## Supplemental Digital Content 4. Demographic and clinical characteristics of groups by HIV status and anal SCC diagnosis.

| | HIV-negative | | | HIV-positive | | |
|---|---|---|---|---|---|---|
| | non-cases (n=2565) | cases (n=8) | *p* | non-cases (n=2680) | cases (n=45) | *p* |
| Age at baseline (median [IQR]) | 35 [30, 41] | 39 [36, 49] | 0.09 | 34 [30, 39] | 34 [30, 38] | 0.83 |
| Age at endpoint (median [IQR]) | 52 [43, 61] | 58.50 [54, 61.50] | 0.13 | 47 [40, 55] | 52 [48, 57] | **0.001** |
| Cumulative person-years (median [IQR]) | 12 [10, 26] | 18 [9.75, 22.75] | 0.98 | 11 [7, 18] | 20 [10, 24] | **<0.001** |
| African American race | 295 (11.50) | 2 (25.00) | 0.63 | 468 (17.46) | 8 (17.78) | 1.00 |
| No. of sexual partners >2/6 months [a] | 1647 (64.21) | 5 (62.50) | 1.00 | 1948 (72.69) | 33 (73.33) | 1.00 |
| No. of anal receptive partners > 2/6 months [a] | 269 (10.49) | 1 (12.50) | 1.00 | 916 (34.18) | 13 (28.89) | 0.559 |
| Tobacco ≥0.5 pack/day [b] | 521 (20.31) | 1 (12.50) | 0.91 | 722 (26.94) | 13 (28.89) | 0.90 |
| Alcohol >14 drinks/week or bingeing [b] | 554 (21.60) | 2 (25.00) | 1.00 | 650 (24.25) | 6 (13.33) | 0.13 |
| Marijuana ≥1000 exposures [c] | 144 (5.61) | 0 (0.00) | 1.00 | 284 (10.60) | 4 (8.89) | 0.90 |
| Poppers ≥1 year of daily or weekly use | 559 (21.79) | 1 (12.50) | 0.84 | 762 (28.43) | 12 (26.67) | 0.93 |
| Crack cocaine ≥100 exposures [c] | 69 (2.69) | 1 (12.50) | 0.54 | 113 (4.22) | 4 (8.89) | 0.25 |
| CD4+ count (cells/μl) (median[IQR]) [d] | 970 [755, 1229] | 835.5 [671, 1114.25] | 0.30 | 392 [150.75, 639] | 412 [271, 586] | 0.47 |
| CD4+ count (cells/μl) lagged 6 years (median [IQR]) [e] | 962 [751, 1207] | 921 [824.50, 1098.25] | 0.89 | 510 [355, 705] | 396 [296, 520] | **0.001** |
| CD4+ nadir (cells/μl) (median [IQR]) [f] | 626 [486, 796] | 486 [317, 560.25] | **0.02** | 191 [48, 351.25] | 190 [42, 277] | 0.212 |
| CD4:CD8 ratio (median [IQR]) [d] | 1.83 [1.36, 2.44] | 1.57 [1.16, 1.80] | 0.14 | 0.45 [0.20, 0.81] | 0.44 [0.27, 0.75] | 0.83 |
| CD4:CD8 lagged 6 years (median [IQR]) [e] | 1.78 [1.33, 2.32] | 1.29 [1.06, 1.99] | 0.15 | 0.62 [0.40, 0.93] | 0.41 [0.31, 0.64] | **<0.001** |
| CD4:CD8 nadir (median [IQR]) [f] | 1.19 [0.90, 1.56] | 0.88 [0.80, 1.06] | **0.02** | 0.22 [0.09, 0.42] | 0.21 [0.1, 0.30] | 0.26 |
| HAART use at endpoint | 7 (0.27) | 0 (0.00) | 1.00 | 1364 (50.90) | 41 (91.11) | **<0.001** |
| HBV-active medication use prior to endpoint [g] | 37 (1.44) | 0 (0.00) | 1.00 | 1057 (39.44) | 36 (80.00) | **<0.001** |
| HBV past or current | 842 (32.83) | 6 (75.00) | **0.03** | 1150 (42.91) | 39 (86.67) | **<0.001** |
| ATHBC positive [h] | 823 (32.08) | 6 (75.00) | **0.03** | 1135 (42.35) | 39 (86.67) | **<0.01** |
| HBSAG, HBEAG, and HBV DNA negative [i] | 701 (27.32) | 6 (75.00) | **0.01** | 871 (32.50) | 32 (71.11) | **<0.001** |
| HBSAG, HBEAG, or HBV DNA positive | 122 (4.76) | 0 (0.00) | 1.00 | 264 (9.85) | 7 (15.56) | 0.309 |
| ATHBC negative/HBSAG or HBV DNA positive | 19 (0.74) | 0 (0.00) | 1.00 | 15 (0.56) | 0 (0.00) | 1.00 |
| HCV past or current [j] | 140 (5.46) | 0 (0.00) | 1.00 | 382 (14.25) | 7 (15.56) | 0.98 |
| Deaths | 54 (2.11) | 1 (12.50) | 0.42 | 570 (21.27) | 1 (2.22) | **0.003** |

Data shown are n (%) unless otherwise indicated. *p* values calculated using Wilcoxon rank sum test for continuous measures and Chi-squared test for categorical measures, bold indicates $p < 0.05$.
ATHBC, antibody to HBV core antigen; HAART, highly active anti-retroviral therapy; HBEAG, HBV e antigen; HBSAG, HBV surface antigen; HBV, hepatitis B virus; HCV, hepatitis C virus; IQR, interquartile range.

[a] Average over first three visits.
[b] Average over 10 years prior to endpoint.
[c] Total exposures within 10 years prior to endpoint.
[d] Time-updated values lagged 1 year prior to endpoint.
[e] Time-updated values lagged 6 years prior to endpoint.
[f] Lowest value between enrollment and study endpoint.
[g] HBV-active medications included Lamivudine, Tenofovir, Emtricitabine, pegylated-IFN or IFN-α, and other medications (see Table 1 legend) used between enrollment and study endpoint.
[h] At least 2 positive tests, or 1 positive test in combination with positive test for HBSAG, HBEAG, or HBV DNA any time following enrollment to study endpoint.
[i] Negative = 0 positive tests among subjects with at least 1 value.
[j] At least 1 positive test for HCV antibodies or HCV RNA any time following enrollment to study endpoint.