Efficacy and Safety of B/F/TAF in Hispanic/Latine Adults With HIV-1 Initiating First-Line Therapy: 5-Year Follow-up From Two Phase 3 Studies

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NCT02607956 and NCT02607930

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Conclusions

- Through 5 years of follow-up in Hispanic/Latine people with HIV-1, B/F/TAF achieved and maintained high rates of virologic suppression, was well tolerated, and no treatment-emergent drug resistance was reported
  - Virologic suppression (< 50 c/mL) was high and similar in Hispanic/Latine and non-Hispanic/Latine people with HIV-1
  - Changes in eGFR, lipids, lipid-lowering therapy, and weight, and rates of treatment-emergent diabetes and hypertension, were generally similar between Hispanic/Latine and non-Hispanic/Latine people with HIV-1
  - TEAEs were comparable between the groups
  - Adherence ≥ 85% was high and similar between Hispanic/Latine and non-Hispanic/Latine people with HIV-1
- These results demonstrate the durability and long-term safety of B/F/TAF in Hispanic/Latine people with HIV-1

Plain Language Summary

- Hispanic/Latine people are one of the communities most affected by human immunodeficiency virus (HIV) type 1
- B/F/TAF is a single pill that is used to treat HIV-1 in many countries
  - The pill combines three medications: bictegravir (B), emtricitabine (F), and tenofovir alafenamide (TAF)
  - International guidelines recommend using B/F/TAF:
    - As the first HIV-1 treatment
    - For people who have taken other HIV treatments before starting B/F/TAF and have low levels of HIV-1 in their blood
- This study looked at data from two clinical studies of B/F/TAF to find out if it was effective and safe for Hispanic/Latine people with HIV-1
- After 5 years of treatment, B/F/TAF was very effective at reducing the amount of HIV-1 in the blood of both Hispanic/Latine and non-Hispanic/Latine people with HIV-1
- Researchers also found that side effects were rare and were similar in both groups of people
- This study shows that B/F/TAF is an effective long-term treatment for Hispanic/Latine people with HIV-1

Introduction

- Hispanic/Latine people are disproportionately affected by HIV-1[1] and may have a greater risk of comorbidities compared with non-Hispanic/Latine people with HIV-1[2,3]
  - This population has historically been underrepresented in HIV-1 clinical studies[4]
  - Efforts regarding HIV prevention, care, and treatment should focus on Hispanic/Latine people to reduce HIV-related disparities and health inequity in this population[5]
- Studies 1489 and 1490 (NCT02607930 and NCT02607956, respectively) demonstrated the efficacy and safety of bictegravir, emtricitabine, and tenofovir alafenamide (B/F/TAF) in people with HIV-1 who are treatment naïve[6-8]
  - However, the efficacy and safety of B/F/TAF in Hispanic/Latine people with HIV-1 have not been reported

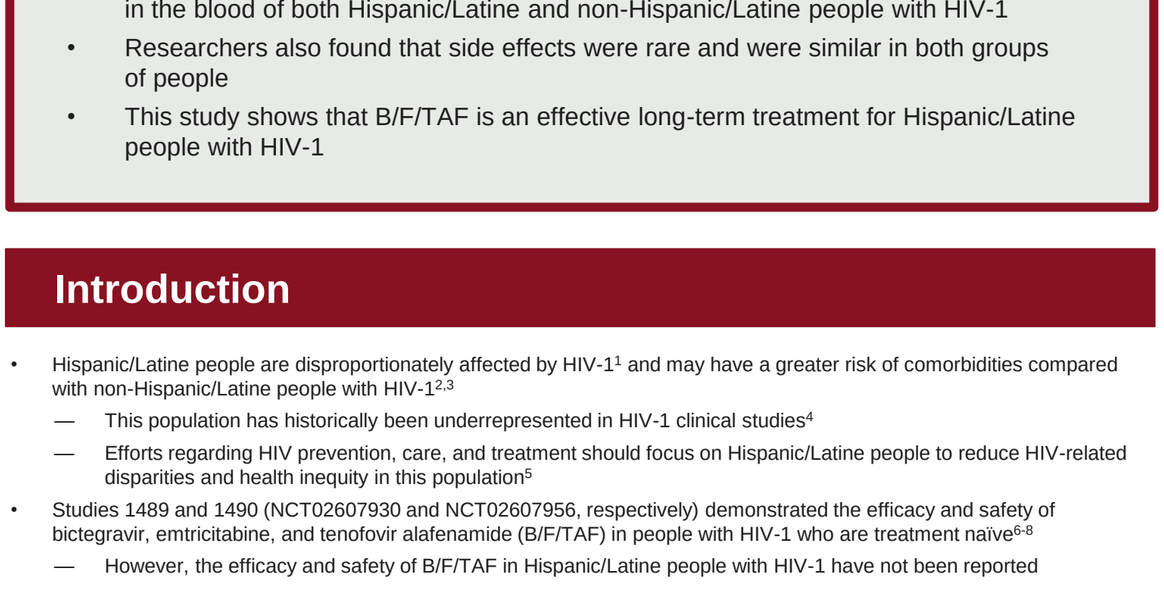
Objective

- To assess the efficacy and safety of first-line therapy with B/F/TAF over 5 years in Hispanic/Latine people with HIV-1 participating in two Phase 3 studies

Methods

Study Design

- Pooled analysis of participants who received B/F/TAF in the 144-week randomization phase and in the 96-week open-label extension of two randomized, double-blind, multicenter Phase 3 studies



[a]Participants were also required to be HLA-B*5701 negative for inclusion in the study.
3TC, lamivudine; ABC, abacavir; B, bictegravir; c, copies; DTG, dolutegravir; eGFR$_{CG}$, estimated glomerular filtration rate by Cockcroft-Gault equation; F/FTC, emtricitabine; HBV, hepatitis B virus; HCV, hepatitis C virus; HLA, human leukocyte antigen; QD, once daily; TAF, tenofovir alafenamide; TFV, tenofovir.

Results

Baseline Demographics and Disease Characteristics

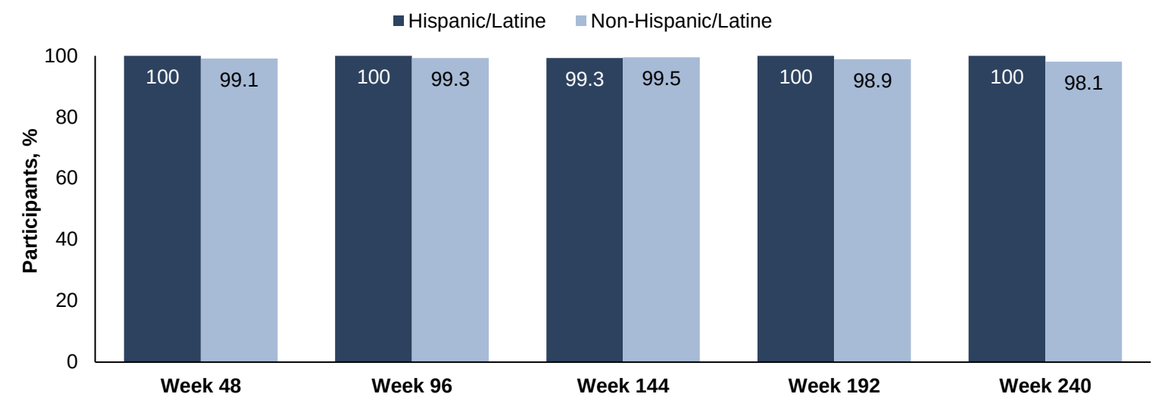
		Hispanic/Latine N = 155	Non-Hispanic/Latine N = 477
Age, years, median (Q1, Q3)		30 (26, 39)	33 (26, 46)
Male sex at birth, n (%)		138 (89)	425 (89)
Region, n (%)	US[a]	96 (62)	325 (68)
	Ex-US[b]	59 (38)	152 (32)
	Dominican Republic	29 (19)	0
	Spain	16 (10)	21 (4)
HIV-1 RNA, log$_{10}$ c/mL, median (Q1, Q3)		4.43 (4.06, 4.77)	4.42 (3.99, 4.93)
CD4 cell count, cells/µL, median (Q1, Q3)		422 (277, 570)	451 (299, 593)
Weight, kg, median (Q1, Q3)		73 (66, 81)	79 (69, 91)
eGFR, mL/min, median (Q1, Q3)[c]		120 (103, 137)	124 (105, 145)
Medical history, n (%)	Cardiovascular disease	1 (< 1)	13 (3)
	Diabetes mellitus	7 (5)	31 (7)
	Hyperlipidemia	16 (10)	70 (15)
	Hypertension	20 (13)	78 (16)

[a]Includes participants from Puerto Rico (Hispanic/Latine [n = 6], non-Hispanic/Latine [n = 0]). [b]Includes participants from Australia (Hispanic/Latine [n = 1], non-Hispanic/Latine [n = 3]), Belgium (Hispanic/Latine [n = 1], non-Hispanic/Latine [n = 7]), Canada (Hispanic/Latine [n = 2], non-Hispanic/Latine [n = 28]), France (Hispanic/Latine [n = 3], non-Hispanic/Latine [n = 15]), Germany (Hispanic/Latine [n = 2], non-Hispanic/Latine [n = 22]), Italy (Hispanic/Latine [n = 2], non-Hispanic/Latine [n = 20]), and the UK (Hispanic/Latine [n = 3], non-Hispanic/Latine [n = 36]). [c]By Cockcroft-Gault equation.
c, copies; eGFR, estimated glomerular filtration rate; Q, quartile.

For more information on participants' regional distribution, please scan the QR code

Virologic Outcomes Through Week 240

HIV-1 RNA < 50 copies (c)/mL (Missing = Excluded)



n/N =	146/146	437/441	139/139	413/416	133/134	393/395	121/121	353/357	118/118	308/314

- Rates of virologic suppression were high through Week 240 in both Hispanic/Latine and non-Hispanic/Latine participants who received B/F/TAF
- Using missing = failure analysis, 94.2% and 76.1% of Hispanic/Latine participants and 91.6% and 64.6% of non-Hispanic/Latine participants had HIV-1 RNA < 50 c/mL at Week 48 and Week 240, respectively
- No treatment-emergent resistance to the components of B/F/TAF was reported in any participant in either group through Week 240

Immunologic Outcomes at Week 240

- At Week 240, changes in CD4 cell count were similar among Hispanic/Latine and non-Hispanic/Latine participants (mean [SD] change from baseline: +333 [216.1] vs +340 [243.5] cells/µL, respectively; *P* = 0.9442[a])

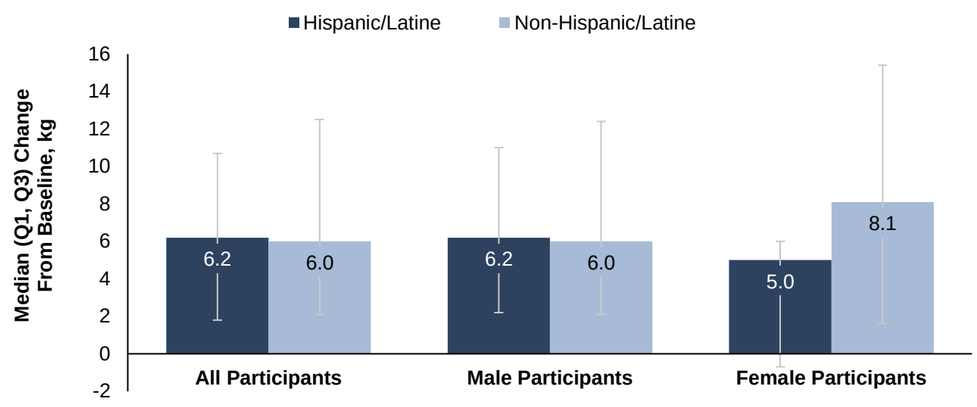
[a]*P* value was from analysis-of-variance model adjusted by the baseline HIV-1 RNA (≤ 100,000 vs > 100,000 c/mL) and region stratum.

Metabolic and Renal Outcomes Through Week 240

- Changes from baseline in fasting lipid parameters were not clinically significant among Hispanic/Latine and non-Hispanic/Latine participants through Week 240
- Change from baseline in estimated glomerular filtration rate (eGFR) was similar among Hispanic/Latine and non-Hispanic/Latine participants through Week 240

For more information on metabolic and renal outcomes, please scan the QR code

Change From Baseline in Body Weight Through Week 240



n at baseline	155	477	138	425	17	52
n at Week 240	118	313	106	281	12	32
Body weight at baseline, kg, median (Q1, Q3)	73.4 (65.5, 81.4)	78.5 (69.4, 90.7)	73.3 (66.6, 81.4)	78.9 (70.0, 91.4)	73.5 (59.0, 79.4)	73.3 (61.4, 88.2)

Baseline value was defined as the last non-missing value obtained on or prior to the first dose of B/F/TAF.
B/F/TAF, bictegravir/emtricitabine/tenofovir alafenamide; Q, quartile.

Change From Baseline in Treatment-Emergent Diabetes and Hypertension Through Week 240

	Hispanic/Latine N = 155		Non-Hispanic/Latine N = 477	
	n (%)	Participants with available data, n	n (%)	Participants with available data, n
Treatment-emergent diabetes[a]	4 (2.7)	148	9 (2.0)	443
Treatment-emergent hypertension[b]	8 (5.9)	136	49 (12.2)	402

[a]Participants with a medical history of diabetes were excluded. [b]Participants with a medical history of hypertension were excluded.

- There were no statistically significant differences in the change from baseline to Week 240 in treatment-emergent diabetes or treatment-emergent hypertension

Treatment-Emergent Adverse Events (TEAEs) Through Week 240

	Hispanic/Latine N = 155	Non-Hispanic/Latine N = 477
Any TEAE	152 (98.1)	450 (94.3)
Study drug–related TEAEs	46 (29.7)	131 (27.5)
Any Grade 3 or 4 TEAEs	32 (20.6)	99 (20.8)
Study drug–related Grade 3 or 4 TEAEs	3 (1.9)[a]	6 (1.3)[b]
Any serious TEAEs	27 (17.4)	108 (22.6)
Study drug–related serious TEAEs	2 (1.3)[c]	3 (0.6)[d]
Study drug discontinuation due to TEAE	1 (0.6)[e]	9 (1.9)[f]
Death	1 (0.6)[g]	7 (1.5)[h]

Data shown as n (%). N-values represent numbers of participants.
[a]Due to atrial flutter, dizziness, and acute pancreatitis (n = 1), diarrhea (n = 1), and suicide attempt (n = 1). [b]Due to abdominal pain, osteoporosis, generalized tonic-closure seizure, elevated liver enzyme levels, chest pain, and abdominal distension (n = 1 each). [c]Due to atrial flutter, dizziness, and acute pancreatitis (n = 1), and suicide attempt (n = 1). [d]Due to generalized tonic-closure seizure, spontaneous abortion, and chest pain (n = 1 each). [e]Due to depression (n = 1). [f]Due to cardiac arrest, abdominal distension, dyspepsia, chest pain, COVID-19, intervertebral discitis, toxicity to various agents, obesity, and tension headache (n = 1 each), and psychiatric disorder (n = 2). [g]Due to poorly differentiated gastric adenocarcinoma. [h]Due to COVID-19, hemorrhagic hypovolemia (self-inflicted), hypertensive heart disease with congestive heart failure, drug toxicity, and an unknown reason (n = 1 each), and cardiac arrest (n = 2).
TEAE, treatment-emergent adverse event.

- Study drug–related TEAEs experienced by ≥ 5% of participants in Hispanic/Latine or non-Hispanic/Latine participants, respectively, were diarrhea (2% and 6%), headache (5% and 5%), and nausea (3% and 5%)

Adherence Through Week 240

	Hispanic/Latine N = 155	Non-Hispanic/Latine N = 477
Participants who returned ≥ 1 bottle, n (%)	154 (99.4)	468 (98.1)
Adherence rate		
Median (Q1, Q3)	97.5 (93.8, 99.1)	97.2 (93.6, 99.0)
≥ 95%, n (%)	106 (68.8)	321 (68.6)
≥ 85% to < 95%, n (%)	40 (26.0)	111 (23.7)
< 85%, n (%)	8 (5.2)	36 (7.7)

Adherence was calculated based on pill count for B/F/TAF only. Denominator for percentage of drug adherence category was the number of participants who returned ≥ 1 bottle and had calculable drug adherence.
B/F/TAF, bictegravir/emtricitabine/tenofovir alafenamide; Q, quartile.

- The overall B/F/TAF adherence rate was similar for Hispanic/Latine and non-Hispanic/Latine participants, with similar proportions of participants in each of the three adherence categories
  - Among Hispanic/Latine participants with an adherence rate of < 85%, virologic suppression (< 50 c/mL) by missing = excluded (M = E) analysis was high at Week 240 (n/N = 4/4)
  - Similar results were observed in the corresponding non-Hispanic/Latine group (M = E, n/N = 15/15)

References: **1.** CDC. https://www.cdc.gov/hiv/data-research/facts-stats/race-ethnicity.html (accessed April 23, 2024). **2.** Lopez-Alvarenga JC, et al. *Front Med (Lausanne)*. 2021;8:676979. **3**. Bedimo R, et al. *Open Forum Infect Dis*. 2018;5(suppl 1):S199. **4.** Castillo-Mancilla JR, et al. *HIV Clin Trials*. 2014;15:14-26. **5.** HIV.gov. https://www.hiv.gov/hiv-basics/overview/data-and-trends/impact-on-racial-and-ethnic-minorities (accessed May 13, 2024). **6.** Gallant J, et al. *Lancet*. 2017;390:2063-72. **7.** Sax PE, et al. *Lancet*. 2017;390:2073-82. **8.** Sax P, et al. *EClinicalMedicine*. 2023;59:101991.

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