**Background:**
- There is growing evidence that chronic infection with hepatitis B virus (HBV) or hepatitis C virus (HCV) is associated with an increased risk of non-Hodgkin lymphoma (NHL) in the HIV-infected population.
- NHL continues to be one of the most common AIDS defining events even in the presence of antiretroviral therapy (ART). It is unclear whether chronic infection with HBV and HCV promotes NHL in HIV infection.

**Methods:**
- Using data from COHERE, a pan-European cohort collaborative, ART-naive individuals with no prior NHL diagnoses were followed from the 1st of January 2000 or entry into study cohort until NHL diagnosis, death, loss to follow up or 1st January 2013.
- Time periods during which ART was not used were analyzed separately to time-dependent confounding.
- The association between time-updated chronic HBV (2 positive HBsAg measurements >6 months apart) and HCV (detectable HCV RNA or positive HCV Ab if no HCV RNA unavailable) infection and NHL was assessed using Cox models with adjustment for age, gender, CD4-cell count, HIV RNA, CD4 cell count at baseline, study time, and updated CD4 cell count and HIV viral load.
- Inverse probability of censoring weights were used to adjust for informative censoring due to death, starting ART or loss to follow up.

**Results:**
- We included 52,479 ART-naive patients, 1339 (3.3%) patients with HBV and 7506 (18.7%) patients with HCV; median follow up was 13 months while ART-naive, of whom 40,219 went on to start ART (1255 (3.1%) with HBV and 5481 (13.8%) with HCV); median follow up was 80 months.
- Of patients with chronic HBV, 89% received an HBV-active ART; of patients with HCV, 15% were treated for HCV.
- During 306,306 person-years of follow up 252 ART-naive and 310 ART-treated individuals developed NHL. Of those, 106 (19%) were Burkitt's lymphoma, 60 (11%) diffuse large B-cell lymphoma, 29 (5%) primary brain lymphoma, and 367 (65%) were unspecified NHL types. In total 2070 patients died, of which 174 (8.4%) died following NHL, and the rest from other causes.
- Incidence rates of NHL in the entire population of ART naive subjects were 219 per 100,000 person-years and 312, 154 and 153 per 100,000 in patients with chronic HBV, HCV and dual HBV and HCV infection.
- The respective figures for ART treated patients were 246 per 100,000 person years in the entire population and 204, 300 and 168 per 100,000 person years in patients with chronic HBV, HCV and dual HBV and HCV infection.
- In ART-naive patients, no association was found between chronic HBV (HR=1.29; 95% CI 0.67, 2.48) and HCV infection (HR=0.66; 0.40, 1.10) with NHL (models using censoring weights).
- In ART-treated patients, those with chronic HBV (HR=1.64; 1.01, 2.64) and HCV (HR=1.59; 1.11, 2.21) were at increased risk of NHL (models using censoring weights).
- NHL occurred at low CD4 counts, particularly in HBV+ patients.

**Conclusion:**
- Chronic infection with HBV and HCV is associated with an increased risk of NHL in HIV-infected patients on ART.
- The higher risk for NHL represents an additional reason for improving prevention, diagnosis and management of viral hepatitis infections and early access to interferon free agents for HIV treatment in particular for HIV-infected patients with poor immune recovery.