Table 2.4. Nested case–control studies HTLV-I and ATLL – viral and serum immune markers

Reference, study location and period	Characteristics of cases	Characteristics of controls	Detection method	Exposure categories	No. of exposed cases	Relative risk (95% CI)	Adjusted potential confounders	Comments
Hisada et al. (1998b) Japan, Miyazaki Cohort Study (MCS) –cross-sectional case-control analysis, 1988–91	Within the MCS, 215 HTLV-1 carriers (67 men, 148 women) had multiple measures of abnormal lymphocytes (Ably) on peripheral blood smear; 36% Ably+. Mean age: 62.5 yrs.	Within the MCS, 215 HTLV-1 carriers had multiple measures of Ably on peripheral blood smear. 137 defined as Ably−.	Anti-HTLV-1 by passive particle agglutination assay (PAA) with Western blot confirm-ation, anti- tax by reactivity to recombinant tax; proviral load by semiquantitative PCR; each slide read blindly by 2 technicians, with confirm-ation of positives by clinician.	Those with Ably ≤0.6% =Ably−. Those with >0.6% Ably at least once=Ably+; of these, 30 with >0.6% Ably at all screens and >1.6% at least once=Ably++. Proviral load ≥10ng DNA=high; anti-tax ≥1:500=high titre.	Ably+ _n_=64 _n_=81 Ably++ _n_=18 _n_=30	*High proviral load*: OR=8.9 (4.1,19.5) *Male gender OR*=1.5 (0.73,3.1) *High proviral load*: OR=19.7 (6.9,56.1) *Male gender OR*=2.8 (1.0,7.8)	Age, gender, leukocyte categories Age, proviral load, leukocyte categories Age, gender, leukocyte categories Age, proviral load, leukocyte categories	This study is among HTLV1+ persons and can examine co-factors only

Table 2.4. Nested case–control studies HTLV-I and ATLL – viral and serum immune markers

Reference, study location and period	Characteristics of cases	Characteristics of controls	Detection method	Exposure categories	No. of exposed cases	Relative risk (95% CI)	Adjusted potential confounders	Comments
Hisada et al. (1998b) (contd)					Males: <u>Ably+</u> $n=25$ Males: <u>Ably++</u> $n=9$ Females <u>Ably+</u> $n=27$ Females <u>Ably++</u> $n=9$	*High proviral load:* OR=15.5 (0.33,6.6) *High proviral load:* OR=30.2 (4.4,209.5) *High proviral load:* OR=5.5 (2.0,15.2) *High proviral load:* OR=18.1 (4.1,80.6)	Age, leukocyte categories Age, leukocyte categories Age, leukocyte categories Age, leukocyte categories	
Hisada et al. (1998a) Japan, Miyazaki MCS, nested case-control study (1984–1995)	Five HTLV-1+ incident ATLL cases: 3 men, 2 women Range of ages at death: 64–83 yrs	38 HTLV-1+ subjects matched for age, gender, study screens	Anti-HTLV-1, anti-tax, Ably, as in Hisada (1998b) above			*Anti-HTLV-I per level* ↑: OR=1.6 (0.94–3.8) *Anti-tax per unit* ↑: OR=0.78 *Leukocyte count* (continuous)	Other viral markers, smoking, leukocyte count Other viral markers, smoking leukocyte count Viral markers, smoking	

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Table 2.4. Nested case–control studies HTLV-I and ATLL – viral and serum immune markers

Reference, study location and period	Characteristics of cases	Characteristics of controls	Detection method	Exposure categories	No. of exposed cases	Relative risk (95% CI)	Adjusted potential confounders	Comments
Arisawa et al. (2002) Japan Nagasaki, K Islands; nested case-control study (1985–96) within population of 23 922 screened at K hospital or at public health exams	29 incident ATLL cases identified by Prefecture Cancer Registry. 18 men, 11 women. Age at baseline: 33–76 yrs	All cohort members matched for sex, birth year, date of first blood draw, HTLV-1+: 83 men, 75 women. Age at baseline: 33–76 yrs	Anti-HTLV-1 by PAA and indirect immunofluoresc ence with Western blot confirmation; sIL-2R measured by sandwich enzyme immunoassay. Anti-tax by enzyme-linked immunosorbent assay.	sIL-2R ≥500U/ml v. <500 anti-HTLV-I titre ≥1 024 v. <1 024	↑sIL-2R $n=18$ ↑HTLV-1 titres $n=17$ anti-tax $n=18$	OR=20.5 (4.5–194) OR=2.9 (0.98–9.5) OR=0.59 (0.15–2.0)	matching factors matching factors matching factors	
Okayama et al. (2004) Japan Miyazaki, MCS, nested case-control study 1984–2000	4 incident ATLL cases with prediagnosis PBC samples – 2 men, 2 women, ages 64–83 yrs	37 randomly selected controls matched for age, sex	Proviral load measured by AmpliSensor assay; Clonality by inverse long PCR			*Proviral load* ↑ *per 1000 copies* OR=1.42 (1.04–2.10) Preleukaemic clone detected 8 years before diagnosis in one case	matching factors	