

Real-World Utilization and Effectiveness of Long-Acting Cabotegravir + Rilpivirine in the United States: Trio Cohort Study

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Background

- Cabotegravir+Rilpivirine (CAB+RPV) is the first FDA-approved long-acting (LA) injectable antiretroviral therapy (ART) in the United States.
- CAB+RPV LA is a complete regimen for people living with HIV (PWH) who are on a stable ART regimen (viral load [VL] <50 copies/mL) and have no history of treatment failure or known/suspected resistance to either CAB or RPV.
- CAB+RPV LA can be administered every month or every 2 months.

Objective

- Assess utilization and effectiveness of CAB+RPV LA in real-world setting in the US.

Methods

- Observational cohort study utilizing prospectively collected longitudinal electronic medical record (EMR) data from Trio Health HIV Network.
- Inclusion criteria:
 - ≥18 years old
 - Received ≥1 CAB+RPV LA injections through September 2022
- Demographic and clinical characteristics were stratified by VL <50 or ≥50 copies/mL at CAB+RPV LA initiation.

Results

- Of 190 PWH with ≥1 documented CAB+RPV LA injections, all were treatment experienced except 1 with unknown prior treatment history.
- At CAB+RPV initiation, 170 (90%) of individuals had VL <50 copies/mL, 15 (8%) had VL ≥ 50 copies/mL and remaining 5 (2%) had no available VL at initiation [Figure 1].
- Of 170 with VL <50 copies/mL at initiation, 19 (11%) were women, 61 (36%) were Black and 60 (36%) had a BMI of ≥30; median age was 46 (IQR: 36, 55) years [Table 1].
- Median follow-up from first injection to time of analysis was 5.1 months (IQR: 2.9, 8.1) among individuals with VL <50 copies/mL at initiation [Figure 2].
- 95% of individuals with VL <50 copies/mL at initiation remained on CAB+RPV LA at the time of analysis [Figure 2].
- Of 49 individuals with VL <50 copies/mL at initiation and VLs after first injection, 96% had follow-up VL <200 copies/mL and 84% had VL <50 copies/mL [Figure 3].
 - 36% of individuals with VL <50 copies/mL at initiation had baseline BMI ≥30 kg/m²; of them, 88% had follow-up VL <200 copies/mL [Table 2].
- Among individuals with VL ≥50 copies/mL at initiation and follow-up VLs, 100% had follow-up VLs <200 copies/mL and 43% VL <50 copies/mL [Figure 3].
 - Of those with VL ≥50 copies/mL and BMI ≥30 kg/m² at initiation, 100% were suppressed (follow-up VL <200 copies/mL) [Table 2].

Figure 1. CAB+RPV LA use in Trio Cohort

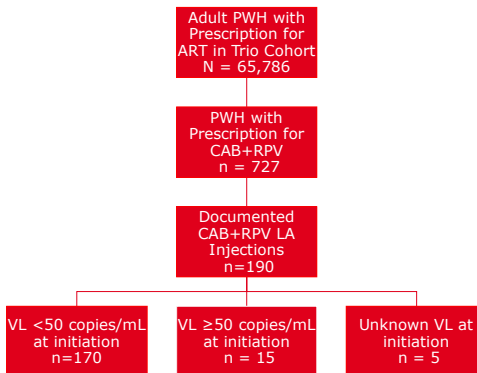


Table 1. Demographic characteristics of PWH with ≥1 CAB+RPV LA injections by viral load at initiation

N (%) unless specified		VL <50 copies/mL at initiation n=170	VL ≥50 copies/mL n=15
Age, median (IQR)		46 (36, 55)	38 (32, 44)
Gender	Male	116 (68)	8 (53)
	Female	19 (11)	3 (20)
	Unspecified/non-binary	35 (21)	4 (27)
Race/ethnicity	White	76 (45)	5 (33)
	Black	61 (36)	9 (60)
	Hispanic or Latino	14 (8)	1 (7)
	Other race (Asian, American Indian, Pacific Islander)	9 (5)	0 (0)
	Unspecified race	10 (6)	0 (0)
			2 (1)
Body Mass Index (BMI)	Underweight <18.5 kg/m ²	39 (24)	2 (14)
	Normal 18.5-24.9	65 (39)	5 (36)
	Overweight 25-29.9	60 (36)	6 (43)
	Obese ≥ 30		
CD4, median (IQR)		N = 167; 699 (530,942)	N = 12; 713 (472,917)
Time Suppressed (months from recent suppression), median (IQR)		28 (10, 66)	N/A
Number of Known Prior Prescribed Regimens, median (IQR)		3 (2, 5)	2 (2, 3)

Figure 2. Duration of CAB+RPV LA use by viral load at initiation

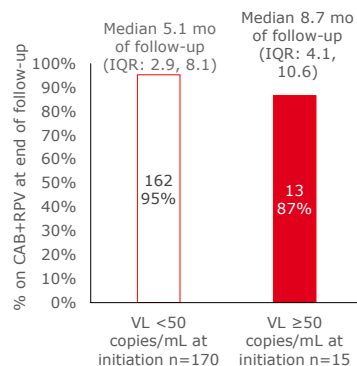
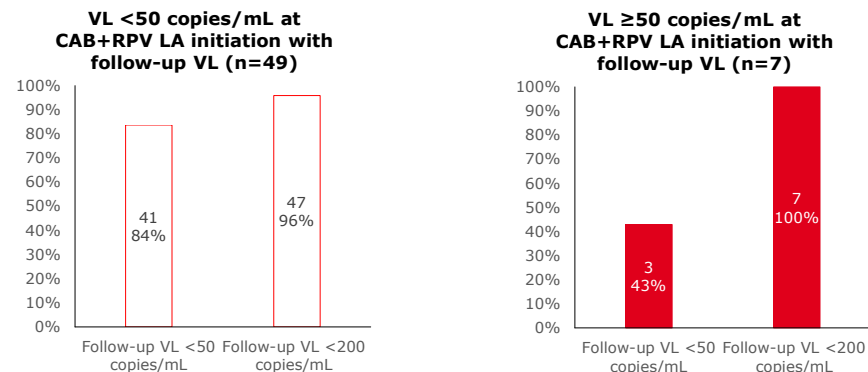


Table 2. Clinical outcomes of PWH with ≥1 CAB+RPV LA injections and baseline BMI ≥30 kg/m² by viral load at initiation

n (%)	VL <50 copies/mL at initiation with baseline BMI ≥30 kg/m ² n=60	VL ≥50 copies/mL with baseline BMI ≥30 kg/m ² n=6
Recorded VL after first CAB+RPV LA injection, n (%)	17 (28)	3 (50)
Follow-up VL <200 copies/mL	15 (88)	3 (100)

Figure 3. Virologic outcomes of PWH with ≥1 CAB+RPV LA injections by viral load at initiation



Conclusion

- These early real-world data demonstrate high levels of virologic control after switching to CAB+RPV LA regimen among virologically suppressed individuals.
- Future analysis with longer follow-up is needed to evaluate outcomes in real-world setting.



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