

Table 2.5. Cohort studies of HIV and non-Hodgkin lymphoma in the HAART era

Reference, location.	Cohort description	Detection method	No. of cases	Relative risk (95% CI)	Adjustment for potential confounders	Comments
International collaboration on HIV-1 and cancer, (2000)	47 936 HIV positive people in North America, Europe and Australia	Mixture of methods	757	RR 0.58 overall. It was 0.42 for PBL; 0.57 for IBL and 1.18 for BL.		
Matthews et al., (2000), UK	7840 patients with HIV, C&W hospital, London, 1988–1999	Clinic records	150 systemic NHL	Incidence per year ranged from 3–7/1000		No change in rates post HAART
Besson et al., (2001), France	French Hospital HIV database	Clinic records	145	Inc/10 000py fell from 86 in 93–4 to 43 in 97–8 for systemic NHL and from 28 to 10 for PBL.		Improving CD4 at NHL, improving prognosis.
Grulich et al., (2001), Australia.	People registered with HIV or AIDS, 1985–1999, national.	Data linkage with cancer registry data.	235	IR/1000 py declined from 3.28 in 1994–96 to 1.89 in 96–98		Significantly declining incidence after 1996.
Ives et al., (2001), England	1538 people with HIV before AIDS diagnosis, London Hospital, 1990–98	Clinic records	no	Rate per 100py increased from 0.43 to 1995 to 0.65 in 96–98	none	Non-significant increase
Kirk et al., (2001), Europe	8471 patients with HIV, 20 European countries (EUROSIDA), 1994–2001	Clinic records	222	Incidence declined from 1.99 (pre 1995) to 0.30/100PY	In multivariate model, current CD4, age, sex and higher VL predictive of risk.	Most marked for PBL (0.83 to 0.04; but also for IBL (0.50 to 0.10; and BL 0.18 to 0.03). Rates 20 fold higher in those with CD4 less than 50 compared to more than 350.
Carrieri et al., (2003), France	People with HIV, Nice Hospital	Clinic diagnoses	36	RR among those who had received HAART was 0.24 (0.12-0.47)	Compared to HAART non-receivers	
Bedimo et al., (2004), USA	2882 people attending an HIV clinic in Alabama, 1989–2002	Clinical diagnoses	64	RR 0.58, 95% CI 0.35=0.94	Not adjusted for age, sex or race	

Table 2.5. Cohort studies of HIV and non-Hodgkin lymphoma in the HAART era

Reference, location.	Cohort description	Detection method	No. of cases	Relative risk (95% CI)	Adjustment for potential confounders	Comments
Bhaskaran et al., (2004) (CASCADE collaboration)	7103 seroconverters aged >15 followed till end 2002	Clinical records	129	Compared with pre-97, RR was 0.66 in 97–98, then 0.25 in 99–02. CD4: referent >350. RR was 11 at <100.		One of few studies with data on current CD4 count as a risk factor for NHL.
Stebbing et al., (2004), England	9621 HIV patients in C&W Hospital, from 1996 to end 2005	Clinical Records	102	CD4 of <200 associated with increased risk.		NNRTI (HR 0.4, 0.3-0.5) and PI-based HAART (0.5, 0.4-0.7) equally protective against NHL
Bower et al., (2006), England	9, 621 HIV patients in C&W Hospital, from 1996 to end 2005	Clinical records	61 P CNS NHL	Declined from 3 to 1.2/1000 py		From clinic entry. Significant improvement in survival.
Diamond et al., (2006), USA	11 867 adults registered with AIDS 1998–2000, San Diego	Data linkage with cancer registry data	537	Incidence declined from 29.6 to 6.5/1000py pre to post HAART.	Person-year rates post AIDS	From AIDS diagnosis to end 2000. Systemic declined from 21.2 to 5.4; PCNS NHL declined from 8.4 to 1.1/1000.
Gingues & Gill, (2006), Canada	2137 patients with HIV attending an Alberta clinic, 1984–2005.	Medical records	64	Decline from 14 to 2/1000 py pre to post HAART.		
Barclay et al., (2007), USA	Patients at HIV clinics in Seattle, 1990–2003	Data extraction from medical records	123	Incidence decreased from 36.6 (pre-) to 8.4 (post-HAART).	Largest decrease was for PCNS NHL (14.1 to 0.6/1000py); BL not sig (3 to 1.8/1000py). Iblast 18.1 to 6.6/1000py)	Median CD4 at NHL increased from 41 (pre) to 92 (post-HAART)
Chiappini et al., (2007), Italy	1190 perinatally infected children	Clinic diagnoses	27	Incidence decreased from 2.77 to 0.38 per 1000 child years		Comparison of 1985–1999 and 2000–2004

Table 2.5. Cohort studies of HIV and non-Hodgkin lymphoma in the HAART era

Reference, location.	Cohort description	Detection method	No. of cases	Relative risk (95% CI)	Adjustment for potential confounders	Comments
Polesel et al., (2008), Switzerland	12 959 people with HIV in the Swiss HIV cohort study	Clinical diagnosis and/or linkage with cancer register	429	1993–95: inc of 13.6/1000py; 2002–06: 1.8/1000py, HR 0.26 (0.20–0.33)		Greater decline for primary CNS (declined from 32% to 13% of all NHL). Among HAART users, only age was a risk factor. Among HAART nonusers, having a CD4 of less than 350 at enrollment was predictive of risk. HR dropped as soon as a few months post HAART and was maintained.
Shiels et al., (2008), USA	2121 male HIV seroconverters in the TACC and MACS cohorts	Clinical diagnosis of cancer	16	RR of AIDS defining cancer in the HAART period was 0.26 (0.15–0.46)		KS and NHL combined.
Dal Maso et al., (2009), Italy Record linkage study from 24 cancer registry 1986–2005	21 951 AIDS cases aged 16–69 years	Linkage with cancer registry	420	<u>1986–1996</u> 497 (450–546)		Compared excess cancer risk among persons with HIV/AIDS before and after HAART. 772 NHL cases developed (C82-C88, C96)
			352	<u>1997–2004</u> 93.4 (83.9–104)		
			275	<u>Men</u> 85.6 (75.8–96.4)		
			77	<u>Women</u> 138 (109–173)		
			160	<u>16–34 years</u> 78.9 (64.2–96.0)		
			252	<u>35–69 years</u> 101 (88.7–114)		
			152	<u>IDU</u> 87.3 (73.9–102)		
			126	<u>Heterosexual</u> 106 (88.3–126)		
74	<u>MSM</u> 88.2 (69. -111)					