Biktarvy® (BIC/FTC/TAF) Use for HIV-1 Post-Exposure Prophylaxis

This document is in response to your request for information regarding Biktarvy® (bictegravir/emtricitabine/tenofovir alafenamide [BIC/FTC/TAF]) and its use for HIV-1 post-exposure prophylaxis (PEP).

Some data may be outside of the US FDA-approved Prescribing Information. In providing this data, Gilead Sciences, Inc. is not making any representation as to its clinical relevance or to the use of any Gilead product(s). For information about the approved conditions of use of any Gilead drug product, please consult the FDA approved prescribing information.

The full indication, important safety information, and boxed warnings are available at: www.gilead.com/-/media/files/pdfs/medicines/hiv/biktarvy/biktarvy_pi

Product Labeling

BIC/FTC/TAF is a three-drug combination of BIC, a HIV-1 integrase strand transfer inhibitor (INSTI), and FTC and TAF, both HIV-1 nucleoside analog reverse transcriptase inhibitors (NRTIs), and is indicated as a complete regimen for the treatment of HIV-1 infection in adults and pediatric patients weighing at least 14 kg who have no antiretroviral treatment history or to replace the current antiretroviral regimen in those who are virologically suppressed (HIV-1 RNA <50 copies per mL) on a stable antiretroviral regimen with no history of treatment failure and no known substitutions associated with resistance to the individual components of BIC/FTC/TAF.[1]

BIC/FTC/TAF is not indicated for use for HIV-1 PEP.

Clinical Data

Evaluation of Safety and Tolerability of BIC/FTC/TAF for HIV-1 PEP

Study Design and Baseline Demographics[2]

A prospective, single-arm, open-label, single-site trial evaluated the safety, tolerability, and adherence to co-formulated BIC/FTC/TAF for prophylaxis following potential exposure to HIV-1. Key inclusion criteria were HIV-negative individuals aged ≥ 18 years and presenting to the clinic within 72 hours after a potential sexual exposure to HIV-1. Participants received a fixed-dose formulation of BIC/FTC/TAF and were instructed to take 1 tablet once a day for 28 days. Participants were assessed with lab tests at baseline, 2, 4, 12 and 24 weeks, which included serologies, biochemistry, liver function tests, glucose, and lipids. HIV RNA was tested to exclude participants with HIV in acute stage. Analyzed endpoints included HIV diagnosis, completion of PEP, as well as PEP adherence via self-reports and pill counts.

A total of 112 participants enrolled in the trial. Baseline demographics are listed in Table 1.

Table 1. Baseline Demographics[2]

	BIC/FTC/TAF (N=112)
Age, mean years ± SD	30 ± 8
Male, n (%)	109 (97.3)
Type of exposure, n (%)	
Anal sex	58 (51.8)
Vaginal intercourse	43 (38.4)
Oral sex	29 (25.9)
Time from exposure, mean h ± SD	27.5 ± 18.8
≤24 h, n (%)	54 (48.2)
25−48 h, n (%)	45 (40.2)
49−72 h, n (%)	13 (11.6)

Results[2]

Through 24 weeks, there were no HIV seroconversions. Most participants (96.4%) had completed the 28-day PEP regimen, with a rate of adherence to all expected doses of 98.9% by self-report and 98.5% by pill count. Two participants did not complete the PEP regimen because the source partner was found to be HIV-negative, one participant was excluded due to HBV, and one participant discontinued due to their own decision. AEs attributed to study drug were mild and included headache (n=2), diarrhea (n=2), and nausea (n=1), which all resolved on their own without discontinuation of BIC/FTC/TAF. Lab abnormalities include Grade 1 elevation of serum creatinine in four participants.

High Tolerability and Adherence with BIC/FTC/TAF as HIV PEP

Study Design and Baseline Demographics[3]

A randomized, open-label trial evaluated the tolerability and adherence to BIC/FTC/TAF as HIV PEP with text message support vs standard of care. Key inclusion criteria were HIV-negative individuals aged ≥ 18 years, initiated PEP within the past 6 days for sexual exposure, and were able/willing to receive texts via mobile phone. The study was a switch study at randomization, with an average of four days on PEP before switching to BIC/FTC/TAF to complete 28 days of PEP. Participants were assessed with lab tests at Week 2, which included CBC, ALT, and creatinine. HIV status was assessed at baseline, Week 6, and Week 12. Additional outcomes included adherence assessed via telephone call at Week 4 and AEs assessed at Week 4 and Week 13 follow-up visits. A total of 85 participants enrolled in the trial and 81 participants completed the PEP regimen at Week 4. Baseline demographics are listed in Table 2.

Table 2. Baseline Demographics[3]

	BIC/FTC/TAF (N=81)
Age, mean years (range)	29.9 (26.2−34.5)
Sex assigned at birth, n (%)	
Female	3 (4)

	BIC/FTC/TAF (N=81)
Male	78 (96)
Previously used PEP, n (%)	19 (24)
Initially prescribed PEP regimen, %	
TDF/FTC + DTG	100
TDF/FTC + RAL	0
Days of initial PEP regimen taken before switch to B/F/TAF, mean	4

Results[3]

At Week 4, most participants (89%) reported completing ≥28 days of PEP. There were no lab abnormalities found deemed likely related to the study drug. AEs associated with the study drug were mostly mild and the most common included fatigue (14%), nausea (10%), diarrhea (6%), and dizziness (6%). Only 10% of participants experienced AEs of Grade ≥2 severity, which included diarrhea (2%), nausea, respiratory tract or other infection, sexually transmitted or genital infection, and fatigue (1% each).

BIC/FTC/TAF for Non-Occupational Post-Exposure Prophylaxis (nPEP)

Study Design and Baseline Demographics[4]

A non-randomized, single-site, open-label, single-arm trial evaluated the safety, tolerability, and acceptability of a fixed-dose formulation of BIC/FTC/TAF for prophylaxis following potential non-occupational exposure to HIV-1. The study enrolled 52 HIV-negative participants with possible high-risk sexual exposure to HIV-1 recent enough to permit receiving the first dose of study medication within 72 hours from the end of the exposure. Participants received a fixed-dose formulation of BIC/FTC/TAF and were instructed to take 1 tablet once a day for 28 days. Participants were assessed at 2 and 4 weeks and at 3 months. The primary endpoints were nPEP failure as measured by HIV seroconversion during study participation and safety and tolerability of BIC/FTC/TAF.

The median age of participants was 37.2 years. Reasons for initiating nPEP included condomless receptive anal intercourse (51.9%), insertive anal intercourse (42.3%), insertive or receptive vaginal intercourse (5.8% for each), and oral intercourse (57.7%). Over half (55.8%) reported more than one potential exposure and 15.4% reported having unprotected intercourse with a known HIV-positive partner.

Results

Most of the participants (90.4%) completed the 28-day BIC/FTC/TAF course with no HIV seroconversions detected when tested at Week 4 or at the three-month interview. Five participants were lost to follow-up.

The most commonly-reported AEs included nausea with or without vomiting (15.4%), fatigue (9.6%), and diarrhea (7.7%). All AEs were Grade 1, except for a single report of Grade 2 fatigue which was associated with discontinuation of BIC/FTC/TAF. Lab abnormalities were observed in 9 participants; 2 had Grade 1 increased transaminases; 7 had decreased CrCl of which 4 were Grade 2. All lab abnormalities returned to normal upon completion of the BIC/FTC/TAF course.

References

1. Enclosed, Gilead Sciences Inc. BIKTARVY® (bictegravir, emtricitabine, and tenofovir alafenamide) tablets, for oral use. US Prescribing Information. Foster City, CA.
2. Liu A, Xin R, Zhang H, et al. An open-label evaluation of safety and tolerability of coformulated bictegravir/emtricitabine/tenofovir alafenamide for post-exposure prophylaxis following potential exposure to human immunodeficiency virus-1. *Chinese medical journal.* 2022;135(22):2725-2729. https://www.ncbi.nlm.nih.gov/pubmed/36719359
3. Tan DHS, Persaud R, Qamar AA, et al. High tolerability and adherence with bictegravir, emtricitabine and tenofovir alafenamide as HIV post-exposure prophylaxis. [Poster C5.50]. Paper presented at: Canadian Association for HIV Research (CAHR); April 27-30, 2023; Quebec City, Canada.
4. Mayer KH, Gelman M, Holmes J, Kraft J, Melbourne K, Mimiaga MJ. Safety and Tolerability of Once Daily Co-Formulated Bictegravir, Emtricitabine, and Tenofovir Alafenamide for Post-Exposure Prophylaxis after Sexual Exposure. *J Acquir Immune Defic Syndr.* 2022;90(1):27-32.

Abbreviations

AE=adverse event
ALT=alanine transaminase
BIC=bictegravir
CBC=complete blood count
CrCl=creatinine clearance
DTG=dolutegravir
FTC=emtricitabine
HBV=hepatitis B virus
PEP=post-exposure prophylaxis
RAL=raltegravir
TAF=tenofovir alafenamide
TDF=tenofovir disoproxil fumarate

Product Label

For the full indication, important safety information, and boxed warning(s), please refer to the Biktarvy US Prescribing Information available at:
www.gilead.com/-/media/files/pdfs/medicines/hiv/biktarvy/biktarvy_pi

Follow Up

For any additional questions, please contact Gilead Medical Information at:

☎1-866-MEDI-GSI (1-866-633-4474) or 🖱 www.askgileadmedical.com

Adverse Event Reporting

Please report all adverse events to:

Gilead Global Patient Safety ☎ 1-800-445-3235, option 3 or
🖱 www.gilead.com/utility/contact/report-an-adverse-event

FDA MedWatch Program by ☎ 1-800-FDA-1088 or ✉MedWatch, FDA, 5600 Fishers Ln, Rockville, MD 20852 or 🖱 www.accessdata.fda.gov/scripts/medwatch

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