

# Global Health Day

## A comparison of risk factors and other clinical characteristics between HIV - infected Nigerians with and without significant fibrosis/cirrhosis

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**Background:** Liver disease is a major cause of morbidity and the main cause of non-AIDS associated mortality in HIV infected persons in Africa, with liver fibrosis being an important risk factor. Therefore, its early recognition and diagnosis is important to reduce morbidity and mortality. Measurement of liver stiffness with Transient Elastography has been shown to have good sensitivity and specificity for the detection of significant fibrosis in this population.

**Methods:** HIV-infected adults on enrolled in an NCI-funded study examining biomarkers associated with HIV-associated HCC were included in this cross-sectional descriptive study. Demographic, clinical and laboratory data were compared between HIV-infected subjects with and without significant fibrosis TE (>9.3kPa) using R version 4.0.2.

**Results:** 426 subjects [279 (65.8%) females; 72 (16.9%) TE >9.3 kPa; median age 46.0; 99.5% on ART] were included in the analysis. A high proportion of those with TE>9.3kPa were males [35 (48.6%); p=0.01]. The median age, body mass index (BMI), duration of HIV infection, pre-ART CD4 T cell count was similar between the two groups. Transaminase levels were significantly higher among those with TE >9.3 kPa; p<0.01. Overall, 50 (12.3%) of subjects were HBsAg positive and the proportion seropositive did not differ between groups [TE >9.3 kPa 12 (19.0%) vs. and TE < 9.3kPa 38 (11.0%); p=0.12]. A significantly higher proportion of subjects with TE >9.3 kPa were positive for anti-HCV [15 (23.8%) vs. 28 (8.1%); p<0.01]. Duration of alcohol consumption was longer in subjects with TE >9.3 kPa (20 vs. 15 years) and the proportion of subjects consuming alcohol differed significantly between the two groups [TE >9.3kpa 16 (22.2%) vs. and TE < 9.3kPa 42 (11.9%); p=0.02]. A higher proportion of subjects with TE >9.3kpa had diabetes. However, obesity, dyslipidemia and other laboratory parameters associated with metabolic conditions did not differ between the groups.

**Conclusions:** Traditional risk factors observed in other African and non-African cohorts such as viral hepatitis C, alcohol consumption and male gender were more common in subjects with TE >9.3 kPa in this cohort. Surprisingly, HBsAg positivity was similar between groups, however this is likely due to the effects of ART which has been shown to result in sharp, early declines in liver fibrosis in HIV/HBV coinfection to levels similar to those with HIV. Further study is needed to examine the independent role of active HCV infection in liver disease progression in these communities.

*This research was presented as part of Northwestern University Institute for Global Health's  
Annual Global Health Day on Friday, December 4<sup>th</sup>, 2020.*