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# Cancer incidence in persons living with HIV

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TO THE EDITOR — We read with interest the report by Borges et al [1] assessing the cancer incidence in person living with human immunodeficiency virus (HIV) who start antiretroviral treatment (ART) immediately or who defer until CD4 counts drop to <350 cells/µL. The Strategic Timing of Antiretroviral Treatment (START) study is a multicenter, randomized trial including 4685 naive people living with HIV from 35 countries worldwide [2].

Perhaps the design of the START trial is not the most appropriate to analyze cancer incidence (especially infection-unrelated cancers), due to the short HIV exposure, short follow-up, and participants with young age and few comorbidities. Nevertheless, the study has shown a lower incidence of infection-related cancers, and a trend of fewer infection-unrelated cancers, in patients with immediate ART start vs those starting at a CD4 count <350 cells/µL.

We collected all cancers in our institution between 1993 and 2014, with a total of 185 cancers in 2318 people living with HIV, contributing to 27086 person-years. We conducted a comparative analysis between HIV-monoinfected patients and those chronically coinfected with hepatitis C virus (HCV). Cancers were classified as AIDS-defining cancer (ADC) or non-AIDS-defining cancer (NADC). The overall incidence rate was 6.96 cases per 1000 person-years (5.45 in HIV-monoinfected patients and 8.29 in HIV/HCV-coinfected patients). After adjusting for age at HIV diagnosis, sex, and transmission route, a higher cumulative incidence of NADC was observed for HIV/HCV-coinfected patients compared with HIV-monoinfected patients (adjusted hazard ratio [HR], 1.70; ; 95% confidence interval [95% CI], 1.15–2.81), and significantly lower cumulative incidence of ADC (adjusted HR, 0.44; ; 95% CI, 0.25–0.74).

In our data, the median time from HIV diagnosis to cancer was 11.0 years (IQR, 4.0-18.0) for NADC and 1.5 years (0.0–8.2) for ADC. Coinfected patients developed NADC 6.0 years (3.0–8.3) later than monoinfected patients and ADC 7.1 years (3.5–10.4) later (Figure 1). The median time from HIV diagnosis to randomization in START was 1 year and, after that, the time to infection-related cancer was 0.7 (0.3–3.4) years and to infection-unrelated cancer was 2.3 (0.6–4.9) years; the maximum follow-up was 5 years. After 5 years, in our cohort, close to 40% of NADCs were diagnosed in HIV-monoinfected patients, but only just over 10% in HCV-coinfected patients. With a longer follow-up in the START trial, an increase of cancer events is expected, mainly infection unrelated; it could help to explore better the differences between both strategies, as the authors acknowledge properly in the limitations.

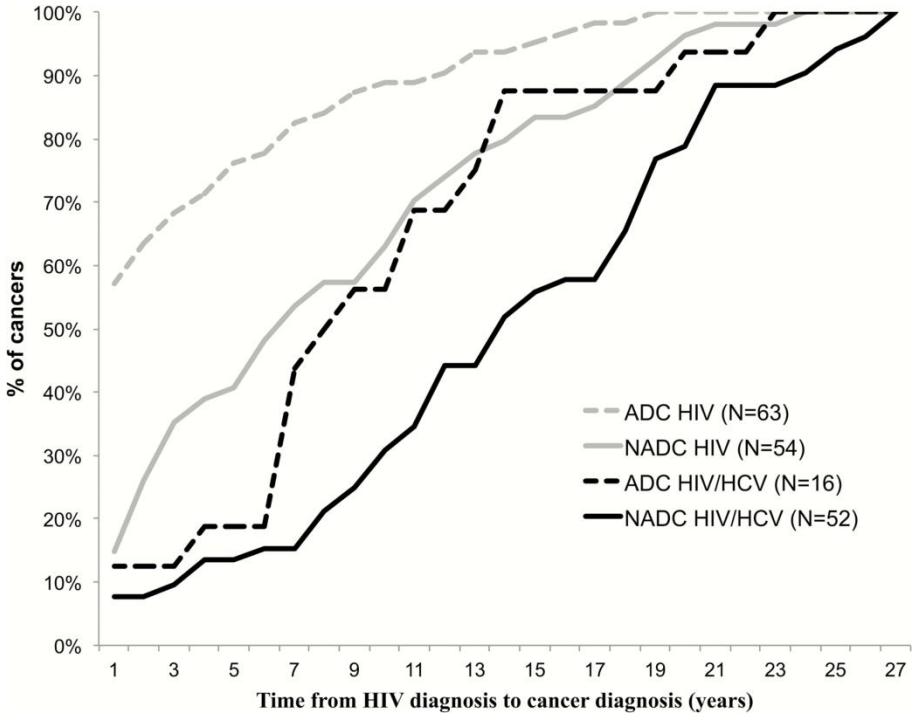


**Figure 1**. Time from HIV diagnosis to cancer in HIV-monoinfected and HIV/hepatitis C virus–coinfected patients. Abbreviations: ADC, AIDS-defining cancer; HCV, hepatitis C virus; HIV, human immunodeficiency virus; NADC, non-AIDS-defining cancer.

Our data suggest a role of HCV coinfection in cancer development, beyond hepatocellular carcinoma, as data in HIV-uninfected patients have suggested [3]. In START, the independent predictors of infection-unrelated cancer were older age and baseline CD8 count. Less than 5% of patients in START were HCV coinfected, but the prevalence was >3 times higher in patients with infection-unrelated cancer than those without cancer. Based on our data, with a longer follow-up and a prevalence of HCV coinfection close to real life, it is expected that HCV coinfection could be a predictor of infection-unrelated cancer.

The data published by Borges et al are novel and important; despite the limitations exposed, when these data are analyzed in real-life cohorts, it is likely that the gap between early and deferred ART can be even higher. More studies to understand some aspects, such as the role of CD8, are needed.

## Note

***Potential conflicts of interest.*** All authors certify. No potential conflicts of interest. The authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

## References


1. Borges ÁH Neuhaus J Babiker AG et al. Immediate antiretroviral therapy reduces risk of infection-related cancer during early HIV infection [manuscript published online ahead of print 8 September 2016]. *Clin Infect Dis* 2016 . doi: 10.1093/cid/ciw621 .
2. Lundgren JD Babiker AG Gordin F et al.; NSIGHT START Study Group. Initiation of antiretroviral therapy in early asymptomatic HIV infection. *N Engl J Med* 2015 ; 373: 795 – 807 .
3. Allison RD Tong X Moorman AC Ly KN Rupp L Xu F et al. Increased incidence of cancer and cancer-related mortality among persons with chronic hepatitis C infection, 2006–2010. *J Hepatol* 2015; 63 : 822 – 8 .