

**Table 2.8 Case-control studies of HCV and other cancers**

Reference, study location and period	Characteristics of cases	Characteristics of controls	Detection method	Exposure categories	No. of exposed cases	Relative risk [odds ratio] (95% CI)	Adjusted potential confounders	Comments
<i>Leukaemias</i> Gentile <i>et al.</i> (1996) Italy, 1986–1990	636 newly diagnosed leukaemia cases $\geq 15$ years of age, recruited from 3 hospitals in Rome, Bologna, and Pavia; sex and age distributions NR; 430 cases with anti-HCV test result: 172 acute myeloid leukaemia (AML), 67 acute lymphocytic leukaemia (ALL), 125 chronic myeloid leukaemia (CML), and 66 refractory anaemia with excessive of blasts (RAEB)	1193 hospital-based controls without haematological malignancies, randomly selected from outpatients seen at same hospitals as cases, excluded if had platelet disorders, leukocytosis, leukopenias, or monoclonal gammopathies or if evaluated for chronic hepatitis or hyperbilirubinaemias; sex and age distribution NR; 857 control patients with anti-HCV test result	Anti-HCV: second-generation enzyme-linked immunosorbent assay (ELISA), with confirmation by third-generation recombinant immunoblot assay (RIBA)	Anti-HCV +/-	AML, 15/157 ALL, 5/62 CML, 2/123 RAEB, 5/59	1.5 (0.81–2.9) 1.3 (0.49–3.5) 0.26 (0.06–1.1) 1.1 (0.40–3.0)	Age, sex, education, history of hospitalization, and study area	
Silvestri <i>et al.</i> (1996); Bellentani <i>et al.</i> (1994) Italy, 1993–1995	Consecutive patients with lymphoproliferative disorders, seen at Division of Haematology of Udine University Hospital [study described in Table 2.7]; 23 cases with ALL (gender and age distributions NR)	6917 participants in population-based, Dionysos cohort study of residents of two towns in northeast Italy beginning in 1991 [described in Table 2.7]	Anti-HCV: second-generation enzyme immunoassay (EIA), with positive samples re-tested with same EIA and with second-generation RIBA	Anti-HCV +/-	ALL, 1/22	[1.5 (0.21–11.4)]		Investigators calculated prevalence ratios in paper.

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Bianco <i>et al.</i> (2004); Mele <i>et al.</i> (2003) Italy, 1998–2001	Newly diagnosed HIV-negative cases of lymphoproliferative and myeloproliferative diseases, ≥15 years old [study described in Table 2.7]; cases of leukaemia included: 54 ALL (30 men, 24 women), 140 AML (79 men, 61 women), and 49 CML (29 men, 20 women)	396 hospital-based controls (205 men, 191 women), patients ≥15 years old with newly diagnosed diseases unrelated to HCV [described in Table 2.7]	Anti-HCV: third-generation EIA, with confirmation by third-generation RIBA HCV RNA: RT-PCR Amplicor assay	Anti-HCV+ or HCV RNA+ / Anti-HCV– and HCV RNA–	ALL, 5/49 AML, 11/129 CML, 6/43	2.4 (0.81–7.1) 1.3 (0.62–2.9) 2.3 (0.84–6.4)	Age, sex, level of education, and place of birth	
Murashige <i>et al.</i> (2005)	94 consecutive cases of newly diagnosed myeloid malignancies (23 men, 71 women), registered at Toranomon Hospital in Tokyo; diagnoses included: myeloid leukaemia, monocytic leukaemia, other leukaemia of specified cell type, and myelodysplastic syndrome; age range: 45–89 (median: 64) years	188 patients admitted to orthopaedics department and 188 patients admitted to otolaryngology department, patients with history of malignancy excluded; each group of controls individually matched 2:1 to cases on age, sex, and year of visit; 84 men, 284 women; age 43–90 (median: 63) years	Anti-HCV: first- or second-generation EIA	Anti-HCV +/-	All myeloid malignancies, 5/87  Myeloid leukaemia (excluding CML), monocytic leukaemia, other leukaemia, 3/49	<i>vs</i> All controls: 0.83 (0.31–2.2) <i>vs</i> Orthopaedic controls: 0.85 (0.29–2.5) <i>vs</i> Otolaryngology controls: 0.90 (0.24–3.4)  <i>vs</i> All controls: 1.4 (0.36–5.6) <i>vs</i> Orthopaedic controls: 1.4 (0.31–6.4) <i>vs</i> Otolaryngology controls: 1.8 (0.27–11.9)	Age, sex, and year of visit	

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<i>Thyroid cancer</i> Montella <i>et al.</i> (2001a); Montella <i>et al.</i> (2000) Italy 1997–1999	130 cases of histologically confirmed thyroid cancer (24 men, 106 women) [study described in Table 2.4]; age range: 28–79 (median: 46) years; participation rate NR	226 patients with no history of malignant tumour [described in Table 2.4]	HCV: anti-HCV by third-generation ELISA, with confirmation by Amplicor RT-PCR assay for HCV RNA	HCV Neg Pos	114 16	1.0 2.8 (1.2–6.3)	Age and sex	