Proprietary

Four-Year Effectiveness of Doravirine-Based Antiretroviral Therapy in Treatment-Experienced People Living with HIV

537

Clotilde Allavena,[1] **Sean P. Fleming**,[2] Colin Deschanvres,[1] Philippe Mariot,[3] Antoine Chéret,[4] Pierre Dellamonica,[5] André Cabié,[6] Laurent Hocqueloux[7]
[1]CHU de Nantes, France, [2]Merck & Co., Inc., Rahway, NJ, USA, [3]MSD France, Puteaux, France, [4]CHU de Guadeloupe, France, [5]CHU de Nice, France, [6]CHU de Martinique, France, [7]CHU d'Orléans, France

BACKGROUND

Doravirine (DOR), a non-nucleoside reverse transcriptase inhibitor, is approved for use in both ART–naïve and ART–experienced PLWH. We assessed the durability of virologic suppression in virologically suppressed, treatment-experienced adults switched to DOR-based regimens in routine care.

METHODS

- Retrospective study using the large French DAT'AIDS cohort between April 2019 and June 2024.
- Inclusion criteria was PLWH aged ≥18 years with plasma HIV RNA viral load (VL) <50 copies/mL who switched to either:
  - Single-tablet DOR/3TC/TDF or
  - DOR plus ≥1 NRTI and/or 1 INSTI
- Exclusion criteria: pregnancy, highly complex salvage regimen, end-stage renal disease, and primary or secondary DOR resistance mutations at baseline.
- The primary outcome was proportion of PLWH maintaining virologic suppression (VS; <50 copies/mL) at 4 years.
- Secondary outcomes included proportion of PLWH maintaining VS at 1, 2, and 3 years and reasons for stopping DOR.
- Reasons for discontinuation included:
  - Virologic failure (VF), defined as two consecutive VL >50 copies/mL or 1 VL >200 copies/mL and DOR discontinuation (applies to all virologic outcomes).
  - Toxicities defined in the medical chart, including medical reasons and PLWH-reported adverse effects.
- VL measures taken ±90 days of each time point.
- PLWH were censored if they discontinued a DOR-based regimen, died, were lost to follow-up (no observations ≥10 months after the last prescription), or study end of 31 December 2024.

Abbreviations:
3TC: lamivudine; ART: antiretroviral therapy; BIC: bictegravir; DOR: doravirine; DTG: dolutegravir; DRM: drug resistance mutation; DRV: darunavir; FTC: emtricitabine; HIV: human immunodeficiency virus; INSTI: integrase strand transfer inhibitor; IQR: interquartile range; NNRTI: non-nucleoside reverse transcriptase inhibitor; NRTI: nucleoside reverse transcriptase inhibitor; PI: protease inhibitor; PLWH: people living with HIV; r: ritonavir; TAF: tenofovir alafenamide; TDF: tenofovir disoproxil fumarate; VF: virologic failure; VL: viral load; VS: virologically suppressed.

Acknowledgements:
The study was sponsored by Merck Sharp & Dohme LLC, a subsidiary of Merck & Co., Inc., Rahway, NJ, USA.
Copyright© 2026 Merck & Co., Inc., Rahway, NJ, USA and its affiliates. All rights reserved.

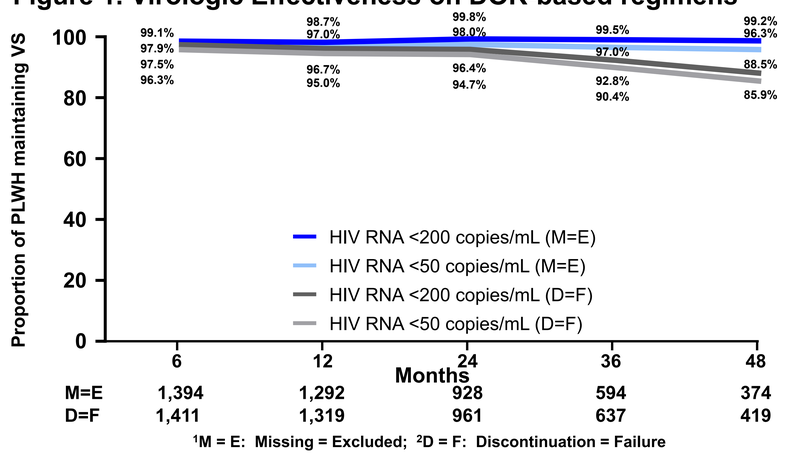
Presented at the Conference on Retroviruses and Opportunistic Infections (CROI); Denver, CO, USA; February 22-25, 2026

Treatment-experienced adult PLWH on a doravirine-based regimen had a high rate of virologic suppression with a low discontinuation rate. This supports the effectiveness and tolerability of doravirine-containing regimens.

RESULTS

- Of 2,114 PLWH initiated on a DOR-based regimen, 1,666 were included (Table 1).
  - Most (73.6%) switched to DOR/3TC/TDF at baseline.
  - Forty-five PLWH discontinued DOR: side effects/toxicity (14/45; 31.1%), simplification/adjustment (10/45; 22.2%), other reasons/unknown (19/45; 42.2%), and VF (2/45; 4.4%).
  - Among the two PLWH with VF, the median (IQR) time to discontinuation was 502 (395 – 610) days.
- VF Case #1:
  - VS switch to DOR/3TC/TDF (DEC 2021) and experienced non-adherence (MAR 2022).
  - 3,109 copies/mL (JUL 2022); re-started DOR/3TC/TDF (August 2022) but no VS achieved.
  - Switched to DRV/r + FTC/TDF (SEP 2022); suppressed and switched back to DOR/3TC/TDF (both DEC 2022) with VS sustained through JAN 2025.
- VF Case #2 (Heavily Treatment-Experienced individual since 1992):
  - Switched to DTG/DOR (FEB 2020) with multiple resistance mutations, but none to DTG or DOR.
  - Viral load was undetectable through APR 2021, and treatment was interrupted (DEC 2021 to JAN 2022) for unknown reasons. HIV-1 RNA rebounded to VF, but with no resistance-associated mutations to DTG or DOR supporting a non-resistance-driven mechanism (e.g., interruption)
  - Switched to DTG + DRV/r then modified to DTG/3TC/DOR (JUN 2022) due to gastrointestinal adverse events. VS was sustained JUN 2022 through MAR 2025.

Figure 1. Virologic Effectiveness on DOR-based regimens



[1]M = E: Missing = Excluded; [2]D = F: Discontinuation = Failure

[1]PLWH with a viral load measure and have continued DOR treatment up to the respective time point
[2]PLWH switched to DOR-based ART including those who discontinued or were lost to follow-up who were treated as "failure" (not having a viral load below the defined threshold)

Table 1. Baseline characteristics

	N=1,666
Age, years, median (IQR)	55.5 (47 – 63)
Sex at birth, male, n (%)	1,086 (65.2%)
Sex at birth, female, n (%)	580 (34.8%)
Place of birth, n (%)	
France	960 (57.6%)
Africa	474 (28.5%)
Others	182 (10.9%)
Unknown	50 (3.0%)
Baseline weight, kg, n=1,289, median (IQR)	80 (70 – 92)
Body Mass Index, kg/m², n=1,234, median (IQR)	27.2 (23.7 – 31.2)
Time since HIV diagnosis, years, median (IQR)	18 (10 – 27)
CDC classification - stage C, n (%)	331 (19.9%)
Nadir CD4 T-cell count, cells/mm³, n=1,397, median (IQR)	243 (122 – 368)
CD4 T-cell count, cells/mm³, n=1,519, median (IQR)	683 (503 – 903)
CD4 T-cell count, <200 cells/mm³, n=1,519, median (IQR)	33 (2.2%)
Duration with plasma HIV RNA <50 copies/mL before switch, years, n=1,355, median (IQR)	10.5 (5.7 – 14.0)
Prior ART duration, years, n=1,656	3.3 (1.5 – 5.5)
Prior ART regimen, n(%)	
INSTI + ≥1 NRTI	689 (41.4%)
NNRTI + ≥1 NRTI	513 (30.8%)
PI + ≥1 NRTI	210 (12.6%)
INSTI + NNRTI +/- ≥1 NRTI	128 (7.7%)
Miscellaneous combination	126 (7.6%)
Physician-reported reasons for switching to a doravirine-based regimen, n(%)	
Simplification	475 (28.5%)
Toxicity/Side Effects	722 (43.3%)
Other (unspecified)/Unknown)	469 (28.2%)
Doravirine-based regimen started at baseline, n(%)	
DOR/3TC/TDF	1,227 (73.6%)
Doravirine-based triple therapy with 2 NRTI	70 (4.2%)
Doravirine-based triple therapy with 1 INSTI + 1 NRTI	33 (2.0%)
Doravirine-based dual therapy with 1 INSTI	252 (15.1%)
Doravirine-based dual therapy with 1 NRTI	84 (5.0%)
PLWH with ≥1 resistance test prior to baseline[1]	1,044
Individuals with ≥1 NRTI DRM	319 (30.6%)
Individuals with ≥1 NNRTI DRM	188 (18.0%)
Individuals with ≥1 PI DRM	171 (16.4%)
Individuals with ≥1 INSTI DRM	73 (7.0%)

[1]Stanford HIV Drug Resistance Database. https://hivdb.stanford.edu/. Accessed February 6, 2026.

CONCLUSIONS

In this real-world cohort of virologically suppressed, treatment-experienced adult PLWH, switching to DOR-based therapy was associated with a high level of sustained virologic suppression and low numbers of discontinuations. These findings support the long-term effectiveness and acceptable tolerability of DOR-containing regimens in routine clinical practice.

PLAIN LANGUAGE SUMMARY

Therapy that included doravirine maintained a reduced viral load in people living with HIV who had prior treatments. Few of these individuals discontinued treatment, which was effective and well tolerated over the 4 years of the study.