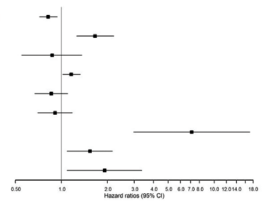
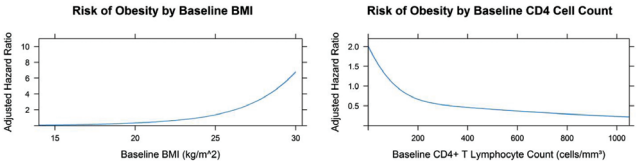
BMI at the end of follow-up was 24.7 kg/m^2 (0.4 kg/m^2 median annual change), the obesity incidence rate was 37.4 per 1000 person-years and the median time to obesity diagnosis was 1.9 years (vs. 4.7 years of follow-up for participants remaining non-obese). Factors associated with obesity after ART initiation included younger age at ART initiation, female sex, higher baseline BMI, lower baseline CD4$^+$ T lymphocyte count, higher baseline HIV-1 RNA, having an integrase inhibitor as the most-used ART core drug and having diagnoses of hypertension and diabetes mellitus (Figure).

Conclusion. Obesity following ART initiation is frequent among HIV+ adults, with rates increasing in recent years. Both traditional (female sex) and HIV-specific (more advanced HIV disease, integrase inhibitor use) risk factors contribute importantly to obesity incidence following ART initiation.

Figure. Factors Associated with Incident Obesity After Multivariate Analysis

	aHR	Lower CI	Upper CI
Age at ART Initiation (per 10 year increase)	0.82	0.72	0.94
Sex: Female (ref male)	1.66	1.26	2.20
Sex: Transgender Women	0.87	0.55	1.36
Baseline Viral Load (copies/mL) Log10	1.16	1.02	1.33
ART Backbone Drug: AZT (ref TDF)	0.86	0.67	1.10
ART Core Drug: PI (ref NNRTI)	0.91	0.70	1.18
ART Core Drug: INSTI	7.12	2.97	17.09
Baseline Diagnosis of Hypertension	1.54	1.09	2.16
Baseline Diagnosis of Diabetes Mellitus	1.92	1.09	3.36





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

Conclusion. For incarcerated PLH, both LTC and RIC as well as viral suppression are suboptimal after release. PLH who receive case management are more likely to have timely LTC. Targeted interventions and integrated programming aligning health and criminal justice goals may improve post-release HIV treatment outcomes.

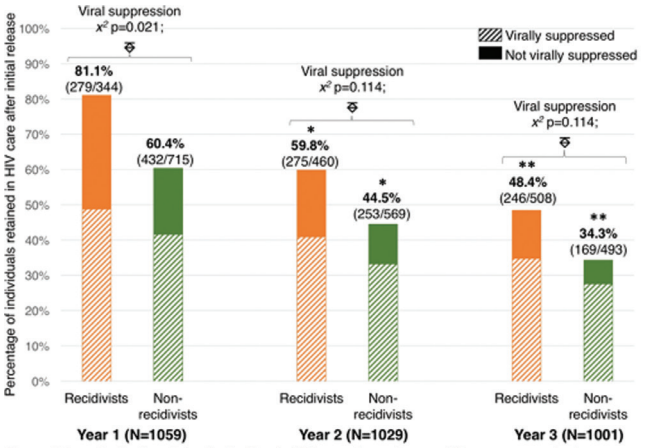


Figure 1. Longitudinal sustained retention in HIV care at one, two, and three years post-release, based on frequency of HIV-1 RNA viral testing, stratified by whether individuals were re-incarcerated at some point during the follow-up period. *statistically significant decline (McNemar's test p<0.0001) compared with initial one-year rates. **statistically significant decline (McNemar's test p<0.0001) compared with sustained two-year rates. ⊼statistically significant difference (x^2 p<0.0001) in retention rates between recidivists and non-recidivists across all time points. Among those retained, non-recidivists had higher viral suppression rates compared to recidivists at end of year 1 (p=0.021) and year 3 (p=0.048).

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1685. Predictors of Linkage to and Retention in HIV Care Following Release from Connecticut Jails and Prisons

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Background. One in six people living with HIV (PLH) in the USA transition through prison or jail annually. During incarceration, people may engage in HIV care, but transition to the community remains challenging. Linkage to care (LTC) post-release and retention in care (RIC) are necessary to optimizing HIV outcomes, but have been incompletely assessed in prior observational studies.

Methods. We created a retrospective cohort of all PLH released from a Connecticut jail or prison (2007–2014) by linking Department of Correction demographic, pharmacy, and custody databases with Department of Public Health HIV surveillance monitoring and case management data. We assessed time to LTC, defined as time from release to first community HIV-1 RNA test, and viral suppression status at time of linkage. We used generalized estimating equations to identify correlates of LTC within 14 or 30 days after release. We also described RIC over three years following an initial release, comparing recidivists to non-recidivists.

Results. Among 3,302 incarceration periods from 1,350 unique PLH, 21% and 34% had LTC within 14 and 30 days, respectively, of which >25% had detectable viremia at time of linkage. Independent correlates of LTC at 14 days included incarceration periods >30 days (adjusted odds ratio [AOR] = 1.6; $P < 0.001$), higher medical comorbidity (AOR = 1.8; $P < 0.001$), antiretrovirals prescribed before release (AOR = 1.5; $P = 0.001$), transitional case management (AOR = 1.5; $P < 0.001$), re-incarceration (AOR = 0.7; $P = 0.002$) and conditional release (AOR = 0.6; $P < 0.001$). The 30-day model additionally included psychiatric comorbidity (AOR = 1.3; $P = 0.016$) and release on bond (AOR = 0.7; $P = 0.033$). Among 1,094 PLH eligible for 3-year follow-up, RIC after release declined over 1 year (67%), 2 years (51%) and 3 years (42%). Recidivists were more likely than nonrecidivists to have RIC but, among those retained, were less likely to be virally suppressed (Figure 1).

1686. Forty-eight-Week Safety and Efficacy On-Treatment Analysis of Ibalizumab in Patients with Multi-Drug Resistant HIV-1

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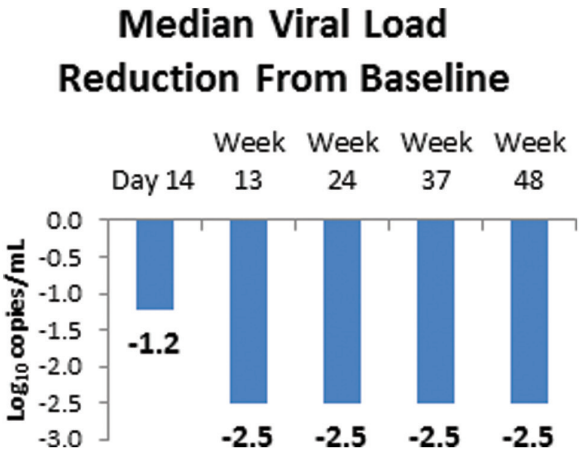
Background. Management of multi-drug-resistant (MDR) HIV-1 remains a challenge. The advent of antiretroviral (ARVs) with novel mechanisms of action are needed to expand therapeutic options for MDR patients. Ibalizumab (IBA) is a humanized monoclonal antibody with a unique binding specificity to the CD4 domain 2, allowing it to block viral entry into host cells without CD4 depletion. Patients completing the 24-week Phase 3 study (TMB-301) continued treatment in study TMB-311. Here, we report the durable efficacy and long-term safety of IBA with an optimized background regimen (OBR) through 48 weeks of treatment.

Methods. TMB-301 was an open-label study investigating the antiviral activity and safety of IBA plus OBR in highly treatment-experienced patients with MDR HIV-1. Patients received an intravenous loading dose of 2,000 mg followed by 800 mg doses every 2 weeks for 24 weeks. 7 days after loading dose, an OBR was added with at least 1 additional sensitive agent throughout the study. Following completion of the 24-week TMB-301 study, patients continued to receive IBA at 800 mg every 2 weeks under TMB-311 for up to 48 weeks. Safety and efficacy were assessed until 48 weeks.

Results. A total of 31 patients enrolled in TMB-301 completed the 24-week treatment period. Of 31 patients, 27 entered study TMB-311. These patients were highly resistant patients - 59% and 33% of patients had exhausted ≥3 and ≥4 ARV classes, respectively, and 7% of patients had HIV-1 resistant to all approved ARVs. IBA plus OBR was well tolerated. Of the 27 patients, 24 (89%) continued to receive treatment until Week 48. The three patients discontinued early due to non IBA-related reasons. No new or unexpected safety concerns emerged between Week 24 and 48. The potent suppression of viremia observed Week 24 was sustained through Week 48. Median viral load (VL) reduction from BL was 2.5 $\log_{10}$ at both Week 24 and 48. Of 27 patients (59%) 16 had VL <50 copies/ml and 17 (63%) patients had VL < 200 copies/ml. All 15 patients with VL < 50 copies/ml at Week 24 maintained viral suppression to Week 48.

Conclusion. IBA plus OBR continued to achieve high rates of virologic suppression through Week 48. The results support the durable efficacy and long-term safety

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



Disclosures. **B. Emu**, TaiMed Biologics: Employee and Shareholder, Salary; **P. N. Kumar**, TaiMed: Advisory Board and Investigator, Consulting fee and Grant recipient; **G. Richmond**, TaiMed: Investigator, Research support; **S. Weinheimer**, TaiMed: Employee, Salary; **C. Marsolais**, TaiMed: Commercial partner, Salary and Salary from Theratechnologies, commercial partner; **S. Lewis**, TaiMed: Employee, Salary and Salary from Theratechnologies, commercial partner

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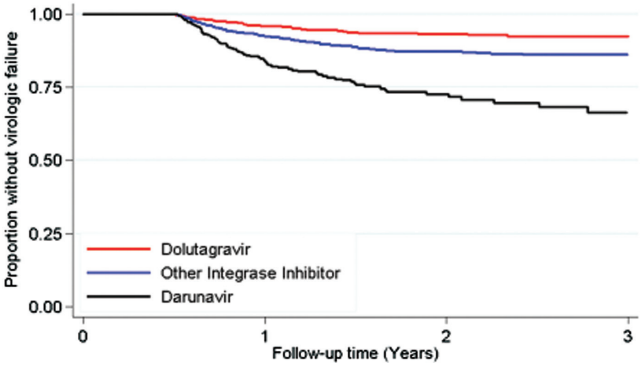
Background. Much of the prior research on viral failure (VF) with integrase inhibitor (INSTI) therapy is based on results from trials rather than clinical care settings and little is known about recently approved medications such as dolutegravir (DTG). We compared VF in persons living with HIV (PLWH)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