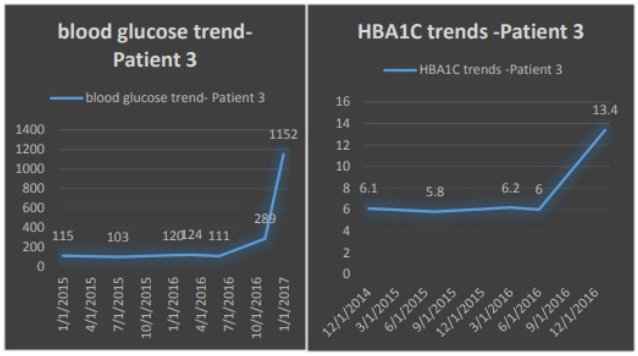
Figure 3- Trends of glucose and HBA1c levels of Patient 3.



Disclosures. **All authors:** No reported disclosures.

346. Factors Associated with Hypertension in Young Adults with Perinatally-Acquired HIV Infection: a Case–Control Study

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Background. The incidence of systemic hypertension (HTN) among perinatally-HIV-infected (PHIV) patients appears to increase as they enter adulthood. Among non-perinatally HIV-infected adults both traditional and HIV-associated risk factors have been found to contribute to HTN. Whether these same factors contribute to HTN in PHIV is unknown. The purpose of this study was to determine the socio-demographic, clinical, virologic, and immunologic factors associated with HTN among a cohort of PHIV adolescents and young adults, aged ≥18 years.

Methods. We conducted a case–control study among a population of 160 PHIV adults with and without HTN who were receiving care at the University of Maryland and aged 18–35 years as of December 31, 2017. Covariates assessed included traditional risk factors such as age, family history of HTN, and smoking, as well as HIV- and antiretroviral-associated covariates.

Results. We identified 49 HTN cases (30.6%) and 111 (69.4%) controls. There were no significant differences in the odds of most traditional (age, gender, race, family history of HTN, tobacco, alcohol, and/or other drug use) or HIV-associated (CD4 nadir <100 cells/mm3, individual ART exposure, ART interruption) risk factors among PHIV adults with HTN compared with those with no diagnosis of HTN. Cases had lower odds of a history of treatment with lopinavir/ritonavir (LPV/r). Cases had 3.7 (95% CI 1.11, 12.56) times the odds of a prior diagnosis of chronic kidney disease (CKD) compared with controls after controlling for CD4 nadir and ARV treatment history.

Conclusion. The results of this study suggest that most traditional and HIV-related risk factors do not appear to increase the odds of having HTN in this PHIV cohort. However, HTN among PHIV may be driven in part by CKD, and a focus on the prevention and early management of CKD in this group may be necessary to prevent the development of HTN. Additionally, there may be as yet unidentified risk factors for HTN among PHIV which require further exploration. Given the large and growing population of PHIV entering adulthood worldwide, it is imperative to explore risk factors for and effects of HTN in large, diverse PHIV populations.

Disclosures. **All authors:** No reported disclosures.

347. Hepatic Steatosis in People Living with HIV: Effect of Sex and Race/Ethnicity

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Background. Recent studies have shown increased weight gain and visceral adiposity in people living with HIV (PLWH) treated with integrase strand transfer inhibitors (INSTI), mostly among women, Blacks and Hispanics. A potential association of INSTI with hepatic steatosis (HS)—which has been associated with increased atherosclerotic cardiovascular disease (ASCVD) risk in the general population—has never been evaluated. We sought to evaluate the prevalence of HS among PLWH on ART, its association with race/ethnicity and INSTI exposure and its association with ASCVD risk.

Methods. All patients on stable ART in a large urban clinic were included in the analysis. We calculated Hepatic Steatosis Index (HSI = 8 × (ALT/AST ratio)+BMI (+2, if female; +2, if diabetes mellitus) in all patients and Controlled Attenuation Parameter (CAP) score in a subset that underwent transient elastography. The effects of ART class, race and ethnicity on HSI and CAP were examined using linear regression models adjusting for age. We also correlated HSI with CAP and with ASCVD risk score.

Results. Among the 3122 patients analyzed, 84.6% were male, 45.1% Black (B), 22.5% Hispanic (H), and 30.0% non-Hispanic Whites (NHW). Mean age was 42 years. ART regimens were INSTI-based (n = 1777), PI (n = 723) or NNRTI (n = 302). A subset of 77 patients underwent transient elastography. There was no significant difference in mean BMI between INSTI (27.87), PI (27.70) and NNRTI (28.26) recipients (P = 0.49). However, HSI was lower for PI (35.99) than for INSTI (36.73) and NNRTI (37.46) groups (P = 0.02). Age is also significantly associated with his (P < 0.01). Mean HSI was higher for H (37.54) than non-Hispanics (36.56 for B and 36.19 for NHW); P = 0.001. HSI was highly correlated with ASCVD risk score (R=0.1; P < 0.001). There was also a strong correlation between HSI and CAP (R=0.45; P < 0.001), and a trend toward high CAP for H vs. B and W (P = 0.11).

Conclusion. HSI increased with age and was significantly associated with ASCVD risk score, suggesting that HS in PLWH might predict higher ASCVD risk. Hispanics had higher HSI and higher CAP than Blacks and Whites. We did not observe an increased BMI or HS with INSTI exposure in this cohort. PI use was associated with lower risk of HS.

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348. Kidney Function Decline Among HIV-infected Thai Adults: Is Low Vitamin D One of the Factors?

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Background. The prevalence of both hypovitaminosis D and Chronic Kidney disease (CKD) are high among Thai HIV-infected adults. Therefore, we examined the association of hypovitaminosis D and kidney function decline among HIV-infected Thai adults.

Methods. Using data prospectively collected from the HIV-NAT long-term cohort, we selected patients who were on ART, and virologically suppressed for ≥6 months. Baseline was defined as when the patient had a serum 25 OHD measured, with estimated Glomerular filtration rate (eGFR) above 60 mL/minute. Participants with eGFR measured at least twice a year were analyzed in the study. The primary outcome was kidney function impairment assessed as eGFR decline. Generalised estimating equations (GEE) were used to assess associations between the outcome and patient comorbidities and disease-related characteristics, including age, sex, body mass index (BMI) hypertension, gout, diabetes mellitus, co-infections with Hepatitis B or C viruses HIV-viral load and co-variate interactions with vitamin D status defined as normal, insufficient or deficient.

Results. A total of 435 participants were observed longitudinally through observations over the median follow-up of 24 (IOR 12–48) months. The median age of the participants was 46.6 (IOR 38.06–54.29) years. Median serum 25 OHD was 23.4 (IQR 18.5–29) ng/mL, and 209 (48%) and 126(29%) had insufficient and deficient 25 OH levels, respectively. Median baseline eGFR was 95 (IQR 82.70–104.93) mL/minute/l.73 m^2. We found a significant interaction between BMI and vitamin D concentration (P = 0.02). In our multivariate model, the adjusted mean predictions of eGFR change at 24 months for patients with BMI ≥25 kg/m^2 and deficient, insufficient and sufficient vitamin D were 89.8 (88.3–91.4), 91.2 (90.1–92.4) and 92.8 (91.3–94.4), respectively. In those with BMI <25 kg/m^2 and deficient, insufficient and sufficient Vitamin D the adjusted mean predictions in eGFR change were 92.0 (91.1–93.0), 91.6 (90.9–92.3) and 92.3 (91.3–93.3), respectively.

Conclusion. HIV-infected Thai adults with high BMI (25 and above) but who are vitamin D deficient had a statistically significant eGFR decline. Further studies in larger populations with multi-ethnic groups are warranted.

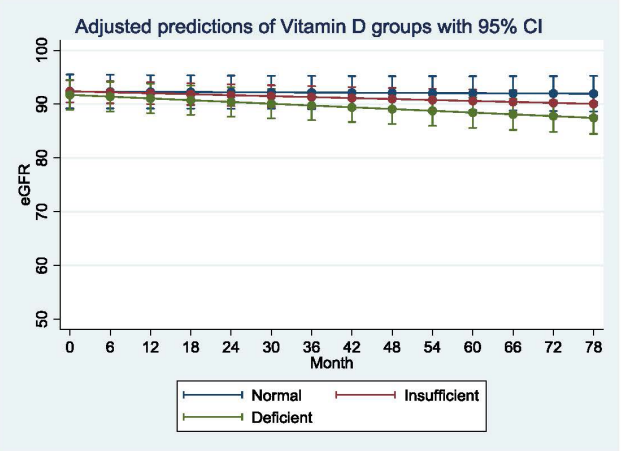

Table1. Characteristics of study participants

Characteristics	Study participants (n =435)	
	No.	%
Vitamin D Status (ng/ml)		
Normal	91	21
Insufficient	219	50
Deficient	125	29
Median Vitamin D		
Gender		
Male	271	62
Female	164	38
CDC staging		
A	166	38
B	186	43
C	74	17
Missing	9	2
Concurrent Illness		
Hypertension	131	30
Diabetes	51	11
Gout	5	1
Hepatitis B co infection	54	12
Hepatitis C co infection	6	1

eGFR	Coef.	Std. Eriz		P>|z|	[95%	CI]
Vitamin D groups						
Insufficient	-0.9	1.72	-0.53	0.599	-4.274	2.468
Deficient	2.099	2.037	1.03	0.303	-1.894	6.092
follow-ups (months)	-0.02	0.014	-1.66	0.097	-0.05	0.004
vitD# follow-ups						
Insufficient	0.002	0.016	0.14	0.891	-0.03	0.034
Deficient	0.015	0.019	0.78	0.436	-0.022	0.051
diabetes	-2.03	0.718	-2.82	0.005	-3.435	-0.62
hypertension	0.84	0.513	1.64	0.102	-0.167	1.846
GOUT	1.976	2.069	0.96	0.34	-2.08	6.032
hbv	0.406	0.585	0.69	0.488	-0.741	1.553
hcv	1.063	1.01	1.05	0.292	-0.916	3.042
baseline CD4 count	5E-04	8E-04	0.57	0.57	-0.001	0.002
baseline viral load!	0.404	0.617	0.65	0.513	-0.806	1.614
baseline eGFR	0 (omitted)					
baseline age	-0.71	0.024	-29.4	0	-0.761	-0.666
female	-19.8	0.498	-39.8	0	-20.77	-18.81
serum creatinine	-102	1.04	-97.8	0	-103.8	-99.71
BMI categories						
2	1.076	1.334	0.81	0.42	-1.538	3.69
3	1.133	1.507	0.75	0.452	-1.821	4.088
vitD#BMI						
Insufficient#2	0.106	1.738	0.06	0.952	-3.3	3.511
Insufficient#3	-0.81	1.938	-0.42	0.675	-4.612	2.985
Deficient#2	-3.06	2.062	-1.49	0.137	-7.103	0.979
Deficient#3	-5.53	2.269	-2.44	0.015	-9.983	-1.087
_cons	223.3	2.068	108	0	219.2	227.3

Table 2 Multivariate analyses by GEE on eGFR outcome

where BMI means body mass index; baseline viral load! Mean <50 copies/ml; diabetes means diabetes mellitus, BMI categories are as of 1 for BMI <18.5,2 for 18.5 <BMI<25 and 3 for BMI 25 and above. HBV means Hepatitis B virus coinfection and HCV means Hepatitis C virus co-infection; # means interaction between, vitD means vitamin D groups and P value (<0.05) is significant.

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349. Implementation of a Multidisciplinary HIV-Pulmonary Clinic

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Session: 44. HIV Complications: Cardiovascular, Metabolic, and Other Complications
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Background. Among people with HIV (PWH), pulmonary comorbiditiees are a leading cause of morbidity and mortality. As PWH live a near-normal lifespan with ART, the focus has shifted from opportunistic infections to chronic disease. This includes chronic obstructive pulmonary disease (COPD) and lung cancer, for which PWH with and without concomitant tobacco use are at high risk. We sought to improve access to and quality of pulmonary care for PWH by instituting a pulmonary clinic co-located within a Ryan White-funded HIV clinic in the Southeastern United States.

Methods. A pulmonologist with expertise in lung disease in PWH began seeing patients one half-day twice monthly beginning in 2017. Longitudinal demographic, clinical, and appointment information was collected on each patient.

Results. Fifty patients were referred to the HIV-Pulmonary clinic. Of the 32 patients seen for an initial visit, the mean age was 55, 63% were male, and all were on ART. The majority were current (52%) or prior smokers (31%) with a mean pack-year history of 42. Over 40% of the patients had a COPD diagnosis and 25% had no prior pulmonary diagnosis. The majority of patients had not engaged in pulmonary care within the past year, as 63% had never seen a pulmonologist and another 28% did not follow-up with a prior provider. After the first visit, 69% either followed up or had a pending follow-up. Of the 17 current smokers, all were offered assistance with smoking cessation and 59% engaged. Of the 10 patients who were eligible for lung cancer screening (LCS) by current guidelines, all engaged in shared decision making and 40% pursued annual screening CT scans.

Conclusion. Chronic pulmonary diseases are increasing relevant comorbidity in PWH on ART. Our HIV-pulmonary clinic demonstrates the utility and feasibility of integration of sub-specialty consultative care in comprehensive care of PWH. By introducing a general pulmonary clinic within the existing infrastructure of the HIV clinic at our institution, we were able to engage PWH with and at risk for lung disease in longitudinal care to prevent, detect, and treat pulmonary disease. Future goals of this interdisciplinary design include increased compliance with current COPD treatment guidelines and LCS, improved rates of smoking cessation, and continued collaboration between the ID and pulmonary providers.

Disclosures. **All authors:** No reported disclosures.

350. Outcomes for Joint Arthroplasty in Persons Living with HIV

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Session: 44. HIV Complications: Cardiovascular, Metabolic, and other Complications
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Background. Persons living with HIV (PLHIV) now have dramatically improved life-expectancy with age-related morbidities requiring total joint arthroplasties. We present here an institutional review of PLHIV who underwent total joint arthroplasty and prosthesis-related adverse outcomes at one year.

Methods. This was a retrospective chart review in a large academic medical center. Inclusion criteria were adult PLHIV undergoing total joint arthroplasty between 2013 and 2017. Arthroplasty-related adverse outcomes within the first-year post-surgery were recorded. Patients were identified using ICD-10 codes and classified as having a PJI using Infectious Diseases Society of America (IDSA) criteria.

Results. A total of 40 patients met the criteria. The median age was 59 years and 53% of patients were male. The median CD4 count and RNA viral load were 587 (range 94–1920) cells/mm^3 and 0 (range 0—189,000) copies/mL, respectively. The most common procedure was hip replacement (55%) and the most common indication for arthroplasty was avascular necrosis (43%). Adverse outcomes including PJI, dislocation, prosthesis loosening, seroma and chronic pain were identified in 28% of patients. PJI occurred in two patients and both required surgical revision. Modifiable risk factors present in both patients were active smoking, history of substance use disorder, chronic pulmonary disease, depression and hepatitis C antibody positivity. Both patients had CD4 counts >600 cells/mm^3. Both were on atazanavir containing antiretroviral regimens. Neither patient was screened for MRSA carriage. Causal organisms were MRSA and MSSA respectively and each patient received 6 weeks of antimicrobial therapy.

Conclusion. This study supports that when medically optimized, PLHIV have favorable outcomes. The two patients who developed PJI had multiple non-HIV modifiable risk factors predisposing them to PJI. In one case, the patient's isolated organism was MRSA, for which the patient did not receive appropriate pre-operative antimicrobial prophylaxis. This highlights the importance of routine screening for appropriate pre-operative prophylaxis in patients undergoing joint arthroplasty, independent of HIV status.

Disclosures. **All authors:** No reported disclosures.

351. HIV and Aging: Multimorbidity in Older People Living with HIV in One Southeastern HIV Clinic

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Background. While morbidity and mortality related to HIV are decreasing, age-related chronic conditions are becoming more common in people living with HIV (PLWH). We hypothesized that multimorbidity prevalence among PLWH would increase from 2006 to 2016 and that multimorbidity would be associated with demographic and healthcare system-level factors.

Methods. Cohorts included PLWH aged 45–89 who received care at the University of Virginia (UVA) Ryan White HIV clinic in 2006 (Cohort 1) and 2016 (Cohort 2). Multimorbidity was defined as the co-occurrence of ≥2 age-related chronic diseases. Demographics, HIV-specific clinical characteristics and multimorbidity were