Effectiveness of CAB+RPV LA Among Select Sex, Race, and/or Ethnicity Subgroups: Findings from the OPERA Cohort

Quateka Cochran[1], Jennifer S. Fusco[2], Ricky K. Hsu[3,4], Michael Session[5], Gayathri Sridhar[6], Vani Vannappagari[6], Kimberley Brown[6], Jean Van Wyk[7], Michael B. Wohlfeiler[8], Gregory P. Fusco[2]

[1]AIDS Healthcare Foundation, Fort Lauderdale, FL; [2]Epividian, Raleigh, NC; [3]AIDS Healthcare Foundation, New York, NY; [4]Langone Health Systems, New York, NY; [5]CAN Community Health, Fort Lauderdale, FL; [6]ViiV Healthcare, Durham, NC; [7]ViiV Healthcare, London, UK; [8]AIDS Healthcare Foundation, Miami, FL

Background

- CAB+RPV LA is the only complete long-acting regimen currently available
  - Approved for virologically suppressed (VL <50 c/mL) treatment-experienced people with HIV
- High CAB+RPV LA efficacy and effectiveness in clinical trials and cohort studies overall, by VL at CAB+RPV LA initiation (off label if VL ≥50 c/mL), and by BMI
- Little has been published on CAB+RPV LA use and effectiveness by sex, race and ethnicity

Objective

Describe the characteristics and virologic outcomes of individuals taking CAB+RPV LA in the OPERA cohort, based on select sex, race and ethnicity subgroups

Methods

OPERA Cohort

- Prospectively captured, routine clinical data from US-based electronic health records, representing ~14% of people with HIV in the US

Inclusion Criteria

- ART-experienced
- ≥18 years old
- Initiated CAB+RPV LA from 21 Jan 2021 – 31 Dec 2024
- Belong to a subgroup of interest:
  - **Black Women** (any ethnicity)
  - **Hispanic Men** (any race)
  - **Non-Hispanic Black Men**

Censoring Criteria

- Discontinuation of CAB+RPV LA (>67 and >127 days after last injection for the monthly and every 2 months dosing schedules, respectively)
- Death
- Lost to follow-up (12 months after last clinical contact)
- End of analysis period (28 Feb 2025)

Virologic Outcomes

- Assessed among individuals who had:
  - Completed CAB+RPV LA initiation (received initiation injections ≤67 days apart)
  - ≥1 follow-up VL through 28 Feb 2025
- **If baseline VL <50 c/mL:** maintained suppression (all or last follow-up VL <50 c/mL), confirmed virologic failure (2 consecutive VL ≥200 c/mL or discontinuation after a VL ≥200 c/mL within 4 months)
- **If baseline VL ≥50 c/mL:** achieved suppression (any or last follow-up VL <50 c/mL)

Results

Figure 1. Sex, age and ethnicity among individuals initiating CAB+RPV LA in the OPERA cohort between 21 Jan 2021 – 31 Dec 2024 (N = 5,264)

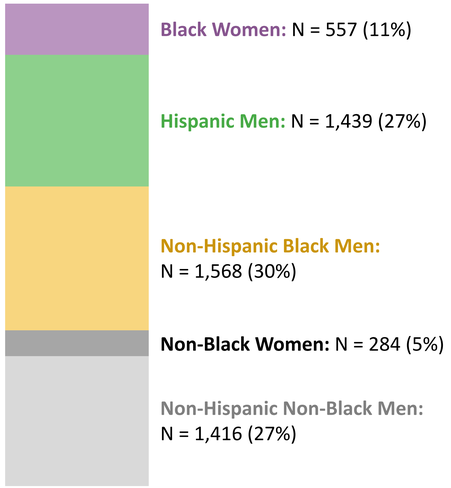


Table 1. Baseline characteristics of individuals initiating CAB+RPV LA by select subgroups of interest

	Black Women (N=557)	Hispanic Men (N=1,439)	Non-Hispanic Black Men (N=1,568)
Age (years)			
Median (IQR)	45 (36, 54)	36 (30, 45)	35 (30, 43)
≥50, n (%)	203 (36)	239 (17)	244 (16)
Care in Southern US, n (%)	406 (73)	630 (44)	943 (60)
Medicare, n (%)	108 (19)	73 (5)	154 (10)
Years since HIV diagnosis, n (%)	9 (3, 19)	5 (1, 10)	6 (2, 12)
BMI (kg/m^2)			
Median (IQR)	32 (27, 37)	27 (24, 30)	27 (23, 31)
≥30, n (%)	308 (55)	363 (25)	459 (29)
≥1 comorbid condition, n (%)	457 (82)	1,094 (76)	1,178 (75)
CD4 count, median cells/µL (IQR)	710 (480, 973)	686 (513, 877)	692 (517, 890)

Table 2. Completion of CAB+RPV LA initiation and follow-up

	Black Women (N=557)	Hispanic Men (N=1,439)	Non-Hispanic Black Men (N=1,568)
Complete initiation, n (%)	521 (94)	1,341 (93)	1,411 (90)
Months of follow-up, median (IQR)	15 (8, 26)	13 (7, 21)	13 (7, 22)
≥1 follow-up VL , n (%)	382 (73)	1,180 (88)	1,171 (83)

Figure 2. Viral load at CAB+RPV LA initiation

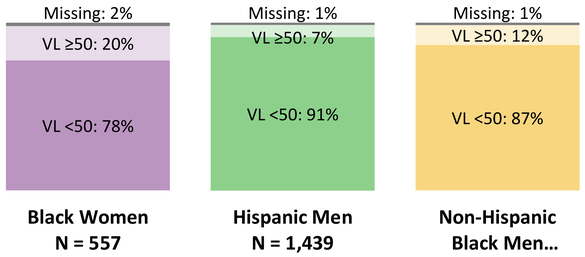


Figure 3. Virologic outcomes among complete initiators with ≥1 follow-up VL and a baseline VL <50 c/mL

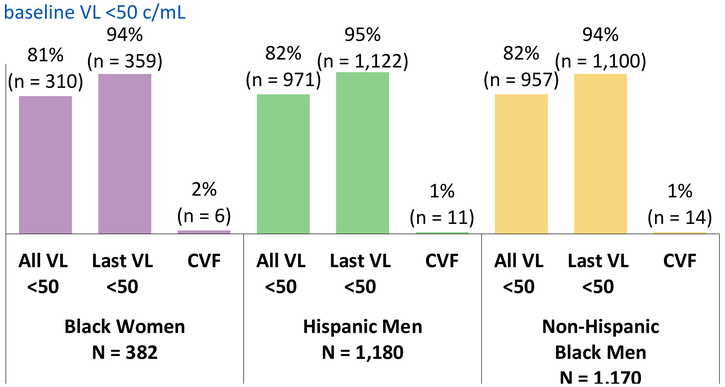
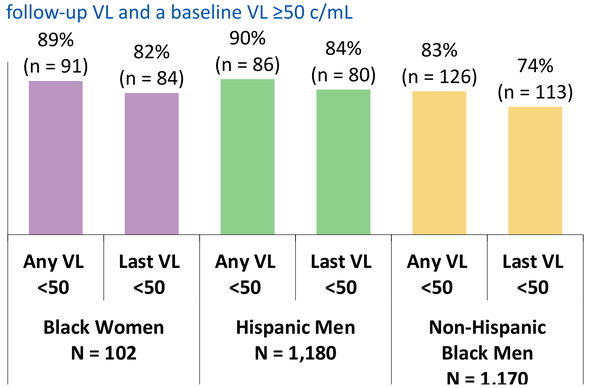


Figure 4. Virologic outcomes among complete initiators with ≥1 follow-up VL and a baseline VL ≥50 c/mL



Abbreviations: BMI, body mass index; c/mL, copies/mL, CAB+RPV LA, cabotegravir + rilpivirine long-acting; CVF, confirmed virologic failure; Dec, December; Feb, February; IQR, interquartile range; Jan, January; N, number; VL, viral load

Discussion

- Among 5,264 adults who initiated CAB+RPV LA over a 4-year period, 68% belonged to a subgroup of interest: 11% Black women, 27% Hispanic men, 30% non-Hispanic Black men (Figure 1)
- Compared to Hispanic men and non-Hispanic Black men (Table 1):
  - Black women were older, from the Southern US, higher body mass index, and had had HIV longer
  - Consistent with their older age, Black women also had more comorbidities and were more likely to be on Medicare
- Fewer Hispanic men were viremic at CAB+RPV LA initiation than non-Hispanic Black men or Black women (Figure 2)
- In all subgroups, most individuals completed the CAB+RPV LA initiation sequence (90% – 94%), but fewer had follow-up VL measurements (73% – 88%) (Table 2)
- Favorable virologic outcomes were observed in all subgroups, regardless of baseline VL (Figures 3-4)
  - Most had a VL <50 c/mL at last measurement (baseline VL <50: 94% – 95%; baseline VL ≥50 c/mL: 74 % – 84%)
  - CVF was infrequent (1% – 2%) among individuals with a baseline VL <50 c/mL
- Limitations
  - Characteristics and outcomes among non-Black women and non-Hispanic, non-Black men were not described
  - Virologic outcomes were not assessed among individuals without a follow-up VL measurement

Key Findings

- In this large, real-world US population, individuals initiating CAB+RPV LA were able to maintain or achieve a VL <50 c/mL, and CVF was rare regardless of sex, race, and ethnicity
- These findings reinforce CAB+RPV LA as a versatile and effective therapy for diverse populations

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Contact: Jennifer Fusco, Jennifer.fusco@epividian.com