

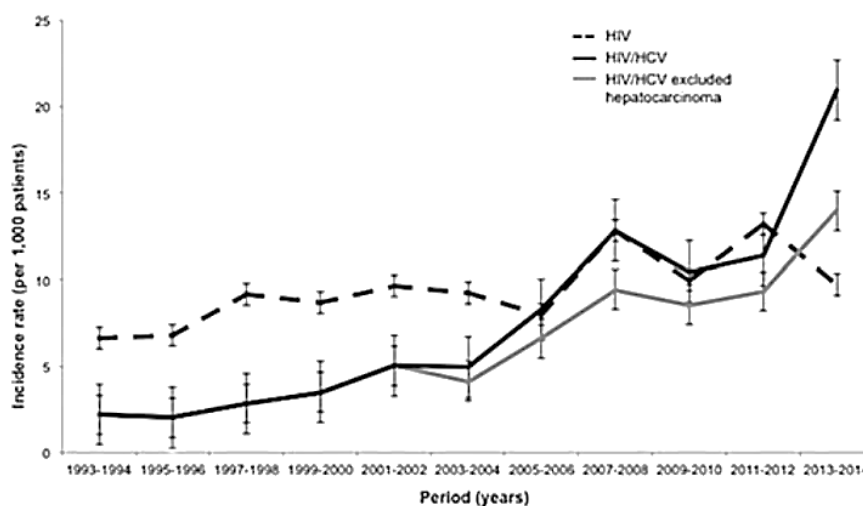
# Increasing incidence of cancer in persons living with HIV coinfecting with HCV: an additional impact of HCV infection?

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**Background and Aims:** Cancer is increasingly common among persons living with HIV (PLWH). A higher incidence of liver and non-liver cancers among persons with chronic hepatitis C infection has been documented. This study compared the incidence, characteristic and the time trends in PLWH with HCV-coinfection (HIV/HCV) and without (HIV) who develop a tumor.

**Methods:** Retrospective cohort study including all cancers in PLWH in care, in a hospital of the Norwest of Spain (period 1993-2014). Epidemiological, demographic, clinical and immuno-virological data were recorded. Cancers were classified in two groups: AIDS defining cancer (ADC) and non AIDS-defining cancer (NADC). Patients were followed until last regular clinical visit, death or lost of follow-up. Incidence of malignancies was evaluated and a comparative analysis between HIV and HIV/HCV was performed.



**Results:** A total of 2318 PLWH were included, of which 185 (117 HIV and 68 HIV/HCV) developed at least one tumor. Patients who developed a tumor were mostly males (81%), with a mean age of  $44 \pm 11$  years old, 67% C-CDC, 60% were on antiretroviral therapy and 37% of HIV/HCV were cirrhotic; without differences between HIV and HIV/HCV. Cancer incidence increased from 1993 to 2014, more in HIV/HCV than in HIV (see Figure). Non-Hodgkin lymphoma (32.7%), Kaposi's sarcoma (25.7%) and lung cancers (16.8%) were the most frequent cancers in HIV; while hepatocarcinoma (27.1%), lung

cancers (23.7%) and Non-Hodgkin lymphoma (18.6%) were in HIV/HCV. All hepatocarcinomas (17 cases) were diagnosed in HIV/HCV and after 2003. The incidence rate (tumors per 1000 person-year) was 4.5 for ADC in HIV and 1.3 in HIV/HCV; for NADC was 3.8 in HIV and 4.2 in HIV/HCV. The timing of cancer incidence after HIV diagnosis was 1 year for ADC in HIV and 10 years in HIV/HCV; for NADC it was 7 years in HIV and 14 years in HIV/HCV. One-year mortality was 44.4% in HIV and 52.9% in HIV/HCV ( $p = 0.3$ ).

**Conclusions:** The current incidence of cancer is higher in HIV/HCV than in HIV, especially NADC but not only due to the hepatocarcinoma. HCV seems to add a risk of cancer in PLWH, likely due to an increase in inflammation and the extrahepatic manifestations of HCV infection. The impact of preventive actions and HCV eradication should be evaluated.