from the date of their last test until the first cancer diagnosis, death, or 12/31/2015. We utilized the Fine and Grey competing risks regression model to estimate adjusted sub-distributional hazard ratios (aHRs) for outcomes, with death as a competing risk.

Results Among 514,501 individuals tested for all infections, 12,586 had any cancer (2.45%), 100 had anal cancer (0.02%), 552 had NHL (0.11%), and 1,081 had liver cancer (0.21%) during a median follow-up of 4.19 years. Compared to no infection, the aHR for all cancers was the highest for HIV/HBV co-infections (HR 2.55, 95% CI: 1.91–3.42) followed by triple infections (aHR 2.29, 95% CI: 1.80–2.89). The risk of anal cancer was higher among individuals with HIV (triple infection aHR 22.61, 95% CI: 7.27–70.33), while risk of the liver cancer was higher among those with HBV or HCV mono or co-infections and triple infections. The risk of NHL was the highest among HIV/HBV co-infections followed by triple infection.

Conclusion HIV, HBV and HCV infections are associated with an overall higher risk of cancer. The highest risks for anal cancer and NHL were among those living with HIV infection. The observed association between HCV and anal cancer, which may be due to the presence of human papillomavirus and/or residual confounding, requires further investigation.

Disclosure No significant relationships.

P387 ASSESSMENT OF THE PERFORMANCE OF WHO PREQUALIFIED HIV RAPID TESTS AND HCV RAPID TECHNOLOGY ON DRIED BLOOD SPOT ELUATS

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Background Rapid testing is a new technological alternative in the diagnostics of HIV and HCV. In view of their intrinsic performance, they can be used on several specimens: whole blood, serum; and plasmaThe present study aims to evaluate the performance of HIV and HCV rapid tests on Dried Blood Spots (DBS) eluates.

Methods Using a Respondent Driven Sampling protocol, 492 dried blood samples were collected from intravenous drug users. The serostatus of the samples towards HIV and HCV was determined by electrochemiluminescence (Cobase411 - Roche, USA) taken as the gold standard. HIV-positive cases were confirmed by Western Blot (HIVBlot 2.2, MPDiagnostics). The rapid tests evaluated are based on immunochromatography, are WHO prequalified: KHB Colloidal HIV 1 + 2 (KHB, China), SD Bioline HIV 1 + 2 (SDBionline, Korea) and UniGold HIV 1 + 2 (Unigold, Ireland). For HCV, these are: KHBColloidal HCV (KHB, China), INFO (Turklab, Turkie); and ABON (Abon, China).

Results From the HIV rapid tests assessment showed that SDBioline highlighted a specificity of 96.28% and a sensitivity of 70.97%, whereas KHB showed a sensitivity of 87.1% and a specificity of 98.51%. UniGold had the highest specificity (100%) and the lowest sensitivity (45.1%). In comparison with the HIV rapid tests, the HCV tests had very low specificities: 18.52% for KHB; 37.04% for INFO and 47.62% for ABON. On the other hand, sensitivity for all HCV rapid tests was 100%.

Conclusion To sum up, HIV and HCV rapid tests were shown to be able to detect anti-HIV and anti-HCV antibodies in DBS eluates. However Based on the overall results of the HCV rapid tests, it is recommended that DBS specimens eluate should not be used in HCV serological Tests. This indicates that there is a great need for further studies to argue the use rapid tests for serological screening of DBS eluatsts.

Disclosure No significant relationships.

P388 EVOLUTION OF HEPATITIS C CARE CASCADES AMONG HIV AND HEPATITIS B CO-INFECTED PATIENTS IN BRITISH COLUMBIA, CANADA

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Background Improvements in tolerability and cure rates of hepatitis C virus (HCV) with direct acting antiviral (DAA) treatment led to expansion of patients treated for HCV; however, research examining the impact of these changes on linkage to care and treatment initiation among patients with hepatitis B (HBV) and HIV co-infection is limited. We compared the care cascades for patients with HBV and HIV co-infection before and after the introduction of DAAs, among a large population-based cohort in British Columbia (BC).

Methods We analyzed data from the BC Hepatitis Testers Cohort, including all individuals tested for HCV or HIV between 1992 and 2015 at the BC Centre for Disease Control Public Health Laboratory, as well as cases of HIV (1980–2015), HCV (1990–2015), HBV (1990–2015), and active tuberculosis (1990–2015) included in registries of reportable diseases in BC. Care cascades were stratified by HIV and HBV co-infection and compared for all individuals with HCV alive at the end of 2012 (pre-DAA) and 2017 (post-DAA), including the following stages: (1) HCV diagnosed; (2) HCV RNA tested; (3) HCV RNA positive; (4) HCV genotyped; (5) initiated antiviral treatment; and (6) sustained viral response (SVR).

Results 53,030 individuals diagnosed with HCV were alivein 2012 and 52,987 in 2017, were included in respective care cascades. In comparison to the pre-DAA era (2012), there were considerable increases in genotyping, treatment, and cure among individuals from all co-infection categories in 2017. For example, the proportion of those with known active infection who initiated treatment was 52% versus 23% among HCV/HIV ($p<0.01$), 51% versus 33% among HCV/HBV ($p<0.01$), 54% versus 20% among HCV/HBV/HIV ($p<0.01$), in 2017 and 2012 respectively.

Conclusion Considerable improvements have been noted in linkage to care and treatment of HCV in BC following introduction of DAAs, particularly among patients with HBV and HIV co-infections.

Disclosure No significant relationships.