Long-Term Follow-Up After a Switch to Bictegravir, Emtricitabine, Tenofovir Alafenamide (B/F/TAF) from a Boosted Protease Inhibitor-Based Regimen

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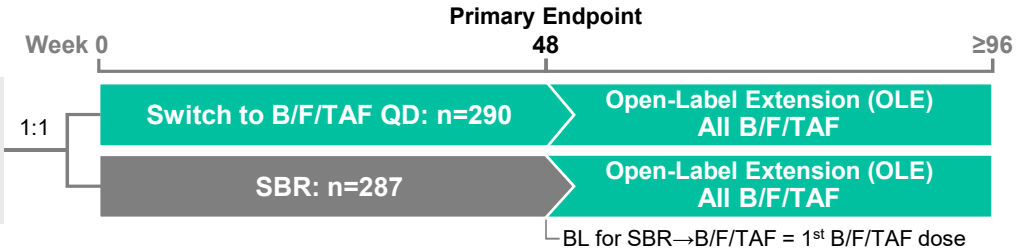
Phase 3, randomized, open-label, active controlled study

HIV Suppressed Adults on Boosted DRV or ATV + 2 NRTIs*

- HIV-1 RNA <50 copies/mL
- $eGFR_{CG}$ ≥50 mL/min



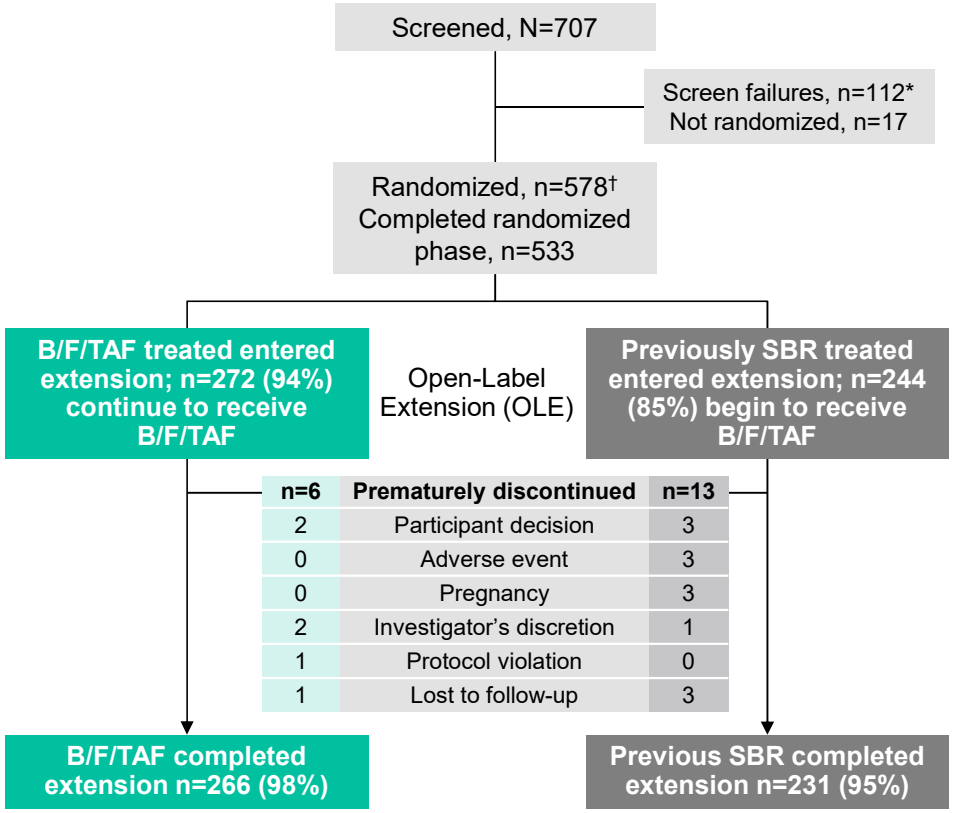
- Primary endpoint: Proportion of participants with HIV-1 RNA ≥50 copies/mL at Week 48 based on FDA Snapshot algorithm with a noninferiority margin of 4%
- Efficacy endpoints included in this final analysis are the proportion of participants with HIV-1 RNA <50 copies/mL by Missing = Excluded (M = E) approach, change from baseline in CD4 cell count and CD4%
- Duration of exposure, median (Q1, Q3): 119.7 (108.0, 132.0) wk for the B/F/TAF group, 72.0 (60.8, 84.8) wk for the SBR to B/F/TAF group, and 101.0 (71.7, 120.1) wk for the All B/F/TAF group
- All B/F/TAF group includes all participants with ≥1 dose of B/F/TAF; baseline for SBR to B/F/TAF group is measured from start of B/F/TAF in the OLE

*Suppressed on regimen for ≥6 mo; nucleoside reverse transcriptase inhibitors (NRTIs): abacavir/lamivudine (ABC/3TC) or emtricitabine/tenofovir disoproxil fumarate (FTC/TDF), ritonavir or cobicistat boosted. ATV, atazanavir; DRV, darunavir. $eGFR_{CG}$, estimated glomerular filtration rate by Cockcroft-Gault; PI, protease inhibitor; PLWH, people living with HIV; SBR, stay on BL regimen.

1. Gallant J, et al. Lancet 2017; 2. Sax PE, et al. Lancet 2017.

Results

Participant Disposition: Extension Phase



Baseline Characteristics

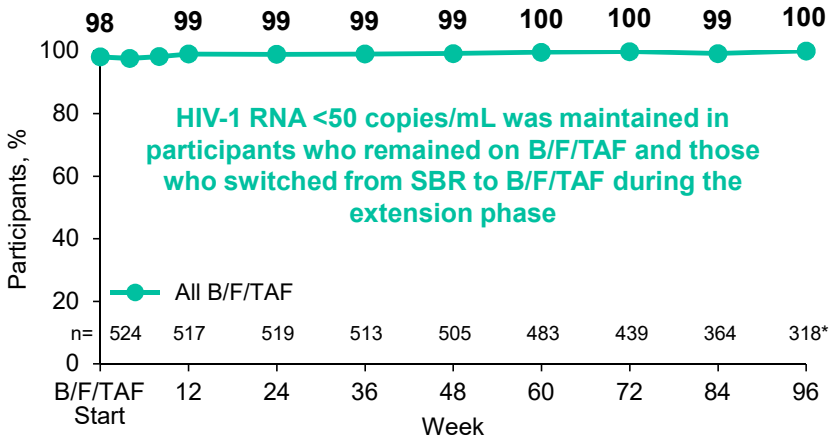
	B/F/TAF n=290	SBR n=244	All B/F/TAF N=534
Median age, y	48	48	48
Male, %	84	81	82
Race/ethnicity, %			
Black or African descent	27	25	26
Hispanic/Latino	21	18	20
Median CD4 count, cells/μL	617	630	624
Co-infection, n			
Hepatitis B	8	6	14
Hepatitis C	5	3	8
Median $eGFR_{CG}$, mL/min	106	106	106
Baseline ARV regimen, %			
FTC/TDF, ABC/3TC	85, 16	86, 14	85, 15
DRV, ATV	57, 43	52, 48	54, 46

*Did not meet all eligibility criteria; †Disposition for the Week 48 randomized phase presented previously. ARV, antiretroviral.

Study 380-1878: HIV Suppressed Adults Switched from boosted DRV or ATV + 2 NRTIs

Virologic Outcome

HIV-1 RNA <50 copies/mL, Missing = Excluded



- Baseline is the 1st dose of B/F/TAF; 52 participants (all in the B/F/TAF group) were still in the study at Week 144 and all remained virologically suppressed
- Mean (SD) change from baseline in CD4 cell counts and CD4% in the All B/F/TAF group at Weeks 96 and 120:
  - CD4 cell counts: 64 (174) and 41 (170) cells/μL, respectively
  - CD4%: 1.3% (4.1%) and 0.8% (4.0%), respectively

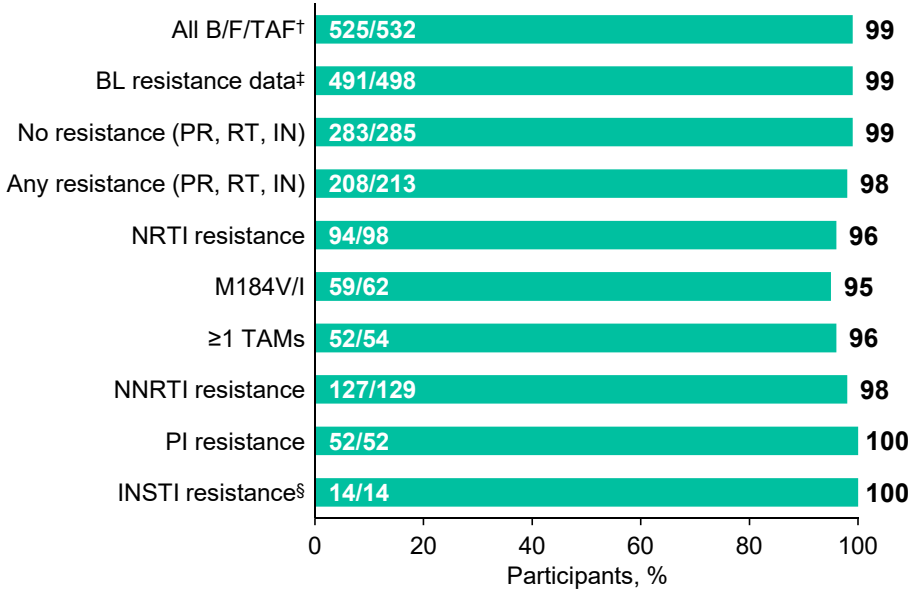
Drug Resistance

Resistance Analysis Population

- 5 participants in the All B/F/TAF group were analyzed for resistance development, 2 of whom resuppressed while still on B/F/TAF
- No treatment-emergent resistance to B/F/TAF was detected throughout the randomized or extension phases of the study

Virologic Outcome by Baseline Resistance

HIV-1 RNA <50 copies/mL at Last Visit



*Week 120 (n=193); 100% participants with HIV-1 RNA <50 copies/mL at Week 120; †With ≥1 HIV-1 RNA value post-B/F/TAF switch; ‡Historical and/or proviral genotypes; §T97A (n=7), E92G (n=3), S147G (n=2), N155H (n=1), Q148H (n=1).

AEs Leading to Study Drug Discontinuation

Previously Reported, Randomized Phase Participants, n	B/F/TAF n=290	SBR n=287
Any AE leading to D/C	2	1
Acetabular fracture/acute kidney injury	0	1
Rash	1	0
Schizophrenia*	1	0

Extension Phase Participants, n	All B/F/TAF N=534
Any AE leading to D/C*	4
Diarrhea and vomiting	1
Rash and pruritis	1
Insomnia	1
Suicidal ideation	1

- No B/F/TAF participant discontinued for renal AEs
- 2 deaths occurred during randomized phase, neither related to study medication
  - B/F/TAF: 63-year-old smoker with COPD, metastatic lung cancer
  - SBR: 54-year old, blunt force head trauma
- In the All B/F/TAF group, a total of 3 SAEs were attributed to study drug by the investigator (randomized phase: schizophrenia; extension phase: suicidal ideation in a participant with pre-existing bipolar and borderline personality disorder, and deep vein thrombosis; n=1 each)

AEs (≥5%) and Laboratory Abnormalities (≥2%)

	Participants, %	All B/F/TAF N=534
AEs (≥5%)	Headache	12
	Nasopharyngitis	15
	Upper respiratory infection	13
	Diarrhea	10
	Back pain	8
	Syphilis	7
	Cough, influenza	6
	Constipation, rash, hypertension, insomnia, influenza, bronchitis, gastroenteritis	5
Grade 3 or 4 Laboratory Abnormalities (≥2%)	Lipase	7
	LDL elevation	4
	Gylycosuria	3
	ALT elevation	2
	AST elevation	2
	Creatine kinase	2
	Hyperglycemia	2
	Hematuria	2

- $eGFR_{CG}$ median (Q1, Q3) change 96 weeks after B/F/TAF start: -3.4 mL/min (-11.2, 4.5) in All B/F/TAF group

*Considered related to study drug. ALT, alanine aminotransferase; AST, aspartate aminotransferase; COPD, chronic obstructive pulmonary disease; D/C, discontinuation.

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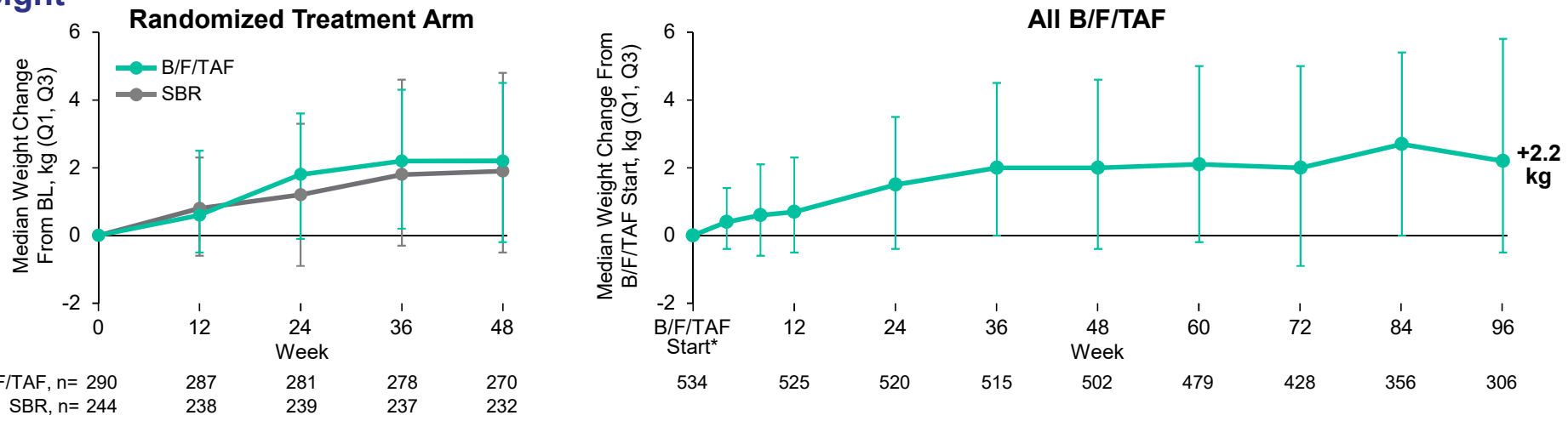
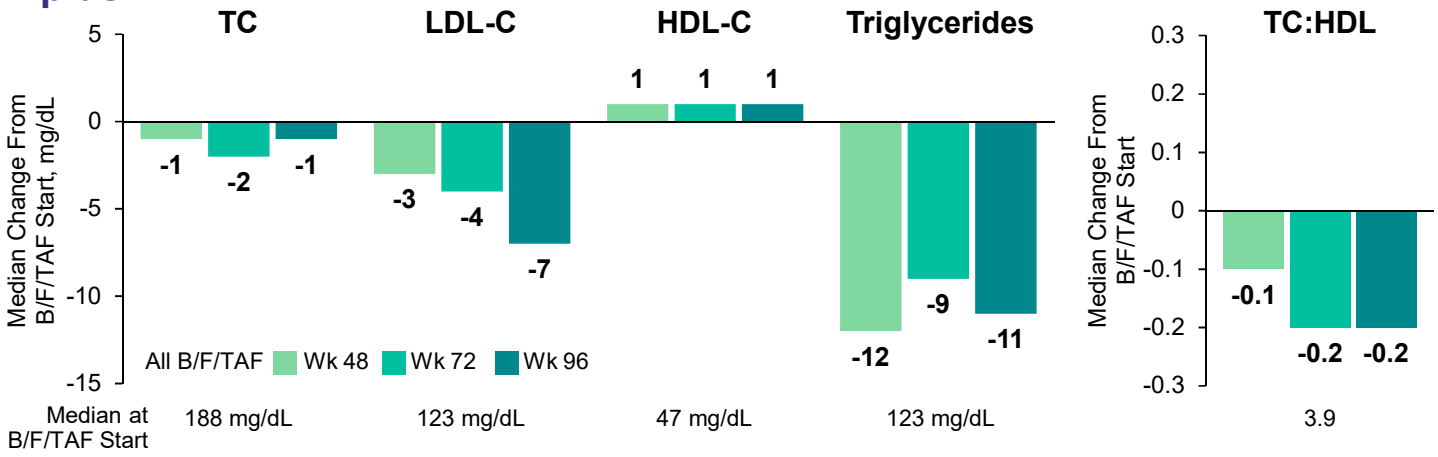
Weight



Lipids



- Taking lipid lowering agents at baseline: B/F/TAF 16%, SBR 16%, p=0.91
- Initiated lipid lowering agents during the randomized phase: B/F/TAF 3%, SBR 3%, p=0.64

HDL, high-density lipoprotein; LDL, low-density lipoprotein; TC, total cholesterol.

Conclusions

- Consistent with Week 48 data, high rates of virologic suppression continued to be maintained and CD4 cell counts remained stable
- No treatment-emergent resistance in extension phase or at last study visit; HIV-1 RNA <50 copies/mL maintained including in those with preexisting resistance
- B/F/TAF was safe and well tolerated; common AEs were generally consistent with those expected within the population and known study drug safety profiles
  - Consistent with Week 48 data, there were no clinically relevant changes from baseline in body weight in the All B/F/TAF group
  - No participant receiving B/F/TAF had proximal tubulopathy (including Fanconi syndrome) or discontinued study drugs due to a renal and urinary disorder or associated investigation AE

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