1040. Real-World Implementation of Dolutegravir-Lamivudine to Achieve and Maintain HIV-1 Viral Suppression at an Academic Medical Center
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Background. Two-drug antiretroviral (ARV) regimens to achieve and maintain HIV viral suppression may lead to decreases in associated drug interactions, adverse events, and pill burden. Dolutegravir-lamivudine (DTG-3TC) has been established as an effective and safe regimen in clinical trials and real-world implementation. This study was performed to evaluate the real-world implementation of DTG-3TC across an academic medical center.

Methods. This retrospective cohort consisted of all patients at an academic medical center with confirmed order of DTG-3TC between April 2019 and March 2020. Patients who were not linked to care by the site’s Medical Home, or had no confirmed order of DTG-3TC were excluded. The primary endpoint was number of patients initiated on DTG-3TC to maintain viral suppression.

Results. A total of 49 patients were initiated on DTG-3TC. Median time to viral suppression was 55 days (IQR 46-60). Sixty-nine percent were male (34/49), 90% carried publicly funded insurance (44/49), and median age at DTG-3TC initiation was 55 years (IQR 46-60), and mean years since HIV diagnosis was 14 (SD ±8). The largest racial/ethnic category represented was Black (45%, 22/49). Forty-seven patients (4/47) met all criteria and included a median age of 55 years (IQR 34-71). Fifty percent of patients wereswitched from alternative regimens, mostly containing an integrase inhi­bitor (41/47, 87%), and with the primary rationale of medication modernization (±525) were switched from alternative regimens, mostly containing an integrase inhibitor (41/47, 87%), and with the primary rationale of medication modernization (27/47, 58%) followed by avoidance of adverse drug reactions (15/47, 32%). From 42 assessed patients, 62% had previous ARV exposure length of over 10 years. No patients were found to have significant resistance mutations to the involved agents.

Conclusion. Initial implementation of DTG-3TC was successful in a northeast academic HIV practice primarily among virally suppressed treatment switch patients with long exposures to ARV and time since diagnosis. No clinically relevant change in CD4 or Viral Loads were immediately seen.
1043. The impact of integrase strand transfer inhibitors (InSTIs) on weight gain among adults with HIV in clinical care
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Background. Integrase strand transfer inhibitors (InSTIs) as ART for HIV has been associated with clinically significant weight gain, in addition to the "return to health phenomenon".

Methods. We conducted a cohort study on adults over 18 with HIV, who had baseline weights and an additional weight at least 6 months later. Individuals with malignancies, thyroid disorders, and disseminated tuberculosis or mycobacterium avium complex were excluded. To understand the impact of InSTIs on chronic vs. recently infected persons, we divided the cohort into four groups: (1) well-controlled on non-InSTI ART [WIN] (2) well-controlled on InSTI ART [WIN] (3) uncontrolled on non-InSTI ART [UN] and (4) uncontrolled on InSTI ART [UN]. Well-controlled persons (viral load < 2000) were proxies for chronic infection on long-term ART and recently infected persons requiring hormonal therapy (Table 2).

Results. 612 of the initial 910 participants in the cohort met the inclusion criteria. Comparing those who remained on the designated regimen throughout the study led to 86 WN, 153 WI, 166 UN, and 145 UN. Mean weight change at 6 months for WN was +0.22 kg (95% CI [0.86, 1.13]), at 1 year was +0.46 kg (95% CI [2.94, 1.22]), and at 2 years was +0.06 kg (95% CI [-2.94, 1.22]), and at 2 years was +0.06 kg (95% CI [-2.94, 1.22]). For WI, mean weight change at 6 months was +0.21 kg (95% CI [0.79, 1.21]), at 1 year was -0.50 kg (95% CI [-2.02, 1.04]), and at 2 years was +0.43 kg (95% CI [-1.35, 2.21]). UN gained weight until the first year (+1.74 kg at 6 mo (95% CI [2.02, 3.24]) and +3.84 kg at 1 year (95% CI [1.57, 6.11]), but plateaued at 2 years (+2.42 kg (95% CI [-0.44, 5.28])). At 6 months mean weight gain for UN was +0.78 kg (95% CI [0.15, 1.71]), at 1 year was +2.33 kg (95% CI [1.02, 3.64]), and at 2 years was +3.04 kg (95% CI [1.2, 4.85]). WI had a higher incidence of diabetes (37% vs. 32%, p=0.40), hyperlipidemia (32% vs. 29%, p=0.66), and hypertension (34% vs. 26%, p=0.18) compared to WN.

Conclusion. InSTIs may confer a larger and more sustained weight gain among individuals in the first two years after ART initiation. Well controlled individuals did not have statistically significant weight change, but those on Insti-based ART had more weight gain.

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1044. The Incidence and Severity of Drug Interactions Before and After Switching Antiretroviral Therapy to Bictegravir/Emtricitabine/Tenofovir Alafenamide in Treatment Experienced Patients
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Background. Switching antiretroviral therapy (ART) in virally suppressed people with HIV (PWH) can simplify treatment, improve tolerability, and limit long-term toxicity. It can also influence the presence of drug interactions (DIs) in a positive or negative manner among patients receiving concomitant medications (CMs). The extent to which switching ART to bictegravir/entricitabine/tenofovir alafenamide (BIC/FTC/TAF) influences DIs in treatment-experienced PWH is unclear. The purpose of this study was to assess changes in the incidence and severity of DIs after switching to BIC/FTC/TAF.

Methods. This was a multicenter retrospective cohort study of PWH on ART and at least one prescription CM who switched to BIC/FTC/TAF between 3/2018 and 6/2019. Using the University of Liverpool’s HIV drug interaction checker, two DI analyses were performed for each patient. The first assessed patients’ pre-switch ART regimen with their CM list. The second assessed the same CM list with BIC/FTC/TAF. Each ART-CM combination was given a numerical score of 0 (no or potential weak interaction), 1 (potential interaction), or 2 (contraindicated interaction). Total DI scores for each patient, both before and after switching to BIC/FTC/TAF were then calculated. A paired t-test analyzed changes in DI scores following ART switches and a linear regression model examined factors contributing to DI score reductions.

Results. A total of 411 patients were included in the analysis (Table 1) of which 292 (71%) had at least one DI present at baseline. On average, patients had a baseline DI score of 1.45 (SD 1.85) and experienced a 1 point reduction (95% CI -1.1-0.8) after switching to BIC/FTC/TAF (p < 0.0001). After adjusting for demographic variables as well as baseline ART and CM categories in the regression model, switching to BIC/FTC/TAF led to significant DI score reductions in patients receiving CMs for the following conditions: cardiovascular disease, neurologic and psychiatric disorders, chronic pain, inflammation, gastrointestinal and urologic conditions and conditions requiring hormonal therapy (Table 2).

Table 1. Descriptive Summary of Baseline Characteristics, n = 411.

| Variable                        | ART-BIC/FTC/TAF | ART-Continuing | P-Value |
|---------------------------------|-----------------|----------------|---------|
| Age, mean (SD)                  | 53.16 (10.4)    | 53.16 (10.4)   |         |
| Gender (%)                      | Male            | Female         |         |
| Number of persons with at least one prescription CM at baseline | 236 (57%)       | 236 (57%)      |         |

Conclusion. Bictegravir/emtricitabine/tenofovir alafenamide switching from a non-InSTI ART to BIC/FTC/TAF led to significant DI score reductions in patients receiving concomitant medications (CMs). The extent to which switching ART to bictegravir/entricitabine/tenofovir alafenamide (BIC/FTC/TAF) influences DIs in treatment-experienced PWH is unclear. The purpose of this study was to assess changes in the incidence and severity of DIs after switching to BIC/FTC/TAF.