

Non-Hodgkin lymphoma incidence in the Swiss HIV Cohort Study before and after highly active antiretroviral therapy.

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OBJECTIVE: To assess the long-term effect of HAART on non-Hodgkin lymphoma (NHL) incidence in people with HIV (PHIV). **DESIGN:** Follow-up of the Swiss HIV Cohort Study (SHCS). **METHODS:** Between 1984 and 2006, 12 959 PHIV contributed a total of 75 222 person-years (py), of which 36 787 were spent under HAART. Among these PHIV, 429 NHL cases were identified from the SHCS dataset and/or by record linkage with Swiss Cantonal Cancer Registries. Age- and gender-standardized incidence was calculated and Cox regression was used to estimate hazard ratios (HR). **RESULTS:** NHL incidence reached 13.6 per 1000 py in 1993-1995 and declined to 1.8 in 2002-2006. HAART use was associated with a decline in NHL incidence [HR = 0.26; 95% confidence interval (CI), 0.20-0.33], and this decline was greater for primary brain lymphomas than other NHL. Among non-HAART users, being a man having sex with men, being 35 years of age or older, or, most notably, having low CD4 cell counts at study enrollment (HR = 12.26 for < 50 versus >or= 350 cells/microl; 95% CI, 8.31-18.07) were significant predictors of NHL onset. Among HAART users, only age was significantly associated with NHL risk. The HR for NHL declined steeply in the first months after HAART initiation (HR = 0.46; 95% CI, 0.27-0.77) and was 0.12 (95% CI, 0.05-0.25) 7 to 10 years afterwards. **CONCLUSIONS:** HAART greatly reduced the incidence of NHL in PHIV, and the influence of CD4 cell count on NHL risk. The beneficial effect remained strong up to 10 years after HAART initiation.