

Cancer risk in people infected with human immunodeficiency virus in the United States

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Data are limited regarding cancer risk in human immunodeficiency virus (HIV)-infected persons with modest immunosuppression, before the onset of acquired immunodeficiency syndrome (AIDS). For some cancers, risk may be affected by highly active antiretroviral therapy (HAART) widely available since 1996. We linked HIV/AIDS and cancer registries in Colorado, Florida and New Jersey. Standardized incidence ratios (SIRs) compared cancer risk in HIV-infected persons (initially AIDS-free) during the 5-year period after registration with the general population. Poisson regression was used to compare incidence across subgroups, adjusting for demographic factors. Among 57,350 HIV-infected persons registered during 1991-2002 (median CD4 count 491 cells/mm³), 871 cancers occurred during follow-up. Risk was elevated for Kaposi sarcoma (KS, SIR 1,300 [n = 173 cases]), non-Hodgkin lymphoma (NHL, 7.3 [n = 203]), cervical cancer (2.9 [n = 28]) and several non-AIDS-defining malignancies, including Hodgkin lymphoma (5.6 [n = 36]) and cancers of the lung (2.6 [n = 109]) and liver (2.7 [n = 14]). KS and NHL incidence declined over time but nonetheless remained elevated in 1996-2002. Incidence increased in 1996-2002 compared to 1991-1995 for Hodgkin lymphoma (relative risk 2.7, 95% CI 1.0-7.1) and liver cancer (relative risk infinite, one-sided 95% CI 1.1-infinity). Non-AIDS-defining cancers comprised 31.4% of cancers in 1991-1995, versus 58.0% in 1996-2002. For KS and NHL, risk was inversely related to CD4 count, but these associations attenuated after 1996. We conclude that KS and NHL incidence declined markedly in recent years, likely reflecting HAART-related improvements in immunity, while incidence of some non-AIDS-defining cancers increased. These trends have led to a shift in the spectrum of cancer among HIV-infected persons.

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