–2002	69 962 inhabitants of the country of Nord-Trøndelag, at least 20 years of age; follow-up by linkage to the Norwegian Cancer Registry and the Norwegian Central Person Registry	Health survey	Cases	Stomach	

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Country Name of study	Date of cohort sampling	References	Maximum years of follow-up	Cohort sample and age at beginning of follow-up	Collection of information	Cases/deaths	Cancers analysed	Comments
Norwegian Women and Cancer Study (NOWAC)	1991–97	Dumeaux <i>et al.</i> (2004)	1991–2001	Analytical cohort of 86 948 women, aged 30–70 years	Self-administered questionnaire	Cases	Upperaerodigestive tract, pancreas, breast	Relative risk not adjusted for smoking
Norwegian European Prospective Investigation into Cancer and Nutrition (NEPIC)	1998	Engeset <i>et al.</i> (2009)	1998–2005	Analytical cohort of 34 471 women; aged 41–56 years	Self-administered questionnaire	Cases	Colon, rectum, gastrointestinal tract, breast	NEPIC is also a part of Norwegian Women and Cancer Study (NOWAC)
<i>Sweden</i>								
Swedish Twin Registry Study	1967	Grönberg <i>et al.</i> (1996); Terry <i>et al.</i> (1999); Isaksson <i>et al.</i> (2002)	1967–92	Analytical cohort of 21 884 men and women recruited in 1961, aged 36–75 years	Questionnaire	Cases	Stomach, pancreas, endometrium, prostate	No adjustment for smoking (Terry <i>et al.</i> , 1999)
Malmö Preventative Project	1975–92	Johansen <i>et al.</i> (2009)	1975–2004	Analytical cohort of 33 346 (22 444 men, 10 902 women), recruited into a screening study for cardiovascular disease and alcoholism in Malmö, sweden; average age of 50 years for men and 44 years for women	Self-administered questionnaire	Cases	Pancreas	Relative risks with alcohol drinking reported by body mass index and smoking. Joint effects of tobacco and alcohol examined

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Country Name of study	Date of cohort sampling	References	Maximum years of follow-up	Cohort sample and age at beginning of follow-up	Collection of information	Cases/deaths	Cancers analysed	Comments
Swedish Mammo- graphy Cohort	1987–90	Holmberg <i>et al.</i> (1995); Rashidkhani <i>et al.</i> (2005); Suzuki <i>et al.</i> (2005); Larsson <i>et al.</i> (2007); Friberg & Wolk (2009)	1987–2007	66 651 Swedish women, aged 40–76 years, living in the counties of Västmanland and Uppsala, who responded to a questionnaire. Second exposure assessment in 1997	Self-administered questionnaire	Cases	Stomach, endometrium, breast, renal	Nested case- control design Holmberg <i>et al.</i> (1995)
Malmö Diet and Cancer Cohort	1991–96	Mattisson <i>et al.</i> (2004); Ericson <i>et al.</i> (2007)	1991–2003	Analytical cohort of 11 726 women; aged ≥ 50 years	Interview- administered diet history	Cases	Breast	Relative risk adjusted for smoking
Western Europe								
<i>France</i>								
Supplementa- tion and Vitamins and Minerals Antioxidant Study (SU.VI.MAX)	1994	Hirvonen <i>et al.</i> (2006)	1994–2002	Analytical cohort of 4 396 women, aged 35–60 years	Telephone- administered 24-h recalls	Cases	Breast	

Table 2.1. Cohort studies of consumption of alcoholic beverages and cancer in the general populations

Country Name of study	Date of cohort sampling	References	Maximum years of follow-up	Cohort sample and age at beginning of follow-up	Collection of information	Cases/deaths	Cancers analysed	Comments
<i>Netherlands</i>								
Netherlands Cohort Study	1986	Goldbohm <i>et al.</i> (1994); Schuurman <i>et al.</i> (1999); Zeegers <i>et al.</i> (2001); Schouten <i>et al.</i> (2004); Balder <i>et al.</i> (2005); Loerbroks <i>et al.</i> (2007); Bongaerts <i>et al.</i> (2006, 2008); Heinen <i>et al.</i> (2009)	1986–99	58 279 men and 62 573 women from 204 municipal population registries, aged 55–69 years	Mailed self- administered standardized	Cases	Colon, rectum, pancreas, lung, endometrium, ovary, prostate, urinary bladder	Case-cohort design; for colon cancer, possible limitation: misclassification of alcohol consumption; no adjustment for smoking Schuurman <i>et al.</i> (1999). Relative risks reported by type of alcoholic beverage Bongaerts <i>et al.</i> (2006, 2008); Heinen <i>et al.</i> (2009)
<i>United Kingdom</i>								
British Doctor's Study	1978	Doll <i>et al.</i> (1994, 2005)	1978–2001	Male physicians born between 1900 and 1930	Mailed questionnaire	Deaths	Large bowel, rectum, lung, other cancers,	Relative risk for alcohol use on lung cancer mortality not given; no adjustment for smoking

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Country Name of study	Date of cohort sampling	References	Maximum years of follow-up	Cohort sample and age at beginning of follow-up	Collection of information	Cases/deaths	Cancers analysed	Comments
Oxford Vegetarian Study	1980–84	Sanjoaquin <i>et al.</i> (2004)	1980–99	10 998 vegetarian and non-vegetarians (4162 men, 6836 women), aged 16–89 years; no personal history of cancer	Self-administered standardized questionnaire	Cases	Colorectum	Association between alcohol partially confounded by smoking
General Practitioner Research Database Study	1994	Lindblad <i>et al.</i> (2005)	1994–2001	287 oesophageal adenocarcinomas and 10 000 controls, aged 40–84 years	Interview	Cases	Oesophagus, stomach	Nested case–control study
Million Women Study	1996–2001	Allen <i>et al.</i> (2009)	1996–2006	Cohort of 1 280 296 women who attended breast cancer screening clinics, aged 50–64 years	Self-administered questionnaire at baseline and 3 years later	Cases	Oral cavity, pharynx, larynx, oesophagus, stomach, colon, rectum, liver, pancreas, lung, malignant melanoma, breast, cervix, endometrium, ovary, renal cell carcinoma, bladder, brain, thyroid, non-Hodgkin lymphoma, multiple myeloma, leukaemia	Relative risks for upper aerodigestive tract cancers reported by smoking status

Table 2.1. Cohort studies of consumption of alcoholic beverages and cancer in the general populations

Country Name of study	Date of cohort sampling	References	Maximum years of follow-up	Cohort sample and age at beginning of follow-up	Collection of information	Cases/deaths	Cancers analysed	Comments
Multi-Country								
European Prospective Investigation into Cancer and Nutrition (Denmark, France, Germany, Greece, Italy, Norway, Spain, Sweden, Netherlands, UK)	1992	Boeing (2002); Rohrmann <i>et al.</i> (2006); Tjønneland <i>et al.</i> (2007); Ferrari <i>et al.</i> (2007); Rohrmann <i>et al.</i> (2008, 2009); Weikert <i>et al.</i> (2009)	1992–2005	521 457 from 10 European countries; most study centres recruited from the general population; other sources of recruitment included members of insurance plans, blood donors, mammographic screening, employees of enterprises, civil servants	Dietary instruments developed specifically for each country	Cases	Oral cavity, pharynx, larynx, oesophagus, colon, rectum, pancreas, lung, breast, prostate	Relative risks reported by histological type and by smoking status
Multicentric European Study of Second Primary Tumours Italy, Spain, Switzerland	1979–82	Dikshit <i>et al.</i> (2005)	1979–2000	A cohort of 928 cases of laryngeal cancer from a multicentric population-based case-control study from, Italy, Spain and Switzerland	Interviewer-administered questionnaire	Cases	Oral cavity, pharynx, oesophagus, lung	

HERPACC, Hospital-based Epidemiologic Program at Aichi Cancer Center; HUNT, Helseundersøkelsen i Nord-Trøndelag; NHANES, National Health and Nutrition Examination Survey; NHS, Nurses Health Study; PLCOCT, Prostate Lung, Colorectal and Ovarian Cancer Screening Trial