Background Brazil has a strong HIV prevention public health program since 1980s that includes continuous and free nationwide distribution of male and female condoms, rapid test triage, and eductioncommunication strategies. Even so, the detection rate of HIV has increased, achieving 14.3/1000,000 individuals aged 15–24 years (2017). Regarding this alarming situation, we aimed to access the HIV prevalence and associate characteristics in young Brazilian adults (aged 16 to 25 years).

Methods Data from POP-Brazil Study, a cross-sectional, nationwide, multicenter study with sexually active men and women who use the public health system in Brazil were obtained. Trained primary health care professionals asked participants about sociodemographic characteristics and presence of HIV. Additionally, they invited to undergo a rapid HIV test. Those individuals that not answered the question or did not take the laboratorial test were considered missing values. The measures were weighted by population size in each capital and by sex.

Results Of 8,581 participants, 3,009 do not provided information about HIV, and 49 (1.54%, CI95% 0.83%-2.25%) reported positivity or were reagent in the rapid HIV test, without significant differences between Brazilian regions. The positivity was significantly higher in men than women (2.7% vs. 0.6%, p<0.001), as well as in non-married-participants (p<0.001), those with more than two partners in the last year (p<0.009), heterosexual intercourse (p<0.001) or non-vaginal sexual behavior (p<0.001). The use of condom in the first sexual intercourse was not significant different between the groups of infection.

Conclusion The high prevalence of HIV is even more concerning taking into account the high proportion of missing individuals. Association of HIV with homosexual intercourse and non-vaginal sexual behavior were more frequently in male. Despite the sustained Brazilian public health program, this particular age range need to be on the focus of prevention strategies.

Disclosure No significant relationships.

Background Exclusive breastfeeding is recommended for the first six months in HIV-exposed infants in sub-Saharan Africa. This cost-effective and high impact strategy has proven to promote healthy infant growth, development and survival of children in resource poor settings. Despite antenatal and postnatal counselling and support on the choice of feeding for HIV-exposed infants, the practice of EBF remains low in sub-Saharan Africa. Given the paucity of data on the topic in the study setting, we examined the prevalence of six-month exclusive breastfeeding.

Methods We followed up parturient women enrolled in the East London Prospective Cohort Study with the aim of determining the rate and determinants of exclusive breast feeding in the region. Relevant items on demographic, lifestyles and duration of EBF were obtained using structured interviews. Binary logistic analysis was fitted to examine the significant determinants of EBF.

Results Six infants died within the first six months in the cohort. Of the parturient women with complete responses (469), the prevalence of exclusive breastfeeding for the recommended six months was 32% (n=150). Women who were unemployed in the past 12 months had a higher likelihood of exclusively breastfeeding their infants for 6 months compared to women who were employed [AOR:1.68, CI:1.08–2.63]. Also, women who did not consume alcohol beverages in the past 12 months had a higher odds of exclusively breastfeeding their infants [AOR:1.77, CI:1.12–2.78]. Adherence to antiretroviral therapy [AOR:0.83; CI:0.53–1.29], disclosure of HIV serostatus to sexual partners [AOR:0.98; CI:0.51–1.94] and marital status [AOR:1.32; CI:0.86–2.02] were not significantly associated with exclusively breastfeeding of infants for six months.

Conclusion Very low rate of exclusive breastfeeding for six months among HIV-infected parturient raises serious concern for mother-to-child transmission, morbidity and mortality of exposed-infants in the study setting. Intervention strategies to promote and monitor compliance with exclusive breastfeeding recommendations require targeted research.

Disclosure No significant relationships.
Conclusion HPV infection and high-grade AIN were associated with diffuse mucosal Treg infiltration, reducing the mucosal Th17/Treg ratio in participants with high-grade AIN. While changes in T cell immunology did not increase HIV RNA shedding in ART+ MSM, their effect on ART-naive men or HIV susceptibility in HIV-negative men will be interesting areas for future research.

Disclosure No significant relationships.

Background Antibody-dependent cell-mediated cytotoxicity (ADCC) mediated by natural killer (NK) cells plays a critical role in HIV-1 infection. As a novel subset of dendritic cells (DCs), 6-sulfo LacNAc-expressing DCs (slanDCs) also express CD16. However, the levels of slanDC-mediated ADCC during HIV-1 infection are not well addressed.

Methods Forty-five HIV-1-infected subjects were enrolled and 19 HIV-1 negative individuals were used as healthy controls (HCs). The complex of gp120 and anti-gp120 was used to stimulate peripheral blood mononuclear cells (PBMCs) and the level of TNF-alpha secreted by slanDCs was detected using intercellular staining of flow cytometer.

Results The counts of slanDCs in HIV-1-infected and treatment naïve patients were significantly lower than those of HCs and those receiving anti-retrovirus therapy (ART) (P=0.0331, P<0.0001). The number of slanDCs in HIV-1-infected patients with ART was significantly higher than those who did not receive ART, indicating that ART could help HIV-1-infected individuals to recover the number of slanDCs. The level of slanDC-mediated ADCC evaluated as the level of TNF-alpha production by slanDCs stimulated by the complex of gp120-anti-gp120, was significantly lower in HIV-1-infected subjects as compared with HCs and those receiving ART (P=0.0011, P=0.0002). The expression of CD16 (MFI) by slanDCs from HIV-1-infected patients receiving ART was significantly higher than that from HIV-1-infected untreated and HCs (P=0.0014, P=0.0003), and the expression of CD16 (MFI) in slanDC was positively correlated with the ADCC effect (P<0.0001).

Conclusion The slanDC-mediated ADCC existed in HIV-1-infected patients and the level could be enhanced by ART, suggesting an alternative pathway involved in ADCC in HIV-1 infection.

Disclosure No significant relationships.