Poster

Pooled Analysis of 4 International Trials of Bictegravir/Emtricitabine/Tenofovir Alafenamide (B/F/TAF) in Adults Aged ≥ 65 Years Demonstrating Safety and Efficacy: Week 48 Results

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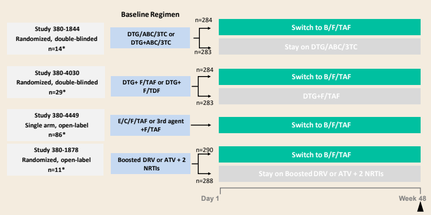
Background

- Almost 50% of people living with HIV (PLWH) are > 50 years old; therefore, data on long term safety in older patients are important
- Older PLWH are at increased risk of co-morbidities and often have higher levels of polypharmacy, so ensuring the safety and convenience of ART in this population is critical
- Bictegravir/emtricitabine/tenofovir alafenamide (B/F/TAF) is an efficacious, well-tolerated, small, single-tablet regimen with few drug-drug interactions and a high barrier to resistance
- This makes B/F/TAF an attractive regimen to consider for older individuals and may be of benefit to this population

Study Methodology

- Objective
  - To evaluate the efficacy and safety of B/F/TAF in an older population by pooling available data on older patients (≥ 65 years old)
  - Data from 4 international B/F/TAF trials in virologically suppressed individuals were included (N=140 participants)
- Primary endpoint
  - HIV-1 RNA < 50 copies/mL at Week 48 as defined by the Food and Drug Administration Snapshot algorithm.
- Key inclusion criteria
  - Age ≥ 65 years at screening randomized to B/F/TAF
  - Documented plasma HIV-1 RNA < 50 copies/mL on current regimen for the last 2 visits preceding the Screening Visit
  - Estimated GFR ≥ 30 mL/min (Cockcroft-Gault formula)

Virologically Suppressed Adults Switched to B/F/TAF



* n is the number of participants 65 years or older from each trial out of the total trial enrollment
Current analysis only evaluated those participants receiving B/F/TAF

Baseline Demographics and Disease Characteristics (Pooled Analysis)

	B/F/TAF N=140
Median age, years (range)	68 (65-80)
Female, % (n)	14% (19)
Race, %, (n)	
White	88% (121/137)
Black	12% (16/137)
Unclassified	(3)
Ethnicity, Hispanic/Latino, % (n)	14% (19)
Median weight, kg, (range)	79 (49-131)
Median estimated $eGFR_{CG}$, mL/min, (range)	74 (38-130)

Results

Baseline Demographics and Disease Characteristics (Pooled Analysis)

		B/F/TAF N=140
HIV-1 RNA < 50 copies/mL at baseline		97% (136)
Median CD4 count, cells/mm^3 (range)		629 (132-1471)
Baseline Regimen (n)		
INSTI (67%)	EVG/COBI/FTC/TAF	56% (79)
	DTG/ABC/3TC	10% (14)
	EVG/COBI/FTC/TDF	0.7% (1)
PI (29%)	ATV/b + ABC/3TC	18% (25)
	DRV/b + ABC/3TC	4.3% (6)
	ATV/b + FTC/TDF	3.6% (5)
	DRV/b + FTC/TDF	2.9% (4)
NNRTI (4%)	RPV/FTC/TDF	2.9% (4)
	EFV/FTC/TDF	0.7% (1)
	NVP + FTC/TDF	0.7% (1)

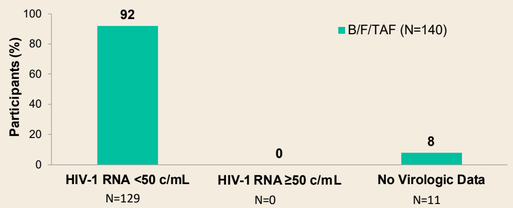
/b represents the PI being boosted by ritonavir or cobicistat

Baseline Demographics and Disease Characteristics(Pooled Analysis)

	B/F/TAF N=140
Medical History at baseline	
Hyperlipidemia	59% (83)
Hypertension	55% (77)
Cardiovascular disease	24% (34)
Diabetes mellitus	22% (31)
Smoking, current	18% (20)*

* Smoking history not collected for study 380-4030

Virologic Outcomes at Week 48 (Snapshot Analysis)



- Median (IQR) change in CD4 count at Week 48 was 13 cells/mm3 (-54, 98)
- DC Study Drug Due to AE or death and Last Available HIV-1 RNA<50 c/mL – 5 participants
- Missing data during window but on study drug – 6 participants
  - all were undetectable after Week 48
- No participant had a HIV-1 RNA viral load ≥ 50 c/mL
- There were no virologic failures or development of resistance

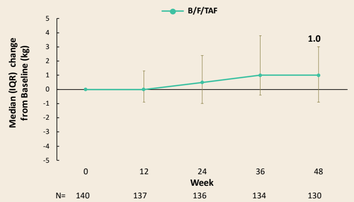
Treatment-Emergent Adverse Events through Week 48

	B/F/TAF (n=140) % (n)
Any Grades 2-4 Study Drug-Related AE	1.4% (2)
Any Grades 3-4 Study Drug-Related AEs	0
Grades 3 or 4 Laboratory Abnormalities	10% (14)
Any Study Drug-Related Serious AE	0
AEs Leading to Study Drug Discontinuation	2.9% (4)*
AEs Leading to Study Drug Discontinuation (drug-related)	0.7% (1)
Death	0.7% (1)†

*1) abdominal discomfort (grade 2, drug-related) 2) alcohol withdrawal 3) benzodiazepine withdrawal 4) device related infection
† The one death occurred in a 71 yo White male on study day 96 (380-1844) due to hypertension and atherosclerotic disease and was not judged to be study drug-related by the investigator.

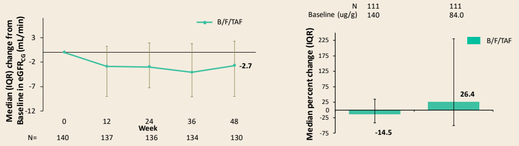
There were no renal, bone or hepatic discontinuations

Weight: Median Change from Baseline through Week 48



Median weight at baseline was 79 kg
Median change in weight at Week 48 was 1.0 kg (IQR -0.9, 3.0)

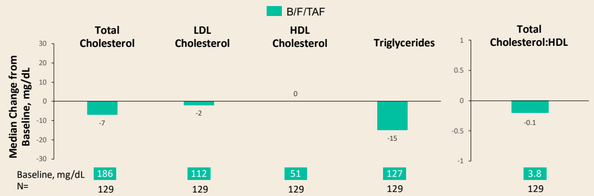
eGFR and Renal Biomarker Changes at Week 48



* Urine Albumin was not collected for studies 380-4030 and 380-4449 and was not reported
RBP:Cr, retinol-binding protein/creatinine; β2m:Cr, urine beta-2-microglobulin/creatinine

- Median change from baseline in eGFR was a decline of 2.9 mL/min at week 12 and remained steady with a decline of 2.7 mL/min at week 48
  - This is consistent with the known inhibition of OCT2 creatinine transporter
- No proximal renal tubulopathy was reported

Changes in Fasting Lipids at Week 48*



LDL-low-density lipoprotein, HDL-high-density lipoprotein
*A sensitivity analysis was conducted excluding subjects who took lipid modifying medication with similar results

- Participants on lipid-modifying medication
  - At baseline: n=60 (43%)
  - Initiated during study: n=6 (4%)

Conclusions

- Switching to B/F/TAF is safe, effective and well tolerated in virologically suppressed adults ≥ 65 years through 48 weeks (N=140)
  - High virologic suppression at 92% with no virologic failures and no treatment-emergent resistance
  - No renal, bone, or hepatic AEs resulting in discontinuation
  - Only one drug-related AEs occurred that led to discontinuation
  - No drug-related AEs that were serious or Grade 3 or 4
  - Median weight change of 1 kg plateaued at Week 36 and was consistent with observed trends over time in the general population
  - Modest improvement in fasting lipid parameters
- These data support the use of B/F/TAF for treatment of adults ≥65 years who could benefit from a small single-tablet with few drug-drug interactions and an established safety profile

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