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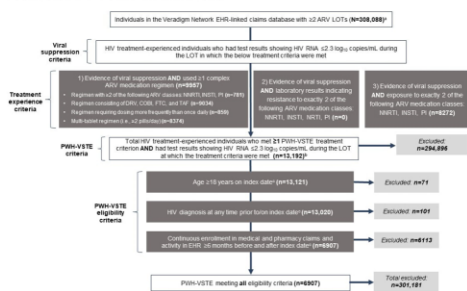
P-481. Characterization of People with HIV Who Are Virologically Suppressed with Treatment Experience Using a US Real-World Database

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Study Group:

Background. People living with HIV who are virologically suppressed with treatment experience (PWH-VSTE) are often prescribed complex multi-tablet and/or multi-dose antiretroviral (ARV) regimens with increased risk of poor clinical outcomes due to adherence challenges, adverse events, and/or drug interactions. This population is not well characterized, with no universal definition. We conducted a retrospective, observational analysis of a large US database to characterize PWH-VSTE and better understand this subset of PWH.

Figure. PWH-VSTE Study Attrition Diagram



^aIdentified within the study period of January 1, 2015 to December 31, 2022. ^b10007 PWH met L2 treatment experience criteria. ^cIndex date was defined as the most recent date on which one of the VSTE-defining treatment criteria was met. ^dARV: abacavir/zidovudine, AZT, didanosine, ddI, didoxifene, ddC, dolutegravir, DTG, efavirenz, ETR, etravirine, Health Research ETR, emtricitabine, FTC, emtricitabine, RTI, integrase strand transfer inhibitor, INSTI, linezolid, rilpivirine, RLV, non-nucleoside reverse transcriptase inhibitor, NNRTI, nucleoside reverse transcriptase inhibitor, NRTI, protease inhibitor, PWH-VSTE, people living with HIV who are virologically suppressed with treatment experience. ^ePI, protease inhibitor.

Methods. PWH with treatment experience (PWH-TE) with ≥ 2 ARV lines of therapy (LOT) were identified from the Veradigm Network electronic health record (EHR) database linked with claims during the study period, Jan 2015–Dec 2022. We defined VSTE as virologic suppression (HIV-1 RNA ≤ 200 copies/mL) during the LOT in which ≥ 1 of the following treatment criteria were met: (1) used ≥ 1 “complex” ARV regimen; (2) resistance to exactly 2 ARV classes out of nucleoside or non-nucleoside reverse transcriptase inhibitors (NRTI, NNRTI), integrase strand transfer inhibitor (INSTI), and protease inhibitor (PI); (3) prior exposure to exactly 2 ARV classes out of NNRTI, INSTI, and PI (Figure). For inclusion, PWH-VSTE were aged ≥ 18 years and had an HIV diagnosis, continuous claims enrollment, and EHR activity. We report the proportion of PWH-TE meeting VSTE-defining criteria, and their characteristics.

Table. PWH-VSTE Characteristics

	PWH-VSTE n=6907
Mean (SD) age at index date, years	48.6 (11.6)
Age group (years) at index date, n (%)	
18–29	517 (7.5)
30–39	1108 (16.0)
40–49	1601 (23.2)
50–59	2499 (36.2)
60–69	1053 (15.2)
70+	129 (1.9)
Gender^a, male, n (%)	4929 (71.4)
Race, n (%)	
White	2257 (32.7)
Black	2861 (41.4)
Asian	185 (2.7)
Other	1058 (15.3)
Unknown/not reported	546 (7.9)
Ethnicity, n (%)	
Hispanic	559 (8.1)
Non-hispanic	4811 (69.7)
Unknown	1537 (22.3)
Geographic region, n (%)	
Northeast	1728 (25)
Midwest	625 (9)
South	2667 (38.6)
West	1833 (26.5)
Other/unknown	54 (0.8)
Payer type, n (%)	
Commercial	2116 (30.6)
Medicaid	3792 (54.9)
Medicare	461 (6.7)
Other/unknown	538 (7.8)
Mean (SD) Charlson Comorbidity Index	6.1 (2.6)
Common (>5%) Charlson Comorbidity Index conditions, n (%)	
Chronic pulmonary disease	1260 (18.2)
Liver disease, mild ^b	853 (12.3)
Renal disease	591 (8.6)
Diabetes with chronic complications	362 (5.2)
Median (IQR) HIV RNA, log₁₀ copies/mL	
Baseline ^c	2.2 (1.2–3.8)
Follow-up ^d	1.6 (1.2–1.9)

^aUnknown, n=2. ^bMild liver disease was defined as chronic hepatitis or cirrhosis without portal hypertension. ^cn=2052. ^dn=5973. PWH-VSTE, people living with HIV who are virologically suppressed with treatment experience.

Results. Of 308,088 PWH-TE, 13,192 (4%) met ≥ 1 VSTE-defining criterion (9957 met Criterion 1 and 8272 met Criterion 3); 6907 (52%) were eligible for analysis (Figure). PWH-VSTE were mostly male (71%), Black (41%), aged 50–59 years (36%), using Medicaid (55%), from the South (39%), and had a mean (SD) Charlson Comorbidity Index of 6.1 (2.6) (Table). Among those with data during the baseline period (6-month period prior to index date), 48.2% (990/2052) had a viral load of ≤ 200 copies/mL. Resistance testing was done for 13.3% of PWH-VSTE during the baseline period, but only 0.2% had results available.

Conclusion. In this large, real-world database, PWH-VSTE comprised 4% of PWH-TE, were mostly male, and had a high level of comorbidities. Understanding the characteristics of PWH-VSTE will enable clinicians to better address the needs of this historically understudied population.

Disclosures. Samir K. Gupta, MD, Gilead Sciences, Inc.: Advisor/Consultant|ViiV Healthcare: Advisor/Consultant|ViiV Healthcare: Grant/Research Support Katherine Cappell, n/a, Veradigm: Employee|Veradigm: Stocks/Bonds (Public Company) Kwana Price, n/a, Gilead Sciences, Inc.: Stocks/Bonds (Public Company) Mac Bonafede, PhD, Moderna, Inc.: Advisor/Consultant|Veradigm: employees|Veradigm: Stocks/Bonds (Public Company) Joshua Gruber, PhD MPH, Gilead Sciences, Inc.: Employee|Gilead Sciences, Inc.: Stocks/Bonds (Public Company) Dylan Mezzio, PharmD, Gilead Sciences, Inc.: employees|Gilead Sciences, Inc.: Stocks/Bonds (Public Company) Soodi Navadeh, PhD, Gilead Sciences, Inc.: Employee|Gilead Sciences, Inc.: Stocks/Bonds (Public Company) Robert Sedgley, n/a, Veradigm: employee Sorana Segal-Maurer, MD, Gilead Sciences, Inc.: Advisor/Consultant|Gilead Sciences, Inc.: Grant/Research Support|Gilead Sciences, Inc.: Honoraria|Janssen: Advisor/Consultant|Theratechnologies: Advisor/Consultant|ViiV: Advisor/Consultant