Figure 2. Weighted Average Effect of Interventions for Depression among HIV-infected Africans.

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569. Immune Microenvironmets of Anal Cancer Precursors Differ by HIV-Serostatus and are Associated with Ablation Outcomes
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Background. HPV-associated anal cancer precursors (high-grade squamous intraepithelial lesions, HSIL) follow a more virulent course in HIV+ patients than in their HIV− counterparts. This study aims to characterize the subpopulations of mucosal-infiltrating T lymphocytes in HSIL microenvironments, correlating them with HIV−serostatus and electrocautery ablation (EA) outcomes.

Methods. Using immunohistochemistry, we quantified mucosa-infiltrating CD4+ and CD8+ T lymphocytes in 115 HSIL (from 70 HIV+ and 45 HIV− patients) and 20 benign anal mucosa samples (from 10 HIV+ and 10 HIV− patients). Clinopathological parameters were collected and compared by HIV status.

Results. Patients’ age, cytology diagnoses, and HPV types were comparable between HIV+ and HIV− groups. In benign controls, T lymphocytes were sparse in both HIV+ and HIV− anal mucosa. The number of total mucosa-infiltrating T lymphocytes and the CD8+ subset were significantly higher in anal HSIL from HIV+ subjects than in those from HIV− subjects (mean 71 vs. 47; 46.5 vs. 22 HPP, P < 0.001) whereas the CD4+ subset was similar between groups (24.5 vs. 25 HPP, P = 0.4). Among patients who underwent EA, subsequent anoscopy and biopsy detected persistent anal HSIL in 21/51 (41%) HIV+ and 5/27 (19%) HIV− patients (P = 0.04, mean 12 month follow-up, range 3-36). Unadjusted analysis showed a trend towards EA failures associated with HIV seropositivity (OR 2.0; 95% CI 0.80–4.9) and increased number of mucosa-infiltrating CD8+ T cells (OR 2.3; 95% CI 0.9-5.3).

Conclusion. Anal HSIL immune microenvironments differ significantly by HIV serostatus. HSIL in HIV+ subjects with increased mucosa-infiltrating CD8+ T cells tended to persist after EA. Therapies that target mucosal immunity may improve treatment outcomes of those lesions.

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570. Alarminging High Rate of Prostate Cancer Detected by Routine Prostate-Specific Antigen Screening in a County HIV Clinic
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Background. Routine prostate-specific antigen (PSA) screening in the general population and in HIV-infected men is controversial. The aim of this study is to determine the prevalence of prostate cancer (PC) among patients living with HIV (PLWH).

Methods. After an index case of PC was detected by sporadic PSA screening, we performed a prospective (2/2010-10/2016) cohort study following PSA levels and biopsy of African-American (AA) men ≥45 years and non-AA men ≥50 years. Screening was done at the discretion of the provider.

Results. Of the 124 men (82 AA, 17 Hispanic, 6 Caucasian, 7 Asian, 2 other) who received PSA screening, 7 (5.6%) had a PSA > 5 and underwent prostatic biopsy. Five patients (4%) were found to have PC, all of whom had a history of good long-term HIV viral control. Mean age of PC patients was 60 years vs. non-PC patients (55 years) (P = 0.031). Mean years of HIV in PC patients was 18 years vs. non-PC patients (14 years) (P = 0.068).

571. Clinical Characteristics and Outcomes of HIV-Infected Patients with Non-AIDS Defining Cancers in a National Institute Cancer in Mexico
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Background. Non-AIDS Defining Cancers (NADCs) have been recognized as an increasing cause of morbidity and mortality in HIV patients, related mainly to co-infections and/or lifestyle risks. There is no data of NADCs prevalence in Mexico. We describe type of NADCs, clinical characteristics and outcomes of HIV-infected individuals with NADCs.

Methods. We conducted a retrospective study of 1126 patients attending the HIV/AIDS Clinic at Instituto Nacional de Cancerología in Mexico city (a tertiary care center for adult patients with cancer), since 1996 to December 2016, who had confirmed NADCs after HIV diagnosis. Demographic and clinical data were collected for all HIV patients with NADCs.

Results. Over 1126 HIV-positive individuals seen at the INCan, 139 (12.3%) patients developed a NADC, five patients developed two NADCs during their follow-up, 114 (82%) were male. The median age at diagnosis of NADCs was 42.4 ± 10.9 years, the median of CD4 was 354.4 cell/mm³ at that time of NADCs, 81 of them (56.3%) had a CD4 count >200 cell/mm³, 81 (56.3%) had undetectable HIV viral load. In males the distribution of NADCs was 36 (25%) Hodgkin’s lymphoma (HL), 16 (11.1%) anal cancer, 13 (9.9%) germinoma tumors males, and two lung cancers, and in females: 11 (7.7%) vulvo-vaginal, seven (4.9%) breast cancer, four (2.8%) thyroid cancer and one case of Hodgkin’s lymphoma. The median of follow-up of NADCs was 2.5 (IQR 0.4-3.6) years. Nine patients died attributable to NADCs and 51 patients lost follow-up.

Conclusion. HL was the most frequent NADC on men as it has been described in other reports, followed by anal cancer. In women vulvo-vaginal cancers were the most frequent. These three malignancies are related with viral etiology. Lung cancer was uncommon, different from that described in the US population, smoking is less frequent in the HIV Mexican population. NADCs can occur at any stage of HIV infection, regardless of immune status.

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572. Missed Opportunities for Primary Prevention of Cardiovascular Disease in an HIV Clinic
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Session: 65. HIV: Cardiovascular Disease, Lipids, Diabetes
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Background. Atherosclerotic cardiovascular disease (ASCVD) is a leading cause of death among people living with HIV (PLWH). PLWH have a high prevalence of ASCVD risk factors, including hypertension (HTN), dyslipidemia, diabetes mellitus (DM), elevated BMI, smoking, physical inactivity, and poor diet.
Methods. Setting—Urban Ryan White funded clinic in Columbia, SC providing care to about 2200 PLWH. A retrospective chart review was performed on a sample of patients ≥40 years old. Patients were eligible if they did not have a known diagnosis of ASCVD, had ≥ 3 visits in the last 3 years, and at least 1 visit in the past 12 months. Data regarding demographics, comorbidities, lab values, medications, and recent blood pressures were abstracted. Data were collected on assessment and intervention for smoking, weight loss, diet, and exercise. Objectives of this study were to: (1) determine the prevalence of ASCVD risk factors among patients without known ASCVD; (2) estimate the proportion of patients who received appropriate pharmacologic and lifestyle interventions.

Results. Charts were reviewed in random order until 100 charts had the required variables to calculate the 10-year ASCVD risk (Figure 1). These complete charts were similar in demographic characteristics to the clinic population. Of the complete charts, 66% met BMI criteria for being obese or overweight; but < 30% of these patients had documentation of the diagnosis, or received appropriate intervention for diet, exercise, or weight loss. HTN was diagnosed in 42% of patients, and 52% of these were adequately controlled. An additional 9% met criteria for HTN but did not carry the diagnosis. Documented diagnosis of DM was surprisingly low at <5%. Nurses assessed smoking in 100% of patients, and the majority of smokers received an intervention. Based on current guidelines, less than 25% of eligible patients were prescribed a statin (Figure 2). To our concern, none of the patients with LDL ≥190 mg/dL or DM had evidence of statin therapy.

Conclusion. Although > 85% of clinic patients have an undetectable HIV viral load, there were multiple missed opportunities for primary prevention of cardiovascular disease, including interventions for smoking cessation, diet and exercise, and guideline based anti-HTN and statin therapy.

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573. A Comparative Analysis of Cardiovascular Risk in HIV Sero-positive and Sero-negative Pre-menopausal Women

A. Jones

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Background. HIV infection has been associated with an increased risk of cardiovascular disease (CVD), stroke, and subclinical atherosclerosis in women. HIV-positive pre-menopausal women tend to lose the cardio-protective effect of estrogen and these women should be more vigilant in reducing their risk for developing CVD. Our study intends to assess the cardiovascular risk in the HIV-positive pre-menopausal women over the last 16 years (1999-2014) using a national wide sample.

Methods. This study is a cross-sectional study using the National Health and Nutrition Examination Survey (NHANES) datasets from 1999 to 2014. The 10-year Framingham risk score for developing CAD was calculated for the HIV-positive and HIV-negative pre-menopausal women. The individual risk factors contributing to CAD including blood pressure, hemoglobin A1c, c-reactive protein (CRP), smoking status, cholesterol level, family history of CVD were compared. The populations’ intent to reduce their risk (exercise, diet modification and use of medications) and their doctor’s advice to reduce the risk (counseling on diet, exercise and weight) were also analyzed. SPSS v.19 was used for analysis and P-value < 0.05 was considered significant.

Results. Out of the available sample of 82,091 people, 9,365 women (11.7%) met the inclusion criteria (pre-menopausal women, 18 to 55 year old, no prior history of CAD, no missing data and tested for HIV). Among them, 25 women were HIV seropositive (0.25%). Though there was no significant difference in the systolic and diastolic blood pressure, HBA1c, CRP, HDL, or total cholesterol (P>0.05). The mean Framingham risk score in pre-menopausal HIV-positive women (M = 2.12, SD = 2.73) was significantly higher than the HIV-negative women (M = 0.95, SD = 1.94); P<0.01. Neither did majority of the HIV-positive women intend to decrease their cardiovascular risk nor did their health care providers advise them to do so.

Conclusion. This study shows that the risk of developing CVD in pre-menopausal women seems to be higher from the traditional risk factors itself. While HIV is now independent risk factor for developing CVD in women, more focus should be on reducing the risk from traditional methods like smoking cessation, diet and lifestyle modification, blood pressure, diabetes and cholesterol and management.

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