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# In VOGUE: DTG/3TC Demonstrates Non-Inferior Efficacy to BIC/FTC/TAF as First-Line Treatment

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# Disclosures

- Jade Ghosn has received honoraria from Gilead Sciences, GSK, MSD, and ViiV Healthcare outside of this work

# Summary

## What is your main question?

- Is the 2-drug regimen DTG/3TC non-inferior to the 3-drug regimen BIC/FTC/TAF as first-line treatment in the phase 3b, randomized VOGUE trial?

## What did you find?

- DTG/3TC demonstrated non-inferior efficacy to BIC/FTC/TAF at Week 48, with no treatment-emergent resistance
- Virologic suppression was rapid in both treatment groups

## Why is it important?

- VOGUE provides the first randomized, head-to-head evidence comparing DTG/3TC with BIC/FTC/TAF in a broad population initiating HIV-1 treatment in a test-and-treat approach

BIC, bictegravir; DTG, dolutegravir; FTC, emtricitabine; TAF, tenofovir alafenamide; 3TC, lamivudine.

# Introduction

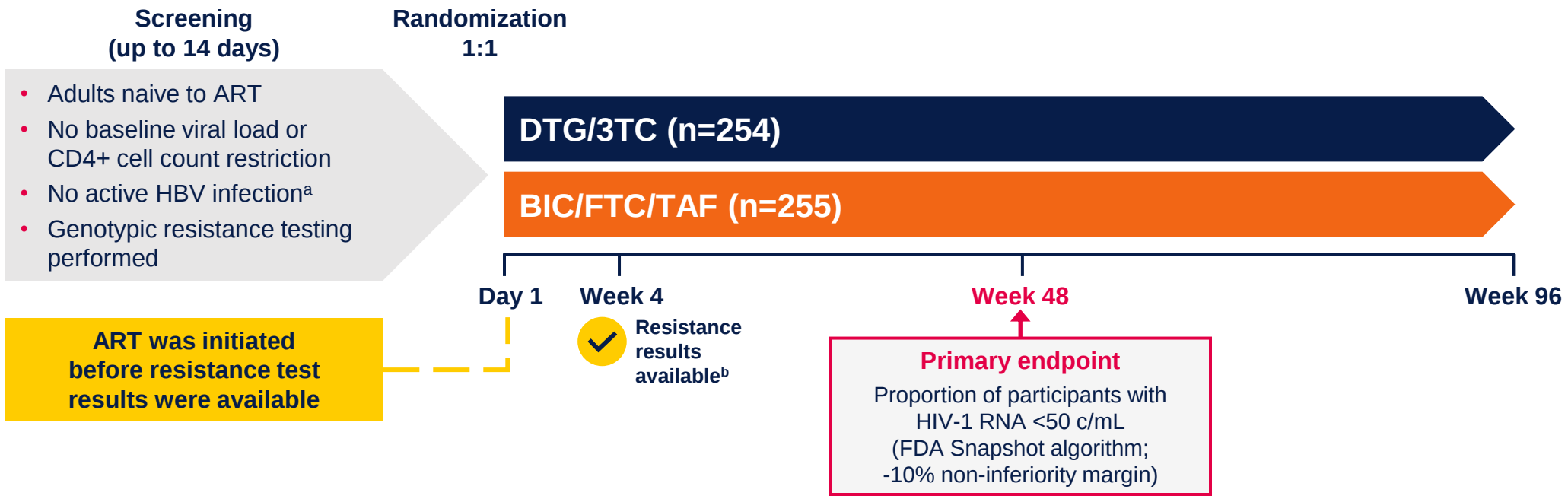
- DTG/3TC is a guideline-recommended 2-drug regimen with extensive clinical trial and real-world experience<sup>1-7</sup>
- In individuals initiating ART, DTG/3TC has consistently demonstrated high and similar efficacy to 3-drug regimens in randomized trials<sup>4,8-11</sup>
- No phase 3 study has directly compared the 2-drug regimen DTG/3TC with the 3-drug regimen BIC/FTC/TAF as first-line treatment
- **VOGUE is the first randomized, head-to-head comparison of DTG/3TC vs BIC/FTC/TAF in a broad population initiating HIV-1 treatment in a test-and-treat approach**

ART, antiretroviral therapy.

1. Gandhi et al. *JAMA*. 2025;333:609-628. 2. Panel on Antiretroviral Guidelines for Adults and Adolescents. <https://clinicalinfo.hiv.gov/en/guidelines/adult-and-adolescent-arv>. Accessed June 18, 2026. 3. European AIDS Clinical Society. <https://www.eacsociety.org/guidelines/eacs-guidelines>. Accessed June 18, 2026. 4. Cahn et al. *AIDS*. 2022;36:39-48. 5. Osiyemi et al. *Clin Infect Dis*. 2022;75:975-986. 6. Llibre et al. *Clin Infect Dis*. 2023;76:720-729. 7. Fraysse et al. *Infect Dis Ther*. 2025;14:357-383. 8. Cahn et al. *Lancet*. 2019;393:143-155. 9. Cahn et al. *J Acquir Immune Defic Syndr*. 2022;83:310-318. 10. Cordova et al. *Lancet HIV*. 2025;12:e95-e104. 11. Figueroa et al. *Clin Infect Dis*. 2026;82:122-131.

# VOGUE Study Design

## Phase 3b, randomized, open-label, non-inferiority study (NCT05979311)



- Randomization was stratified by plasma HIV-1 RNA (< vs ≥100,000 c/mL) and CD4+ cell count (< vs ≥200 cells/mm<sup>3</sup>)

Countries: Argentina, Belgium, Denmark, France, Germany, Greece, Ireland, Israel, Italy, Japan, Mexico, Poland, Portugal, Spain, Sweden, Switzerland, and United Kingdom.

ART, antiretroviral therapy; FDA, US Food and Drug Administration; HBV, hepatitis B virus; INSTI, integrase strand transfer inhibitor.

<sup>a</sup>Participants with immunity to HBV, including those with isolated hepatitis B core antibody positivity without detectable HBV DNA, were not excluded. <sup>b</sup>Participants with major resistance-associated mutations to INSTIs, 3TC, FTC, or TAF were required to discontinue study treatment.

# VOGUE Study Population

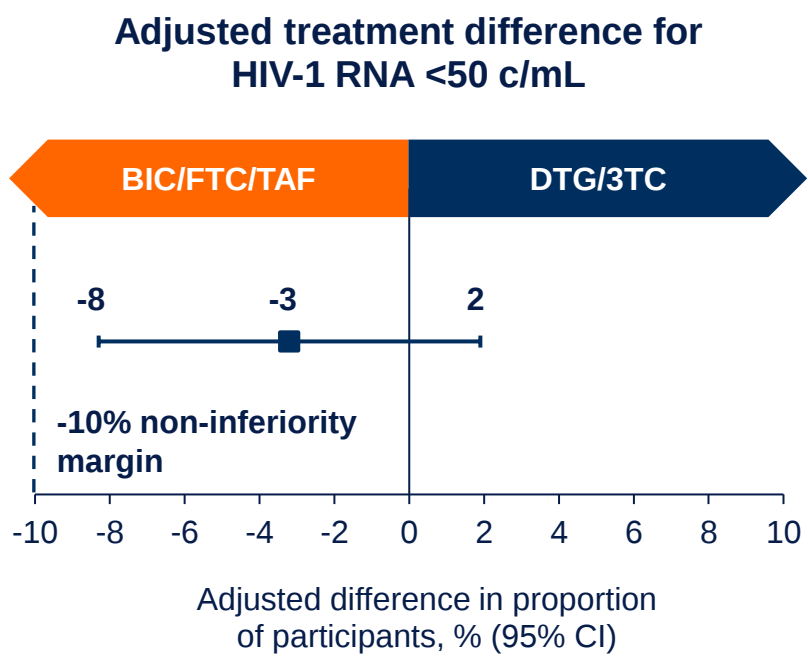
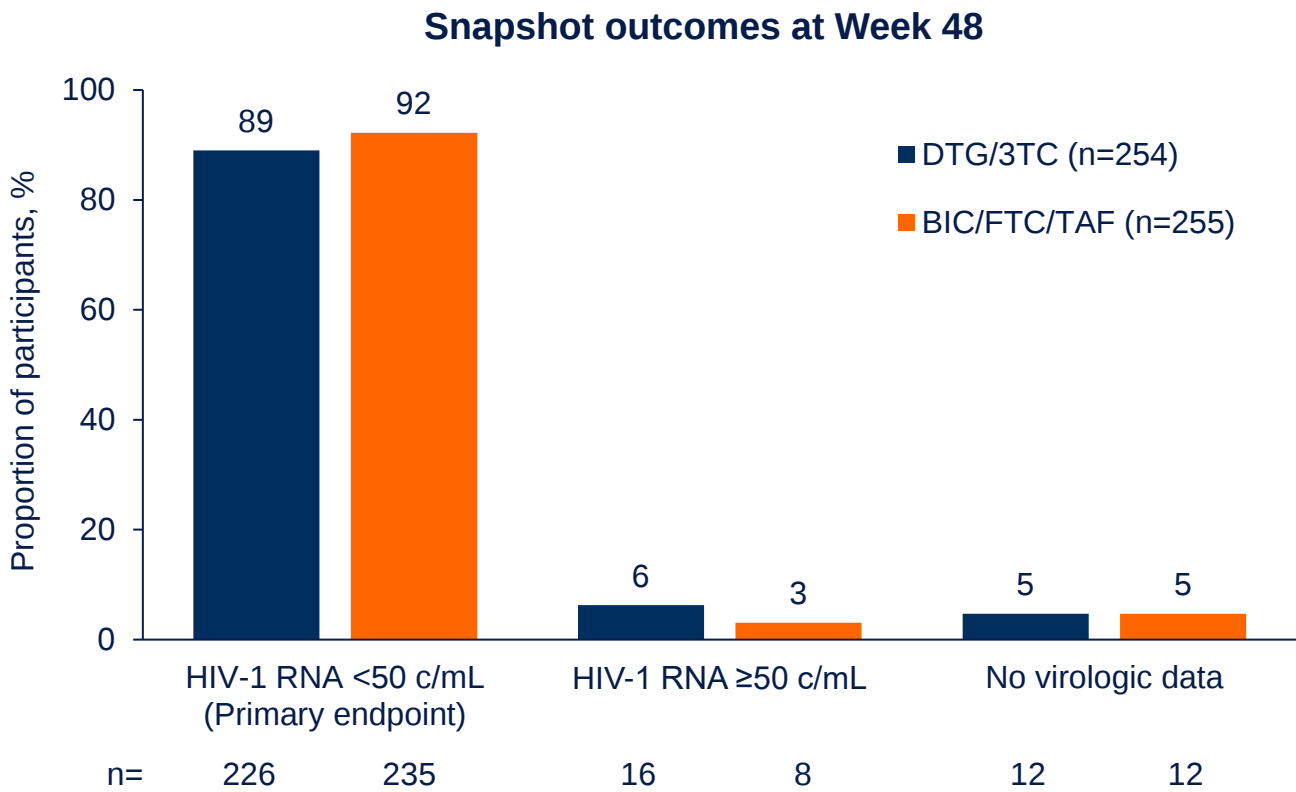
See Poster WEPEB094 for additional data

| Parameter                                                    | DTG/3TC<br>(n=254) | BIC/FTC/TAF<br>(n=255) | Total<br>(N=509) |
|--------------------------------------------------------------|--------------------|------------------------|------------------|
| Age, median (range), y                                       | 33 (18-73)         | 33 (18-84)             | 33 (18-84)       |
| Sex assigned at birth, female, n (%)                         | 41 (16)            | 38 (15)                | 79 (16)          |
| Race (self-reported), n (%)                                  |                    |                        |                  |
| White                                                        | 211 (83)           | 212 (83)               | 423 (83)         |
| Black or African American                                    | 24 (9)             | 20 (8)                 | 44 (9)           |
| Asian                                                        | 14 (6)             | 12 (5)                 | 26 (5)           |
| Other <sup>a</sup>                                           | 5 (2)              | 11 (4)                 | 16 (3)           |
| Ethnicity (self-reported), Hispanic or Latino, n (%)         | 100 (39)           | 97 (38)                | 197 (39)         |
| Plasma HIV-1 RNA, median (IQR), log <sub>10</sub> c/mL       | 4.98 (4.40-5.56)   | 4.92 (4.39-5.45)       | 4.94 (4.40-5.46) |
| ≥100,000 c/mL, n (%)                                         | 126 (50)           | 113 (44)               | 239 (47)         |
| ≥500,000 c/mL, n (%)                                         | 45 (18)            | 38 (15)                | 83 (16)          |
| CD4+ cell count, median (IQR), cells/mm <sup>3</sup>         | 375 (267-548)      | 372 (257-529)          | 373 (264-535)    |
| <200 cells/mm <sup>3</sup> , n (%)                           | 40 (16)            | 39 (15)                | 79 (16)          |
| Time from screening to treatment initiation, median (IQR), d | 10 (8-14)          | 10 (8-14)              | 10 (8-14)        |

- 0.4% (2/548) of screened individuals were excluded due to active hepatitis B virus infection
- 1 participant in each treatment group with baseline M184V achieved HIV-1 RNA <50 c/mL at Week 4 and discontinued study treatment per protocol

<sup>a</sup>American Indian or Alaska Native (DTG/3TC, n=1; BIC/FTC/TAF, n=4), Native Hawaiian or other Pacific Islander (DTG/3TC, n=3; BIC/FTC/TAF, n=5), or unknown race (DTG/3TC, n=1; BIC/FTC/TAF, n=2).

# DTG/3TC Demonstrates High and Non-Inferior Efficacy to BIC/FTC/TAF at Week 48

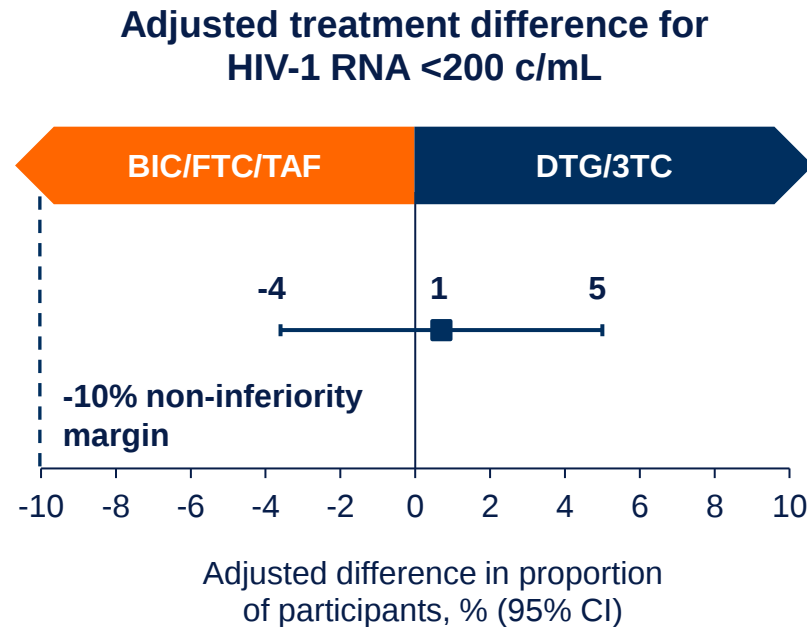
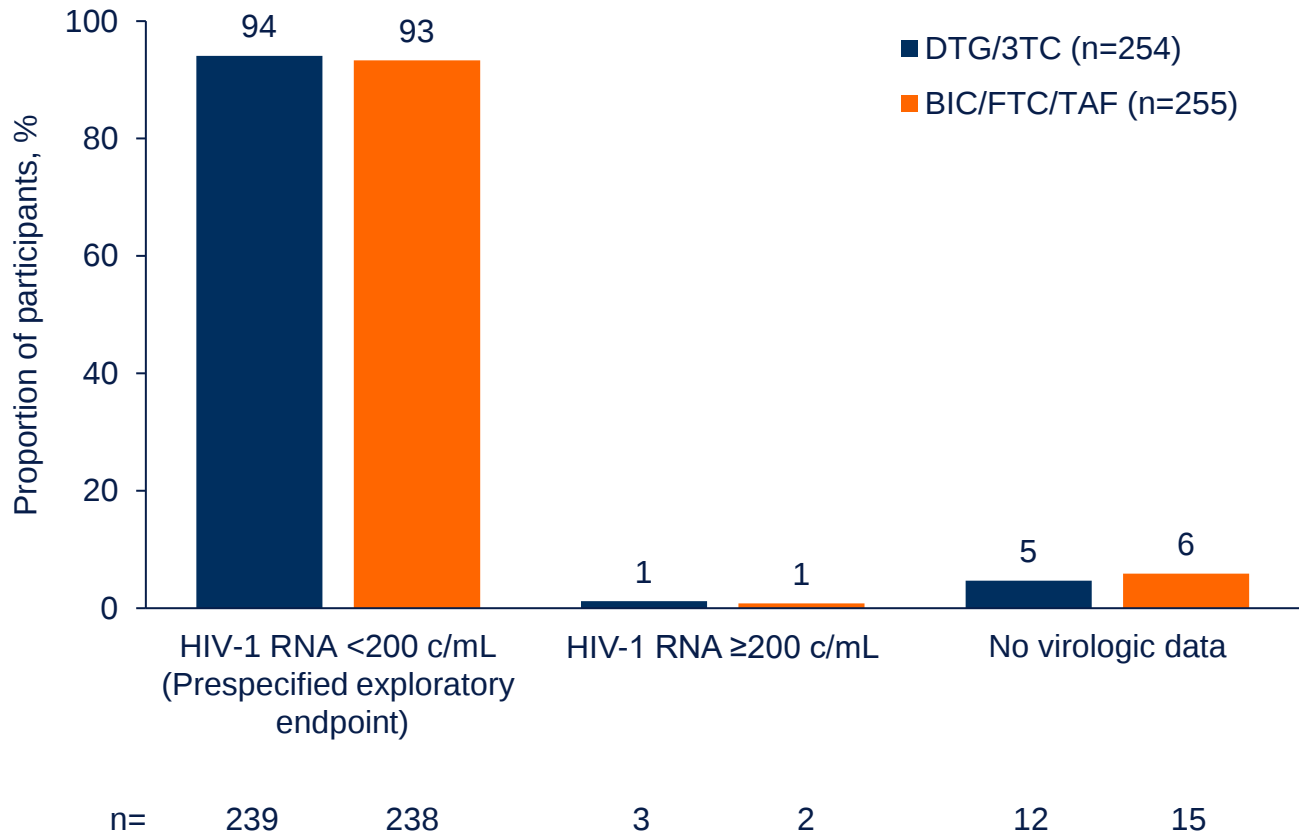


- Most instances of Snapshot HIV-1 RNA ≥50 c/mL were viral load blips <200 c/mL after prior suppression to <50 c/mL, and participants continued on study<sup>a</sup>

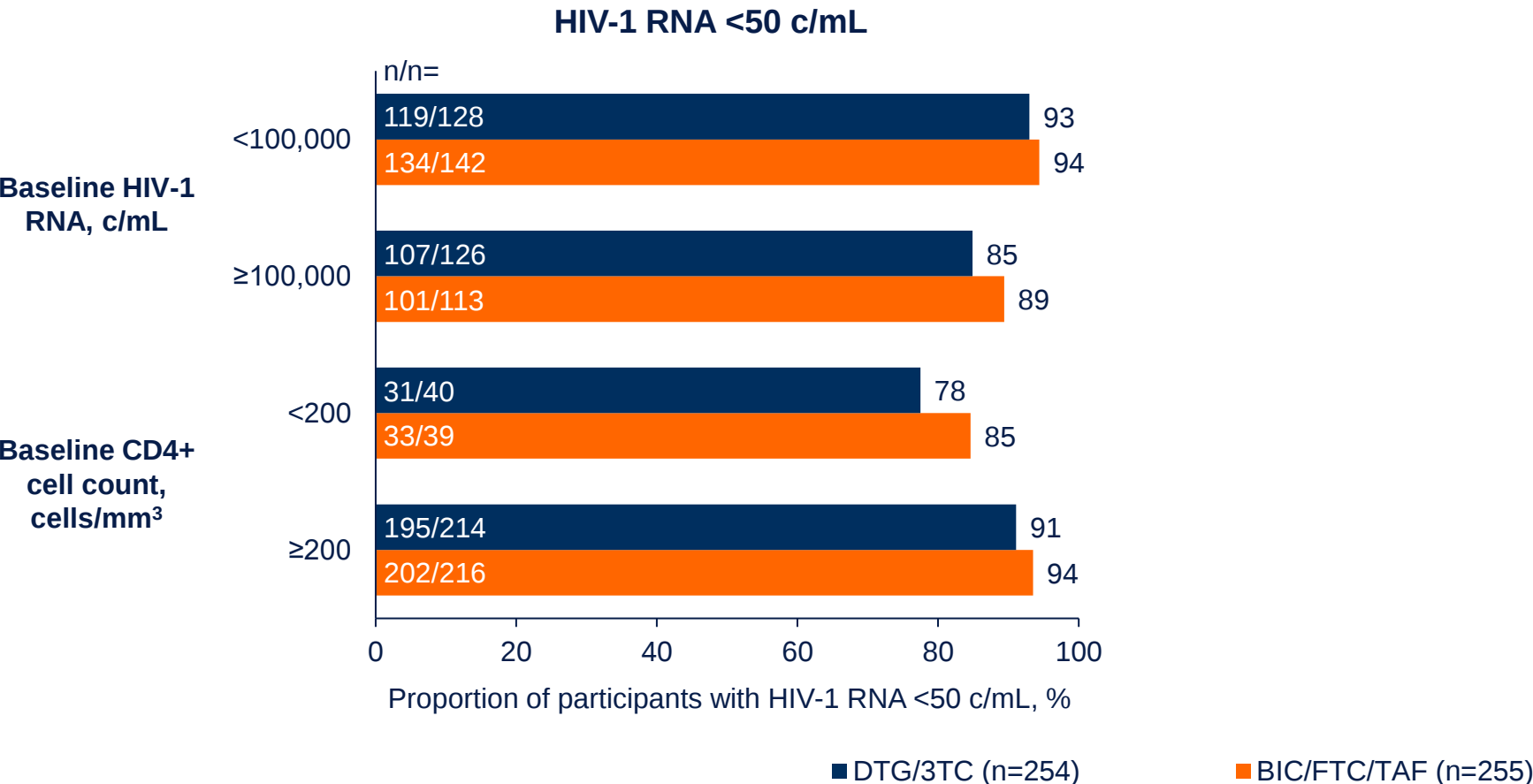
<sup>a</sup>DTG/3TC: Of 16 participants with Snapshot HIV-1 RNA ≥50 c/mL at Week 48, 9/12 with available data at the next visit resuppressed to <50 c/mL. BIC/FTC/TAF: Of 8 participants with Snapshot HIV-1 RNA ≥50 c/mL at Week 48, 2/3 with available data at the next visit resuppressed to <50 c/mL.

# DTG/3TC Meets the Non-Inferior Efficacy Threshold Versus BIC/FTC/TAF For Achieving HIV-1 RNA 200 c/mL

Snapshot outcomes at Week 48 using a 200 c/mL threshold

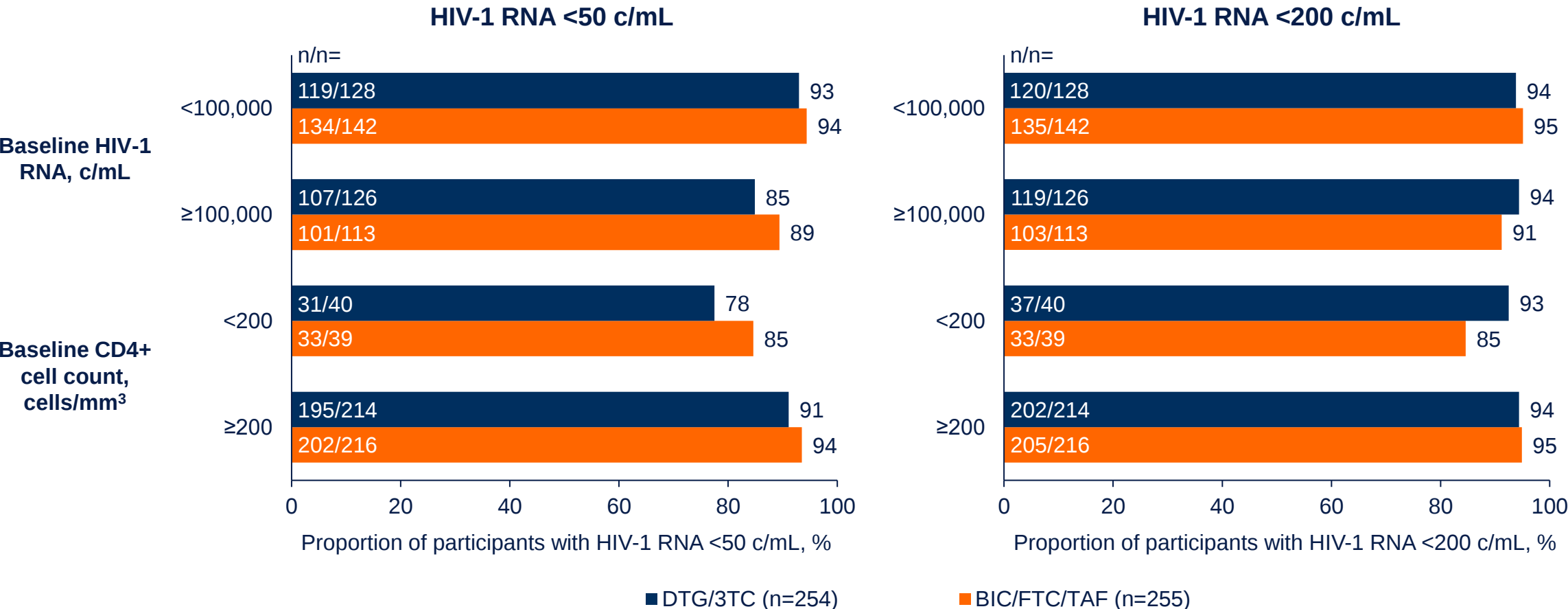


# High Virologic Suppression Observed Across Randomization Strata



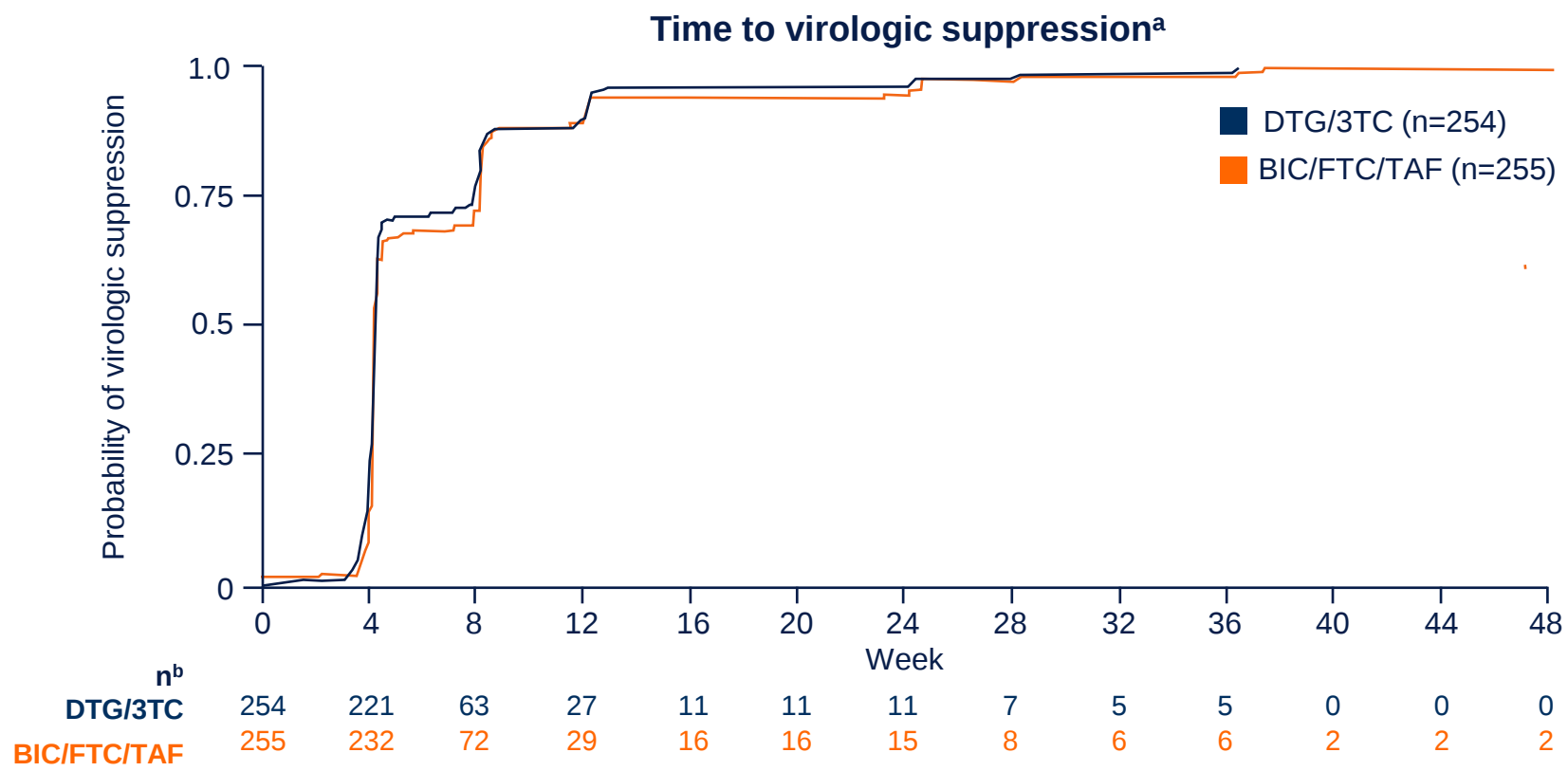
Efficacy was consistent across clinically important baseline subgroups

# High Virologic Suppression Observed Across Randomization Strata



Efficacy was consistent across clinically important baseline subgroups

# Virologic Suppression Was Rapid in Both Treatment Groups

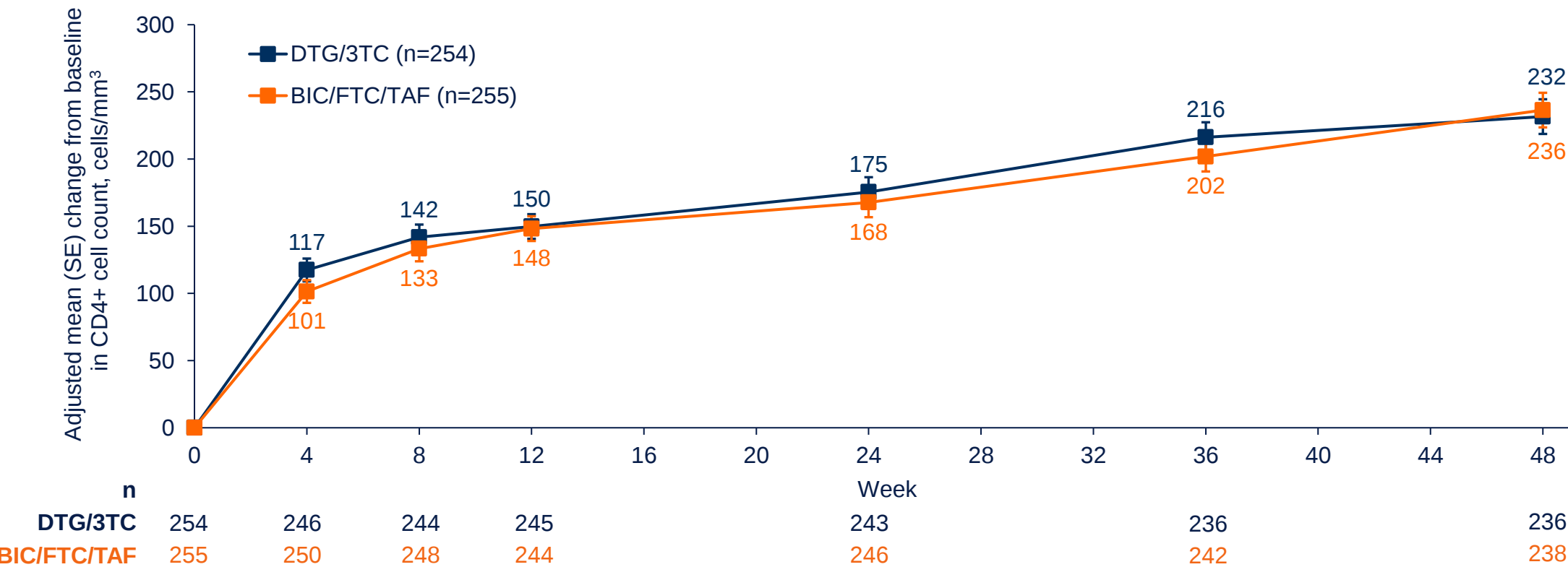


- Participants receiving DTG/3TC had a 23% higher hazard of achieving virologic suppression than those receiving BIC/FTC/TAF (adjusted hazard ratio, 1.23 [95% CI, 1.03, 1.47];  $P=0.0357$ )<sup>c</sup>
- Median (95% CI) time to virologic suppression was 4.1 (4.1, 4.1) weeks for DTG/3TC and 4.1 (4.1, 4.3) weeks for BIC/FTC/TAF

<sup>a</sup>First viral load <50 c/mL. <sup>b</sup>Number of participants at risk and remaining on study at the start of each study visit window. Participants who withdrew from the study without achieving virologic suppression were censored. <sup>c</sup>Estimated using a Cox proportional-hazards model, with treatment as a covariate and controlled for randomization strata.

# CD4+ Cell Count Recovery Was Similar Between Treatment Groups Through Week 48

Change from baseline in CD4+ cell count through Week 48



Baseline median (IQR) CD4+ cell counts were 375 (267-548) cells/mm<sup>3</sup> for DTG/3TC and 372 (257-529) cells/mm<sup>3</sup> for BIC/FTC/TAF.

Adjusted mean change from baseline was calculated using a mixed model for repeated measures, adjusting for treatment, visit, baseline CD4+ cell count, baseline plasma HIV-1 RNA (< vs ≥100,000 c/mL), treatment-by-visit interaction, and baseline CD4+ cell count-by-visit interaction, with visit as a repeated factor.

# No Treatment-Emergent Resistance Was Identified Through Week 48

- CVW was defined as 2 consecutive plasma HIV-1 RNA measurements meeting protocol-defined criteria for either virologic non-response or virologic rebound ( $\geq 200$  c/mL)

| Outcome, n (%)                               | DTG/3TC<br>(n=254) | BIC/FTC/TAF<br>(n=255) |
|----------------------------------------------|--------------------|------------------------|
| CVW by Week 48                               | 7 (3)              | 7 (3)                  |
| Virologic non-response                       | 0                  | 1                      |
| Virologic rebound                            | 7                  | 6                      |
| Treatment-emergent resistance <sup>a,b</sup> | 0                  | 0                      |

CVW, confirmed virologic withdrawal; INSTI, integrase strand transfer inhibitor; NRTI, nucleoside reverse transcriptase inhibitor.

<sup>a</sup>Baseline and virologic withdrawal samples (including available suspected virologic withdrawal and/or confirmatory samples meeting HIV-1 RNA thresholds  $\geq 200$  c/mL) were analyzed for resistance using next-generation sequencing by Cerba Laboratory (3% detection threshold) for participants in the European Union or Monogram Biosciences (10% detection threshold) for participants outside of the European Union.

<sup>b</sup>Among 14 participants meeting CVW criteria, resistance data were obtained for 6 individuals (DTG/3TC, n=2; BIC/FTC/TAF, n=4), and no treatment-emergent resistance to INSTIs or NRTIs was identified. For the remaining 8 participants (DTG/3TC, n=5; BIC/FTC/TAF, n=3), resistance testing failed due to viral load of samples being below the assay cutoff.

# Safety Profiles Were Comparable Between Treatment Groups

- No drug-related SAEs or fatal SAEs occurred in the study
- No new HBV infections or reactivations were observed
- Mean change in weight from baseline to Week 48 was +3.6 kg for DTG/3TC and +4.0 kg for BIC/FTC/TAF

| Parameter, n (%)                           | DTG/3TC<br>(n=254) | BIC/FTC/TAF<br>(n=255) |
|--------------------------------------------|--------------------|------------------------|
| Any AE                                     | 224 (88)           | 237 (93)               |
| Grade 3-4 AE <sup>a</sup>                  | 26 (10)            | 27 (11)                |
| Drug-related AE                            | 44 (17)            | 49 (19)                |
| Grade 3-4 drug-related AE <sup>a</sup>     | 1 (<1)             | 1 (<1)                 |
| SAE                                        | 23 (9)             | 20 (8)                 |
| AE leading to discontinuation              | 3 (1)              | 3 (1)                  |
| Drug-related AE leading to discontinuation | 0                  | 2 (<1) <sup>b</sup>    |

AE, adverse event; HBV, hepatitis B virus; SAE, serious adverse event.

<sup>a</sup>There were no grade 5 AEs. <sup>b</sup>Alopecia and increased weight (n=1 each).

**Overall incidence of AEs was similar, and AEs leading to discontinuation were uncommon in both treatment groups. No drug-related discontinuations occurred with DTG/3TC.**

# Conclusions

- **DTG/3TC demonstrated non-inferior efficacy vs BIC/FTC/TAF at Week 48 in a broad population initiating treatment**
  - **No baseline viral load or CD4+ cell count restrictions**
  - **No treatment-emergent resistance**
- VOGUE provides the first randomized, head-to-head evidence comparing 2-drug DTG/3TC with 3-drug BIC/FTC/TAF as initial ART
- Virologic suppression was rapid in both treatment groups
- Safety outcomes and immunologic recovery were comparable between treatment groups through Week 48
- These findings reinforce DTG/3TC as an effective, first-line, 2-drug option for a broad population initiating ART when used in a test-and-treat approach

ART, antiretroviral therapy.

# VOGUE: Publication in *Open Forum Infectious Diseases*



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*Open Forum Infectious Diseases*

## MAJOR ARTICLE

### VOGUE: Non-Inferior Efficacy of Dolutegravir/Lamivudine Versus Bictegravir/Emtricitabine/Tenofovir Alafenamide in Adults With HIV-1 Naive to Treatment

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