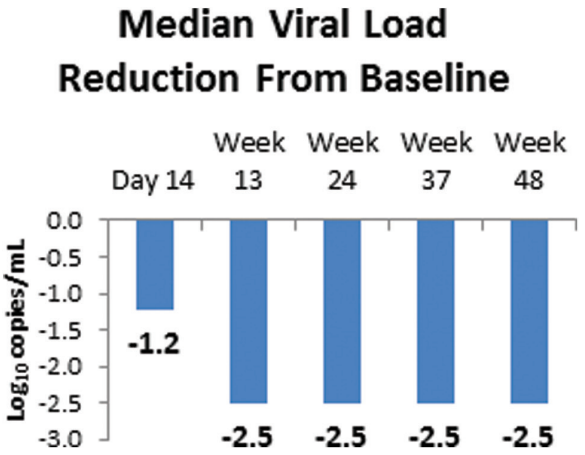
of IBA in highly treatment-experienced MDR patients and offer a valuable treatment option for patients.



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1687. Selected CNS Outcomes Among INSTI Antiretrovirals

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Background. Higher rates of neuropsychiatric events among patients on dolutegravir (DTG) compared with other integrase inhibitors (INSTIs) have been reported from clinic cohorts and one blinded trial. We compared select neurological and psychiatric events in a large sample of patients treated with different INSTIs.

Methods. The Quintiles IMS database, which includes pharmacy and medical claims records, was examined for HIV infected patients treated from 2006 to 2016 with DTG (TIVICAY/TRIUMEQ), elvitegravir (EVG, STRIBILD), or raltegravir (RAL, ISENTRESS). The dependent variable outcomes were insomnia/sleep disturbance and depression. A propensity score was created to adjust for variables associated with treatment with a particular INSTI including age, gender, year of initial INSTI exposure, and enrollment time. Multivariate Poisson mixed models were used to generate incidence rate ratios (IRRs).

Results. Records for 54,151 distinct HIV-infected patients treated with DTG, EVG, or RAL were identified. In the multivariate model the rate of insomnia/sleep disturbance events was significantly higher for patients treated with DTG vs. EVG (IRR 1.21 [95% CI 1.09–1.33, $P < 0.001$]), but was not significantly different when comparing DTG to RAL (IRR 1.04 [95% CI 0.94–1.14, $P = 0.459$]). Likewise, the rate of incident depression was significantly higher for patients treated with DTG vs. EVG (IRR 1.18 [95% CI 1.09–1.27, $P < 0.001$], but not when comparing DTG to RAL (IRR 0.93 [95% CI 0.87 – 1.01, $P = 0.068$]).

Conclusion. In this analysis using a large healthcare database, significantly higher adjusted rates of both incident insomnia/sleep disturbances (21% more) and depression (18% more) were found among patients treated with DTG compared with EVG. In contrast, a significant difference in the rates of either outcome was not observed when comparing DTG and RAL. Further studies are warranted to determine the risk of neuropsychiatric events in patients treated with different INSTIs.

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1688. Viral Failure Among Persons Living with HIV Initiating Dolutegravir-Based vs. Other Recommended Regimens in Real-World Clinical Care Settings

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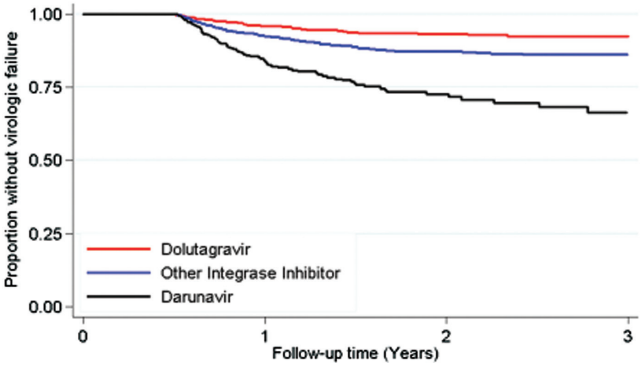
Background. Much of the prior research on viral failure (VF) with integrase inhibitor (INSTI) therapy is based on results from trials rather than clinical care settings and little is known about recently approved medications such as dolutegravir (DTG). We compared VF in persons living with HIV (PLWH) who initiated DTG-based vs. other guideline recommended regimens in clinical care across the United States.

Methods. PLWH from eight CFAR Network of Integrated Clinical Systems (CNICS) sites who started a recommended regimen between August 2013 and August 2016 were included. We compared DTG vs. other INSTI, and vs. darunavir-based (DRV) regimens included in current guidelines for initiating antiretroviral therapy (ART). VF was defined as a viral load of >400 copies/ml >6 months after initiation. We used Cox models adjusting for age, sex, race/ethnicity, hepatitis B, hepatitis C, tuberculosis, HIV risk factor, CD4 count, days since last HIV viral load, and site. PLWH were censored at death, regimen change or loss to follow-up (LTFU) with sensitivity analyses varying LTFU definitions from 0 to 12 months after last activity and including/excluding inverse probability censoring weights based on variables in the main models.

Results. Among 6636 PLWH who initiated a recommended regimen, a lower proportion on DTG-based regimens experienced VF during follow-up (Figure). The adjusted hazard ratio (HR) for VF for DTG vs. DRV-based regimens was 0.56 (95% confidence interval 0.37–0.86). In sensitivity models, the HR for VF for DTG vs. other INSTI regimens ranged from 0.73 to 1.07 depending on LTFU definitions. The HR for DTG vs. DRV-based regimens ranged from 0.38 to 0.63 depending on LTFU definitions. In sensitivity analyses among the 1,229 PLWH known to be ART-naive at initiation, a similar pattern was found with a lower HR of VF among those who initiated DTG vs. DRV-based regimens (HR 0.25, 95% CI 0.11–0.56).

Conclusion. The observed rate of VF during follow-up was lower among PLWH initiating DTG-based vs. DRV-based regimens in routine clinical care at sites across the US. Results also demonstrated that different definitions of LTFU can have a large impact on the results and highlight the importance of sensitivity analyses in informing study definitions to minimize bias.

Figure. Kapxlan–Meier curve of time to VF.



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