

Table 2.72. Case-control studies of parental consumption of alcoholic beverages and childhood hematopoietic cancer

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	
Menegaux <i>et al.</i> (2007), France 1995-1998 National Registry of Childhood Blood Malignancies; 14 regions in France	AL, ALL, AML	472 newly diagnosed patients, <15 years of age ALL: 407, AML: 62, AL: 3	567 randomly selected from the overall population; frequency matched on age, gender, region	Standardized self-administered questionnaire	<i>Maternal alcohol consumption during pregnancy,</i>					Gender, age, center, region, socio-professional category, birth order. The results that are shown as 'multivariate' were also adjusted for maternal smoking and coffee drinking during pregnancy
					AL					
					No	404	1.0			
					Yes	51	1.1 (0.8–1.7)			
					≤1 glass/day	28	0.8 (0.5–1.3)			
					>1 glass/day	23	2.4 (1.1–5.0)			
					Multivariate					
					Yes		1.1 (0.7–1.7)			
					≤1 glass/day		0.8 (0.4–1.3)			
					>1 glass/day		2.3 (1.1–4.9)			
					ALL					
					No	344	1.0			
					Yes	47	1.3 (0.8–2.0)			
					≤1 glass/day	24	0.8 (0.5–1.5)			
>1 glass/day	23	2.8 (1.3–5.9)								
Multivariate										
Yes		1.2 (0.8–1.9)								
≤1 glass/day		0.8 (0.5–1.5)								
>1 glass/day		2.7 (1.2–5.7)								
AML										
No	58	1.0								
Yes	3	0.4 (0.1–1.3)								
≤1 glass/day	3	0.4 (0.1–1.6)								
>1 glass/day	0	–								

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Menegaux <i>et al.</i> (2007) (contd)					<i>Wine, beer, cider consumption during pregnancy</i>				
					AL				
					No	404	1.0		
					Yes	49	1.3 (0.9–2.1)		
					≤1 glass/day	29	1.0 (0.6–1.6)		
					>1 glass/day	20	2.8 (1.2–5.6)		
					ALL				
					No	344	1.0		
					Yes	45	1.5 (0.9–2.3)		
					≤1 glass/day	25	1.0 (0.6–1.7)		
					>1 glass/day	20	3.3 (1.4–7.6)		
					AML				
					No	58	1.0		
					Yes	3	0.4 (0.1–1.5)		
					≤1 glass/day	3	0.5 (0.1–1.7)		

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MacArthur <i>et al.</i> (2008), Canada 1990-1994 Five Canadian districts; British Columbia, Alberta, Saskatchewan, Manitoba, Quebec	AL, ALL, AML	399 incident cases of leukaemia diagnosed between January 1990-December 1994 ; 15 years of age or younger living within 100 km radius of the principal cities in the five districts	399 controls matched by birth date (until 6 months), gender, area, randomly selected from the provincial government health insurance rolls	Face-to-face, in-home interviews ; blinded interviewers ; standardized questionnaire	<i>Alcohol consumption in month before pregnancy</i>					Maternal age at birth, maternal education, household income, ethnicity, and number of residences since birth				
					AL									
					No	258	1.00							
					Yes	137	1.37 (0.99-1.90)							
					ALL									
					No	222	1.00							
					Yes	126	1.40 (1.00-1.95)							
					AML									
					No	28	1.00							
					Yes	10	1.41 (0.58-3.42)							
					<i>Drinks per week, month before pregnancy</i>									
					AL									
					No drinks	259	1.00							
					1-2 drinks	78	1.96 (1.29-2.98)							
					>2 drinks	58	0.93 (0.60-1.43)							
				<i>P trend = 0.005</i>										
ALL														
No drinks	223	1.00												
1-2 drinks	70	1.96 (1.27-3.02)												
>2 drinks	55	0.99 (0.64-1.52)												
				<i>P trend = 0.39</i>										
AML														
No drinks	28	1.00												
1-2 drinks	7	2.40 (0.82-6.98)												
>2 drinks	3	0.71 (0.18-2.78)												
				<i>P trend = 0.91</i>										

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MacArthur <i>et al.</i> (2008) (contd)					<i>Alcohol consumption during pregnancy</i>				
					AL				
					No	254	1.00		
					Yes	141	1.39 (1.01-1.93)		
					ALL				
					No	218	1.00		
					Yes	130	1.43 (1.03-1.99)		
					AML				
					No	28	1.00		
					Yes	10	1.34 (0.55-3.27)		
					<i>Drinks per week, during pregnancy</i>				
					AL				
					No drinks	256	1.00		
					1-2 drinks	118	1.57 (1.11-2.23)		
					>2 drinks	21	0.74 (0.39-1.44)		
							<i>P trend= 0.017</i>		
					ALL				
					No drinks	220	1.00		
					1-2 drinks	107	1.57 (1.10-2.25)		
					>2 drinks	21	0.88 (0.46-1.67)		
							<i>P trend= 0.23</i>		
					AML				
					No drinks	28	1.00		
					1-2 drinks	10	1.93 (0.77-4.84)		
					>2 drinks	0	–		

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Rudant <i>et al.</i> (2008), France 2003-2004 The ESCALE study (National Registry-based)	AL, ALL, AML ; HL, NHL	1181 cases eligible for analyses; newly diagnosed children between January 2003, December 2004; <15 years of age; Identified by French pediatric oncology hospital departments and French National Registry of Childhood Blood Malignancies AL : 765 HL : 130 NHL : 165	1681 randomly selected from the French population in the same period; representative for French population, <15 years of age	Telephone interviews with biological mothers of cases and controls ; cases- 6 months after diagnosis	<i>Maternal alcohol drinking during pregnancy (glass/week)</i>			Age , gender, parental professional category, maternal age at the time of birth	Polytomous regressions models for ALL and AML, unconditional regression models for HL and NHL; Children >4 years for HL and > one year for NHL
					ALL				
					None	399	1.0		
					≤ 1	161	1.1 (0.9-1.4)		
					2-6	47	1.1 (0.8-1.7)		
					≥7	27	1.0 (0.7-1.7)		
					AML				
					None	58	1.0		
					≤ 1	29	1.5 (0.9-2.4)		
					2-6	7	1.2 (0.4-2.6)		
					≥7	5	1.4 (0.5-3.6)		
					HL				
					None	79	1.0		
					≤ 1	26	0.8 (0.5-1.4)		
2-6	10	1.1 (0.5-2.4)							
≥7	10	1.9 (0.8-4.2)							
NHL									
None	87	1.0							
≤ 1	51	1.5 (1.0-2.1)							
2-6	14	1.3 (0.7-2.4)							
≥7	10	1.5 (0.7-3.1)							

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Rudant <i>et al.</i> (2008) (contd)					<i>Type alcohol</i>				
					ALL				
					Wine	171	1.1 (0.9-1.4)		
					Beer	100	1.3 (1.0-1.8)		
					Liquor	130	1.3 (1.1-1.7)		
					AML				
					Wine	32	1.6 (1.0-2.5)		
					Beer	14	1.2 (0.7-2.2)		
					Liquor	13	0.8 (0.4-1.5)		
					HL				
					Wine	34	1.0 (0.6-1.6)		
					Beer	12	0.8 (0.4-1.5)		
					Liquor	19	0.7 (0.4-1.2)		
					NHL				
					Wine	55	1.3 (0.9-1.9)		
					Beer	23	1.1 (0.7-1.9)		
					Liquor	44	1.8 (1.2-2.6)		

AL, acute leukaemia; ALL, acute lymphoblastic leukaemia; AML, acute myeloblastic leukaemia