

Table 2.49. Cohort studies of consumption of alcoholic beverages and cancer of the endometrium in the general population

Reference, location, name of study	Cohort description	Exposure assessment	Organ site (ICD code)	Exposure categories	No. of cases/deaths	Relative risk (95% CI)*	Adjustment factors	Comments
Loerbroks <i>et al.</i> (2007), the Netherlands, the Netherlands Cohort Study	62 573 postmenopausal women (55–69 years), enrolled in 1986; follow up through to 1997 (11.3 years); 280 incident endometrial cancers available for analysis	Self-administered questionnaire on dietary habits and other cancer risk factors	Endometrium	<i>Alcohol consumption</i> Non-drinkers Yes (<i>g/day</i>) 0.1–4 5–14 15–29 ≥ 30	82 172 105 39 17 11	1.00 (ref.) 1.06 (0.78–1.43) 1.09 (0.78–1.52) 0.95 (0.62–1.45) 0.94 (0.52–1.69) 1.78 (0.88–3.60)	Age, age at menarche, OC and HRT use, age at first child birth, parity, age at menopause, physical activity, BMI, height, intake of energy, fat, carbohydrates, dietary fibre, vegetables and fruits intake, education, diagnosis of hypertension, diabetes mellitus family history of endometrial cancer, and smoking	<i>P</i> trend = 0.62

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Setiawan <i>et al.</i> (2008), USA, Hawaii and California The Multiethnic Cohort	41 574 postmenopausal multiethnic women (45–75 years), recruited in 1993–1996, identified from drivers licence list, voter registration lists and Health Care Financing Administration; follow up through to 2002; 324 incident invasive endometrial cancers identified	Self-administered questionnaire at baseline on diet, lifestyle, demography, anthropome-try, medical history	Endometrium (ICD-O-2: C54)	<i>Alcohol consumption</i>			Age, education, age at menarche, age at menopause, duration and type of HRT used, duration of OC use, parity, smoking, diabetes, hypertension, vigorous physical activity	There was no clear effect modification by body mass index, postmenopausal hormone use, parity, oral contraceptive use or smoking status
				Non-drinkers	196	1.00 (ref.)		
				Yes (drinks; g eth./day)				
				≤ 1 (≤ 12 g)	85	1.01 (0.77–1.33)		
				1–2 (12–24 g)	14	1.09 (0.62–1.93)		
				≥ 2 (≥ 24 g)	29	2.01 (1.30–3.11)		
						<i>P</i> trend = 0.013		

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Kabat <i>et al.</i> (2008), Canada, Cohort of Canadian Women (National Breast Screening Study)	Total 89 835 women aged 40–59 recruited in 1980–85; 49 654 women returned questionnaires and were available for analysis; 14 906 women were excluded due to hysterectomy; more exclusions due to extremely high or low BMI and calorie intake; Average 16.4 years of follow up; 426 incident cancers detected	Self-administered lifestyle questionnaire at baseline; From 1982 self-administered FFQ	Endometrium	<i>Alcohol consumption</i>	426	1.00 (ref.)	Age, bmi, education, menopausal status, parity, age at menarche, OC use, HRT use, intake of calories, calcium and raw vegetables	Update of Jain <i>et al.</i> (2000a)
				Non-drinkers				
				Yes (g/day)				
				< 5				
				≥ 5 to < 10				
Friberg & Wolk (2009), Sweden, Prospective cohort of Swedish women (Swedish Mammography Cohort)	61 226 women aged 40–76 at enrolment in years 1987–90; average follow up time 17.6 years; exclusion of women who undergone hysterectomy of reason other than endometrial cancer; 687 cases of adenocarcinomas identified	Self-administered food frequency questionnaire at enrolment and in 1997	Endometrium	<i>Alcohol consumption</i>	268 273 122 24	1.00 (ref.) 1.01 (0.85–1.20) 0.95 (0.75–1.19) 1.12 (0.73–1.71)	Age, BMI, smoking	Results from stratified analyses did not show any suggestions for effect modification by age, smoking, body mass index, folic acid intake, or postmenopausal hormone use
				Baseline (g/day)				
				Non-drinkers				
				< 3.4				
				3.4–9.9				
				≥ 10				
				Non-drinkers				
				< 3.4				
3.4–9.9								
≥ 10								
						1.00 (ref.) 1.01 (0.85–1.20) 0.94 (0.75–1.18) 1.09 (0.71–1.68)	Age, bmi, smoking, education, age at menopause, age at menarche, OC use, hrt use, diabetes, total energy intake	

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Allen <i>et al.</i> (2009), United Kingdom, The Million Women Study	954 450 middle-aged women, participants in breast screening programme in United Kingdom, between 1996–2001; no history of any other cancer than non-melanoma of the skin and/or hysterectomy	Questionnaire socio-demographic characteristics and personal information at enrolment; follow up questionnaire three years after recruitment	Endometrium (ICD-10: C54)	<i>Alcohol consumption</i>		(Floated 95% CI)	Age, region of residence, socioeconomic status, bmi, smoking, physical activity, OC use, HRT use	Test trend among drinking women only, scored according to mean alcohol intake. In another analysis (Beral <i>et al.</i> 2005) no effect modification of alcohol intake on the association between HRT use and endometrial cancer was found
				All women	4 118			
				Non-drinkers	1 170	1.06 (1.00–1.12)		
				Yes (drinks/week)				
				≤ 2	1 264	1.00 (0.95–1.06)		
3–6	897	0.99 (0.92–1.05)						
7–14	597	0.90 (0.83–0.97)						
≥ 15	190	1.05 (0.91–1.22)						
						<i>P</i> trend = 0.4		

BMI, body mass index; CI, confidence interval; eth, ethanol; FFQ, food frequency questionnaire; HRT, postmenopausal hormone therapy; OC, oral contraceptive