Conclusion. Delay in ART initiation as well as risk factors for and presence of CVD were associated with ED in HIV-infected persons. Mitigating risk factors and optimizing comorbidities is important to improve sexual health and reduce ED in HIV-infected persons.

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603. Multi-morbidity and Impaired CD4/CD8 Ratios in Older Adults with Well-Controlled HIV

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Background. Older age has been associated with impaired CD4 recovery and a low CD4:CD8 ratio is an independent predictor of non-AIDS morbidity/mortality. In this study we describe the overall comorbidity burden and assess factors associated with CD4:CD8 <1 among HIV+ older adults 60 years+ seen at CORE Center, Cook County Health and Hospital System; a safety-net health system.

Methods. We evaluated demographic, clinical, and lab variables in all HIV+> 60 years who had at least 1 primary care visit from January 1, 2016 to May 31, 2017 at the RMR CORE center. Since HIV viremia is associated with CD4 recovery, analysis on CD4:CD8 ratios was restricted to the patients with viral suppression.

Results. There were 809 patients with a median age of 63 (range: 60–89) years. Seventy-five percent were male, 74% black, 17% Hispanic and 8% white. Mean CD4 was 538 (+307) cells/mm; 107 (13%) had CD4 < 200 and 675 (84%) had undetectable HIVRNA (<40 copies/mL). 38% were HCV Ab+. Common comorbidities were hypertension 62%, COPD 23%, diabetes 22%, depression 17%, osteoarthritis 15%, neuropathy, chronic kidney disease (CKD) and coronary artery disease (CAD) 13% each. 50% had 1–2 comorbidities and 31% had >3 co-morbidities. Of the 675 patients with suppressed viremia, 470 patient (70%) had CD4:CD8 <1 and 245 (36%) had CD4:CD8 <0.5. Compared with patients with CD4:CD8 >1, patient with CD4:CD8 <1 had lower CD4 counts (451 vs. 739 cells/mm^3; $P < 0.001$), were less likely to have CD4 > 500 (35% vs. 75%; P <0.001), more likely to have CD4 <200 (13% vs. 1%; P <0.001), be male (82% vs. 60%; $P < 0.001$), HCVab+ (39% vs. 32%; P 0.05). They also trended to have more CAD 7% vs. 4% ($P = 0.1$) and more CKD 15% vs. 11% ($P = 0.2$).

Conclusion. There was a high rate of multi-morbidity among older, predominantly ethnic minorities HIV-infected adults with 56% having >2 comorbidities. In the setting of viral suppression, 70% still had a CD4:CD8 ratio <1 which likely reflects the effects of older age, and lower CD4 nadir. This impaired immune restoration and co-morbidity burden portend a higher risk of non-AIDS morbidity and mortality in these patients and highlights the need for comprehensive care in HIV clinic settings.

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

604. Impact of Substance and Alcohol Abuse on Smoking-Related Behaviors When Using a Smoking Cessation Decisional Algorithm Among People Living with HIV (PLWH)

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Background. Compared with the general population, PLWH have higher rates of tobacco use. We performed a prospective single-arm pilot study of the real-world feasibility of integrating an ambulatory smoking cessation decisional algorithm in our HIV clinic. We hypothesized that patients with drug and alcohol abuse would have a smaller change in smoking related behaviors.

Methods. Participants were PLWH attending our clinic and smoking at least 5 cigarettes/day regardless of their motivation to quit ($N = 60$). Each participant had an initial visit and two phone visits (+1 and +3 months). Participants completed surveys via computer during the first visit and by phone in the follow-ups. Additional clinical data were collected via chart review.

Results. Participants had a mean age of 48, were mostly African-American (72%) and male (67%) with well-controlled HIV (mean CD4 622, undetectable viral load in 70%). The mean AUDIT score to assess for alcohol abuse did not change over the. three time points (7.1;7.2;7.6, median 4;5;5). A score of 8 or higher indicates harmful alcohol consumption and 23% of patients met the criteria. Lifetime self-reported treatment for substance abuse was high (35%). DAST score for assessing substance abuse was used and mean scores decreased slightly over time (2.3;1.2;0.93, median 2;0;0). A score of 6 or higher indicates a substance use disorder and 15% met that criterion at baseline, 3% at 3 months. Chart review had similar results with 18% having a diagnosis of substance abuse and 20% with alcohol abuse. Overall participants ($n = 60$) showed a decrease in tobacco use, with an average of 14 cigarettes/day at baseline and 7 cigarettes/day at 3 months ($P = 0.001$). Patients with a diagnosis of substance abuse had a baseline average of 12 cigarettes/day and 6 cigarettes/day at 3 months (reduction 6). For those with an alcohol abuse diagnosis, baseline was 16 cigarettes/day and at 3 months, 10 cigarettes/day (reduction 6). The change over time was not significantly different between the groups.

Conclusion. People living with HIV who smoke are a complex group of patients who commonly have concurrent or historical substance and alcohol abuse. A substance and alcohol abuse diagnosis did not impact the decrease in tobacco use seen with implementation of a decisional algorithm.

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605. Loneliness Among Older Adults Living with HIV: A Study and Online Community

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Background. The population of people living with HIV (PLHIV) is aging. A new registry and online community, called Aging with Dignity, Health, Optimism and Community (ADHOC), has been launched to investigate how HIV impacts the lives of older PLHIV.

Methods. A cross-sectional analysis of ADHOC was performed on 208 PLHIV 50+ years of age. One hypothesis was that increasing age would be associated with greater loneliness. Loneliness was assessed using the UCLA Loneliness Scale (ULS-3). A score ≥6 was classified as lonely. The impact of aging on loneliness was analyzed by ANOVA and multiple linear regression.

Results. ULS-3 scores ranged from 3 to 9 and 48.6% of subjects were classified as lonely. Significant differences were found between the 50–59, 60–65 and 65+ age groups, with older age associated with decreased loneliness ($P = 0.018$) (Table 1). In the multiple linear regression model, these observations persisted even after controlling for gender, sexual orientation, race/ethnicity, relationship status, education, income, and number of comorbidities (Table 2). Decreases in loneliness were associated with female gender, being in a relationship, higher income, and fewer comorbidities ($P < 0.05$).

Conclusion. Among PLHIV over 50, loneliness is less severe in older age groups. Additional investigation is needed to better understand potential causes and to find ways to remediate loneliness among older PLHIV.

Table 1: Comparison of ULS-3 Scores by Age

	50–59 ($n = 133$)	60–65 ($n = 40$)	65+ ($n = 35$)	P-value[1]
ULS-3 Mean ± SD	5.8 ± 2.1	5.1 ± 2.0	4.8 ± 1.8	0.018

[1]P-value from ANOVA.

Table 2: Multiple Linear Regression of ULS-3 Scores

	n	%	Coef.	P-value
Age				
50–59	113	54.3	Ref.	
60–65	40	19.2	−0.80	0.026
65+	35	16.8	−1.41	<0.001
Gender				
Male	196	94.2	Ref.	
Female	12	5.8	−2.06	0.024
Sexual orientation				
Gay/lesbian/other	185	93.4	Ref.	
Heterosexual	19	9.3	1.32	0.108
Race/ethnicity				
White	167	81.1	Ref.	
Black	13	6.3	−0.34	0.600
Hispanic/Latino	16	7.8	−0.96	0.070
Other	10	4.9	−0.99	0.138
Relationship status				
Single	95	54.3	Ref.	
In a relationship	113	45.7	−1.43	<0.001
Education				
Less than college graduate	86	41.4	Ref.	
College graduate (4 years)	82	39.4	0.23	0.474
Graduate school graduate	40	19.2	−0.02	0.963
Income				
<$50,000	84	44.9	Ref.	
≥$50,000	103	55.1	−0.60	0.049
Comorbidities				
0–5	77	37.0	Ref.	
5+	131	63.0	0.65	0.026

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606. Risk Factors for Congenital Infection in the United States: Analysis of the Kids' Inpatient Database (KID)

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