and Shareholder, Salary; **S. Barthel**, GlaxoSmithKline: Employee and Shareholder, Salary; **J. Koteff**, ViiV Healthcare: Employee and Shareholder, Salary; **C. Garris**, ViiV Healthcare: Employee and Shareholder, Salary; **C. Nguyen**, ViiV Healthcare: Employee and Shareholder, Salary; **A. Ustianowski**, ViiV: Speaker's Bureau, Conference sponsorship; Gilead: Grant Investigator, Scientific Advisor and Speaker's Bureau, Consulting fee, Grant recipient and Speaker honorarium; MSD: Scientific Advisor and Speaker's Bureau, Consulting fee and Speaker honorarium; Janssen: Scientific Advisor, Consulting fee; Abbvie: Grant Investigator, Grant recipient; **P. Eitz Ferrer**, ViiV Healthcare: Employee and Shareholder, Salary; **A. Murungi**, ViiV Healthcare: Employee, Salary

1394. Comparison of Time to Viral Suppression Among Treatment-Naïve HIV-Infected Adults Initiating Combination Antiretroviral Therapy by Antiretroviral Regimen Class

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Background. Antiretroviral therapy (ART) regimens for the treatment of HIV that incorporate the integrase strand inhibitor (INSTI) class of antiretroviral medications have high efficacy and tolerability, and may result in faster time to virologic suppression compared with regimens that contain protease inhibitors (PIs) or non-nucleoside reverse transcriptase inhibitors (NNRTIs). However, differences in viral suppression are not well-defined in routine clinical settings.

Methods. We performed a retrospective single-center chart review of treatment-naïve HIV patients initiating ART between 2013 and 2016. Among patients on different ART regimen types, we compared rates of achievement of viral suppression (defined as viral load less than limit of detection or <20 copies/uL) over time and median time to viral suppression using chi-square and independent samples median testing. Patients who were prescribed nonstandard regimens, were nonadherent, or discontinued or changed ART within 6 months were excluded.

Results. One hundred and fifty-five patients—45 (29.0%) female and 110 (71%) male—met study inclusion criteria. Mean age at ART initiation was 41.3 years (SD 12.5), and mean baseline viral load was 293,974 copies/uL. Twelve (7.7%) patients had an opportunistic infection diagnosed at time of ART initiation. Seventy-one (45.8%) initiated an INSTI-based ART regimen, 58 (37.4%) initiated a NNRTI-based regimen, and 26 (16.8%) initiated a PI-based regimen. Eighty-one (52.3%) patients had documented viral suppression, with median time to viral suppression 105 days (IQR 49–159). Patients on INSTI regimens were more likely to achieve viral suppression by 6 months (93.2% compared with 69.7% on NNRTIs and 30.8% on PIs), and had lower median time to suppression (62.6 days vs. 140.5 days on NNRTI regimens and 154.5 days on PI regimens, $P = 0.002$).

Conclusion. In this cohort, patients on INSTI-based ART regimens experienced higher rates of viral suppression at 6 months and shorter time from ART initiation to viral suppression. In HIV patients on INSTI-based ART regimens, virologic failure should be suspected prior to the current recommendation of 6 months.

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1395. The Safety of Substitution of Antiretroviral Regimen in Non-Clinical Trial Settings in Asian Countries

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Background. Although substitutions of antiretroviral regimen are generally safe, most data on substitutions are based on results from clinical trials. The objective of this study was to evaluate the safety of substituting antiretroviral regimen in virologically suppressed HIV-infected patients in non-clinical trial settings in Asian countries.

Methods. HIV-infected patients enrolled in the TREAT Asia HIV Observational Database (TAHOD) were included in this analysis if they started combination antiretroviral therapy (cART) after 2002, were being treated at a center that documented a median rate of viral load (VL) monitoring ≥ 1 tests/patient/year, and experienced a minor or major treatment substitution while on virally suppressive cART (VL < 200 copies/mL). Minor regimen substitutions were defined as within-class changes and major regimen substitutions were defined as changes to a drug class. Virologic failure was defined as having had two viral load measurements > 400 copies/mL. The patterns of substitutions and rate of virologic failure after substitutions were analyzed.

Results. Of 3,994 adults who started ART after 2002, 3,119 (78.1%) had at least one period of virological suppression. Among these, 1,170 (37.5%) underwent a minor regimen substitution, and 296 (9.5%) underwent a major regimen substitution during suppression. The rates of virological failure were 1.48/100person years (95% CI 1.14–1.91) in the minor substitution group and 2.85/100person years (95% CI 1.88–4.33) in the major substitution group, and 2.53/100person years (95% CI 2.20–2.92) among patients that did not undergo a treatment substitution.

Conclusion. The rate of virological failure was relatively low in both major and minor substitution groups, showing that regimen substitution is generally safe in non-clinical trial settings in Asian countries.

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1396. Clinical outcomes associated with once daily ritonavir-boosted darunavir in HIV infected patients harboring single or multi-class resistant virus

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Background. Limited data exist on the use of a potent boosted protease inhibitor plus <2 active nucleotide reverse transcriptase inhibitors without use of additional classes of ART in treatment experienced patients with background resistance. We evaluated the clinical outcomes in HIV-infected patients harboring single or multi-class resistant virus (NRTI ± PI and/or NNRTI) treated with once daily darunavir/ritonavir (DRV/r) plus tenofovir/emtracitabine (TDF/FTC).

Methods. This was a single-center, retrospective chart review of HIV-1 infected patients harboring single or multi-class resistant virus and receiving an ART regimen of TDF/FTC plus DRV/r administered as a once daily regimen > 24 weeks. The primary outcome was HIV viral load (VL) < 200 copies/mL (cp/mL) at last measurement. Additional endpoints included virologic rebound, re-suppression, and/or failure; VL < 40 cp/mL at last measurement; development of additional mutations. Virologic failure (VF) was defined as failure to achieve a VL < 200 cp/mL or achievement of VL < 200 cp/mL but with rebound to > 200 cp/mL on all successive VLs.

Results. 34 of 387 patients meet criteria for inclusion in the study and were receiving DRV 800 mg daily/r 100 mg daily with fixed combination TDF/FTC. All patients had baseline resistance to FTC (M184V/I), 12 (35.3%) had resistance to TDF, and none had high level DRV resistance. 27 (79%) achieved a VL < 200 cp/mL and 25 (74%) had a VL < 200 cp/mL at the last reading. 23 (68%) achieved a VL of < 40 cp/mL. VF occurred in 8/34 patients (24%) with the following baseline parameters: TDF resistance (2/8), low/ intermediate DRV resistance (2/8), and VL > 100,000 cp/mL (3/8). Both patients with baseline DRV resistance and VF demonstrated high level resistance to DRV on repeat genotype testing. Adherence was considered a major contributor to VF.

Conclusion. The use of once daily DRV/r plus TDF/FTC in treatment experienced patients with single/multi-class resistant virus resulted in virologic suppression in over two-thirds of patients. VF was seen in nearly 25% of patients including development of high level DRV resistance. This combination is a potentially viable option in a patient population seeking a once-daily option to improve adherence.

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1397. Gender Differences in Virologic Response after Antiretroviral Therapy in Treatment-naïve HIV-infected Individuals: Results from the 550 Clinic HIV Cohort Study.

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Background. Controversy still exists regarding gender differences in virologic response between treatment-na•ve HIV-infected individuals. The objective of this study was to evaluate gender difference in virologic and immunologic response to antiretroviral therapy in treatment-na•ve HIV-infected individuals.

Methods. This was a retrospective, observational study of treatment-na•ve HIV-infected individuals managed at the 550 clinic who started antiretroviral therapy (ART) between January 1st, 2010 and December 31, 2015. Patients with available viral load and CD4 counts before and one year after initiating ART were included in this study. Virologic suppression was defined as < 48 HIV-1 RNA copies/mL, and mmunologic recovery was defined as a CD4 count increase of at least 150 cells/mm^3. Dichotomous variables were reported in number and percentages and analyzed using Chi-squared tests and Fisher's exact (whichever was appropriate). Continuous variables were reported as median and interquartile range (IQR) and analyzed using Wilcox rank-sum tests. Multivariate analyses performed were logistic regressions with