

Table 2.66. Case-control studies of consumption of alcoholic beverages and multiple myeloma

Reference, study location, period	Organ, site ICD- code	Characteristics of cases	Characteristics of controls	Exposure assessment	Exposure categories	No of cases/deaths	Relative risk (95% CI)	Adjustment factors	Comments
Deandrea <i>et al.</i> (2007), Italy Early 1990s	Multiple myeloma	141 subjects, aged 17–79, median 58 years diagnoses histologically confirmed;	1295 patients, aged 17–79, median 57 years, admitted to hospitals in the same catchment areas for acute, nonneoplastic, nonimmunologic, nondigestive tract diseases	Interviews at hospitals, structured questionnaire	<i>Total alcohol consumption (drinks/day)</i> 0 1–2 3–4 ≥ 5	23 57 30 31	1.00 (ref) 1.04 (0.61–1.76) 1.20 (0.64–2.23) 1.16 (0.59–2.28)	Age, centre, sex, tobacco	
Gorini <i>et al.</i> (2007), Italy 1990–1993 MultiCentric study from hospitals in 11 areas of Italy: Varese, Forli, Siena, Latina, Ragusa, Imperia, Florence, Novara, Vercelli, Verona provinces + city of Turin	Multiple myeloma (ICD-9: 203)	270 patients of both genders, aged 20–74; Identified from departments of haematology, general medicine, surgery, pathology in all hospitals from the study area, specialized hospitals outside the areas, and cancer registries; diagnoses based on morphological cytochemical and immunologic analyses	1771 controls randomly selected from the population living in study areas; aged 20–74	Standardized questionnaire	<i>Alcohol consumption</i> Never/ Ever <i>Total alcohol (serving/week)</i> Non-drinker 1–4 5–9 10–19 ≥ 20 <i>P trend = 0.08</i> <i>Liquor (serving/month)</i> Non-drinker ≤ 1 2–3 4–10 > 10 <i>P trend = 0.79</i>	68 202 59 77 41 43 41 209 13 17 8 14	1.00 0.74 (0.52–1.06) 1.00 (ref) 1.01 (0.67–1.53) 0.56 (0.34–0.93) 0.60 (0.36–1.01) 0.58 (0.34–1.01) 1.00 0.48 (0.25–0.92) 0.39 (0.21–0.72) 0.48 (0.20–1.14) 0.55 (0.27–1.15)	None Gender, age, area of residence, education level, smoking, type of interview Additional adjustment for beer and wine intake	No significant association with wine or beer intake

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Hosgood <i>et al.</i> (2007), USA, Connecticut 1996–2000	Multiple myeloma	173 women with histologically confirmed incident MM, diagnosed between 1996–2000, aged 21–84, with no previous diagnosis of cancer except nonmelanoma skin cancer; residents of Connecticut	670 female controls, aged 21–84 years, recruited using random digit dialling if below 65 years of age and Health Care Financing Administration files for older than 65 years; number of controls randomly selected for each age stratum	Interviews at home or another place; Standardized, structured questionnaire Food frequency questionnaire	<i>Frequency of alcohol consumption (drinks)</i> < 2/ month 2–12/ month 3–7/ week > 1/day <i>P</i> trend < 0.001	123 25 18 7	1.0 (ref) 0.4 (0.2–0.6) 0.6 (0.4–1.1) 0.3 (0.5–0.8)	Age, body mass index (usual in adulthood), total energy intake, race	

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Monnereau <i>et al.</i> , (2008), France 2000–2004 MultiCentrestudy: main hospitals of Bordeaux, Brest, Caen, Lille, Nantes, Toulouse	Multiple myeloma (ICD-O-3: 9731/3, 9732/3)	108 newly diagnosed patients between 2000–2004; from hospitals of Bordeaux, Brest, Caen, Lille, Nantes, Toulouse; aged 18–75 years	475/ of 752 randomly selected patients with no history of hematological neoplasms, hospitalized in the same hospitals as cases, individually matched by centre, age, gender, residential area; a set of controls for MM	Interview, standardized structured questionnaire, all under same conditions	<i>Alcohol consumption</i>			Gender, age, centre + potencial confounders soc.-ec. status, education, history of autimmune disease, family history of cancer and lymphoma, skin characteristics, BMI, farming activity	
					Never drinkers	17	1.0 (ref)		
					Ever drinkers	91	1.3 (0.7–2.4)		
					<i>Average number of drinks per week</i>				
					0–3.7	26	1.2 (0.6–2.5)		
					3.7–10	26	1.3 (0.7–2.7)		
					10–21	16	1.2 (0.5–2.7)		
					> 21	23	1.7 (0.8–3.8)		
					<i>Type of alcohol (ever/never)</i>				
					Cider	6	0.9 (0.3–2.4)		
					Beer	28	1.4 (0.8–2.4)		
					Wine	78	1.1 (0.7–1.8)		
					Aperitif	63	1.2 (0.8–1.9)		
					Liquor	3	1.7 (0.4–6.5)		