

adjustment for other covariates. P value <0.05 was considered statistically significant. R version 3.3.2 was used for the statistical analysis.

**Results.** A total of 70 women and 90 men were included in the study. Median age was 41 years (19) for women and 34 years (19) for men ( $P < 0.001$ ). Virologic suppression was documented in 76% of women and 64% of men ( $p = 0.166$ ). Immune recovery was documented in 60% of women and 68% of men ( $p = 0.323$ ). Multivariate analysis of virologic success is shown in Figure 1 and immunologic recovery is shown in Figure 2.

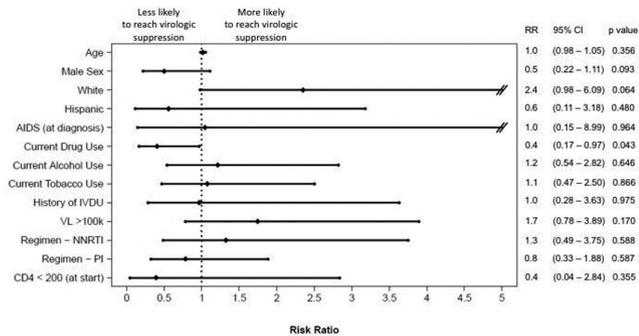


Figure 1: Multivariate Analysis of Virologic Suppression

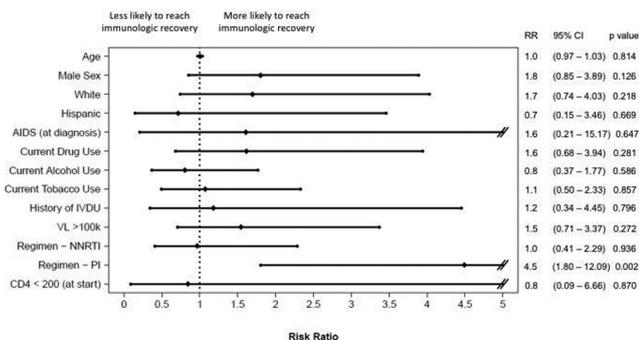


Figure 2: Multivariate Analysis of Immunologic Recovery

**Conclusion.** In our study, gender was not found to be associated with differences in response to ART. As expected, drug abuse continues to be an independent variable associated with lack of virologic suppression. If one of the goals of treatment is to achieve a rapid immunologic response, our study may indicate that regimens containing protease inhibitors should be the ones selected.

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

### 1398. Weight Gain After Switch from Efavirenz-Based to Integrase Inhibitor-Based Regimens

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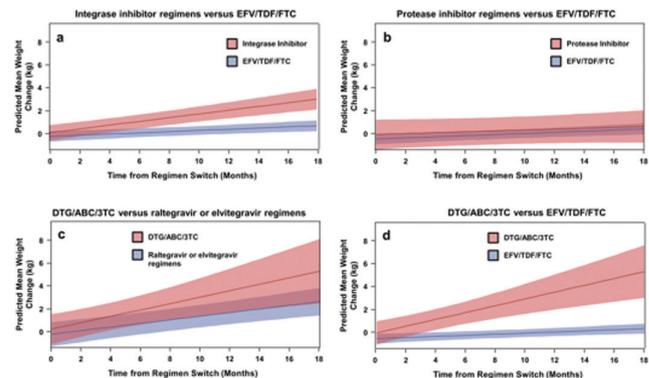
**Background.** Integrase strand transfer inhibitor (INSTI)-based antiretroviral therapy (ART) offers persons living with HIV a potent new treatment option. Recently, local HIV clinicians noted weight gain in patients who switched from daily, fixed-dose efavirenz/tenofovir disoproxil fumarate/emtricitabine (EFV/TDF/FTC) to fixed-dose dolutegravir/abacavir/lamivudine (DTG/ABC/3TC). To assess whether regimen switch was significantly associated with weight gain, we evaluated body weight over time among patients with sustained virologic suppression who switched from EFV/TDF/FTC to an INSTI-containing regimen, including DTG/ABC/3TC.

**Methods.** We analyzed data from adult patients on EFV/TDF/FTC for  $\geq 2$  years with consistent plasma HIV-1 RNA <1000 copies/mL prior to date of switch (or date of sham switch for those who remained on EFV/TDF/FTC). All maintained HIV-1 RNA <1000 copies/mL for  $\geq 18$  months post-switch. We assessed weight change over 18 months in patients switched to an INSTI-containing regimen or a protease inhibitor

(PI)-containing regimen vs. those remaining on EFV/TDF/FTC over the same period. In a sub-group analysis, we compared patients switched to DTG/ABC/3TC vs. raltegravir- or elvitegravir-containing regimens. Linear mixed effects models assessed mean differences in weight over time, adjusting for baseline age, sex, race, CD4+ count and weight.

**Results.** Among 495 patients, 136 switched to an INSTI-containing regimen, 34 switched to a PI-containing regimen, and 325 remained on EFV/TDF/FTC. Patients switched to an INSTI-containing regimen gained an average of 2.9 kilograms (kg) at 18 months compared with 0.9 kg among those continued on EFV/TDF/FTC ( $P = 0.003$ , Figure a), while those switched to a PI regimen gained 0.7 kg ( $P = 0.81$ , Figure b). Among INSTI regimens, those switched to DTG/ABC/3TC gained 5.3 kg at 18 months, which was more than raltegravir or elvitegravir regimens ( $P = 0.19$ , Figure c) and significantly more than those continued on EFV/TDF/FTC ( $P = 0.001$ , Figure d).

**Conclusion.** Switching from daily, fixed-dose EFV/TDF/FTC to an INSTI-containing regimen among patients with virologic control was associated with weight gain at 18 months. This weight gain was particularly profound among those switching to DTG/ABC/3TC.



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

### 1399. Application of The Change Point Analysis to The Long-Term Restoration of CD4 Count Among Well-Controlled HIV-1 Infected Patients Who Started Antiretroviral Therapy

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**Background.** Although CD4 count is an important marker for prognosis of patients infected with HIV-1, how long and how much CD4 count will increase after initiation of cART are still unknown. Hence, the aim of this study is, using change point analysis, to examine the long-term CD4 count restoration among well-controlled HIV-1 patients.

**Methods.** In this single-center cohort study at AIDS Clinical Center, Tokyo, we examined HIV-1 infected patients who initiated cART between January 2004 and January 2012 and achieved HIV viral load of <200 copies/mL within first 48 weeks of treatment and maintained viral suppression (VL <200 copies/mL) for at least 4 years. cART was defined as combination regimen which consisted of NNRTI, PI, or INSTI, plus two NRTIs. All patients were followed until censoring (defined by VL >200 copies/mL, discontinuation of cART for >30 days, lost to follow-up for >1 year, initiating chemotherapy for malignancy, or death), or at end of the observation period (September 30, 2015). Change point analysis was performed to determine the time point where the restoration of CD4 count becomes plateau.

**Results.** Of 752 patients, 708 (94.2%) were male and 89.9% was MSM. The median age was 39.3 years [IQR, 32-45] and the median baseline CD4 count and %CD4 were 172 cells/mm<sup>3</sup> [IQR, 61-254], and 13.8% [IQR, 7.7-18.5], respectively. The median follow-up period was 87.0 months [IQR, 65.2-109.2] and 134 were followed over ten years. With change point analysis, both longitudinal increase of CD4 count and %CD4 increased linearly until 78.6 and 62.2 months, respectively. Stratified by baseline CD4 count (<200 cells/mm<sup>3</sup>, 200-350 cells/mm<sup>3</sup>, and >350 cells/mm<sup>3</sup>), CD4 count increased linearly until 76.2, 62.4, and 58.6 months, respectively. Moreover, the percentage of patient who achieved 500 cells/mm<sup>3</sup> during study period was 63.5%, 87.2%, and 92.0%, respectively.

**Conclusion.** With change point analysis, restoration of CD4 count and %CD4 continued increasing linearly until 6.5 and 5 years of cART, respectively. Patients with lower baseline CD4 count showed longer CD4 count recovery than those with higher baseline CD4; however, their CD4 count did not recover as high as those with higher baseline CD4 count.