Materials and methods: This was an observational, cross-sectional study from ARCA database (https://www.dbcarca.net/) including HIV-positive adults with at least two consecutive viiremia <50 copies/mL after 1 January 2019 and at least one genotypic resistance testing (GRT) for RT/INT from plasma and/or PBMCs. Eligibility criteria for LA CAB+RPV were: negative HBsAg, absence of resistance-associated mutations (RAMs) for NNRTIs, of major RAMs for INSTIs (IAS-USA list 2019), and of previous virological failures (VFs) to INSTIs and/or NNRTIs [1-3]. Prevalence of eligible individuals was calculated. Univariable analysis was performed to investigate potential differences between eligible and ineligible individuals.

Results: Five hundred and fourteen individuals were included: 377 (73.3%) were male, median age was 51 (IQR 43 - 58), 41 (8%) had HBO co-infection, in ART from 9 years (IQR 4 - 17) and in virological suppression from 63 months (IQR 34.7 - 105.2) (Table 1). One hundred and nineteen (23%), 134 (26%), and 17 (3%) individuals experienced VFs to INSTIs, NNRTIs and RPV, respectively. B subtype was detected in 382 (74%) individuals. Thirty-three (6%), 123 (24%) and 104 (20%) individuals had at least one major RAM for INSTIs, for NNRTIs (excluded RPV) and for RPV, respectively. The most common major RAMs are showed in Figure 1. Among 24 ineligible individuals with GRT on RNA and DNA, one had RAMs for NNRTI only on DNA and three had previous VFs without any RAMs. Eligible individuals for LA CAB+RPV were 229 (44.5%, 95% CI 40.8, 48.8): compared to ineligible individuals, they were younger, injected drugs less frequently, had a lower zenith viiremia (4.5 vs 5.1 log10 copies/mL) and higher CD4 count nadir (260 vs 170 cells/mm3)(Table 1). They had a more recent HIV diagnosis (2012 vs 2002) as well as year of ART-start (2015 vs 2007), receiving a lower number of previous regimens (3 vs 6).

Conclusions: Less than half of virosuppressed HIV-positive individuals with available GRTs in ARCA cohort were potentially eligible for LA CAB+RPV. They showed a lower zenith viiremia, higher CD4 cell count, a shorter history of HIV infection and exposure to ART compared to those ineligible to LA CAB+RPV.

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