BICSTaR

A real-world, prospective, observational study assessing the effectiveness and safety of BIKTARVY® in treatment-naïve and treatment-experienced adults, including PWH with ART history and not virologically suppressed[1]

BICSTaR data from **real-world clinical practice** add to the breadth of experience with BIKTARVY, including:

PIVOTAL TRIALS IN TREATMENT-NAÏVE PWH[2,3]

Study 1489

BIKTARVY vs ABC/DTG/3TC

Study 1490

BIKTARVY vs FTC/TAF+DTG

PIVOTAL TRIALS IN VIROLOGICALLY SUPPRESSED PWH[4,5]

Study 1844

BIKTARVY vs ABC/DTG/3TC

Study 1878

BIKTARVY vs ATV- or DRV-Based Regimen*

INDICATION

BIKTARVY is indicated as a complete regimen for the treatment of HIV-1 infection in adult and pediatric patients weighing ≥14 kg with no antiretroviral (ARV) treatment history; or with an ARV treatment history and not virologically suppressed, with no known or suspected substitutions associated with resistance to the integrase strand inhibitor class, emtricitabine, or tenofovir; or to replace the current ARV regimen in those who are virologically suppressed (HIV-1 RNA <50 copies per mL) on a stable ARV regimen with no known or suspected substitutions associated with resistance to bictegravir or tenofovir.

IMPORTANT SAFETY INFORMATION

BOXED WARNING: POST TREATMENT ACUTE EXACERBATION OF HEPATITIS B

- **Severe acute exacerbations of hepatitis B have been reported in patients with HIV-1 and HBV who have discontinued products containing emtricitabine (FTC) and/or tenofovir disoproxil fumarate (TDF), and may occur with discontinuation of BIKTARVY. Closely monitor hepatic function with both clinical and laboratory follow-up for at least several months in patients with HIV-1 and HBV who discontinue BIKTARVY. If appropriate, anti-hepatitis B therapy may be warranted.**

Please see full Important Safety Information on page 11, and click to see full Prescribing Information for BIKTARVY, including **BOXED WARNING**.

*ABC/3TC or FTC/TDF + boosted ATV or DRV regimen (cobicistat or ritonavir).

3TC, lamivudine; ABC, abacavir; ART, antiretroviral therapy; ATV, atazanavir; DRV, darunavir; DTG, dolutegravir; FTC, emtricitabine; PWH, people with HIV; RNA, ribonucleic acid; TAF, tenofovir alafenamide; TDF, tenofovir disoproxil fumarate.

BIKTARVY®

bictegravir 50mg/emtricitabine 200mg/
tenofovir alafenamide 25mg tablets

Many PWH may stop and restart ART over the course of their treatment journey[6]

According to DHHS guidelines, adherence to the continuum of care may be impacted by factors such as[7]:

- Financial instability
- Mental health
- Transportation access and cost
- Schedule conflicts
- Life events

According to a retrospective study that examined ART adherence and treatment gaps among treatment-naïve and treatment-experienced PWH on Medicare in the US (n=48,627) who initiated or switched to a new "anchor" ART (PIs, NNRTIs, or INSTIs) regimen from 2014 to 2017[6,*]:

More than half
of PWH had treatment gaps of ≥**7 days**[6]

More than a quarter
of PWH had treatment gaps of ≥**30 days**[6]

*Adherence to anchor medications and treatment gaps were measured using prescription fill data, including fill date and days' supply reported on each prescription claim. The fill date of the first prescription of the new anchor medication was deemed the index date. Treatment gaps were defined as periods with no supply of an anchor medication after the days' supply of the most recent ART prescription was exhausted.[6]

Restarting ART can be an opportunity to assess a patient's regimen

Consider a variety of important factors when selecting an ARV regimen[7]:

- Barrier to resistance
- Factors that impact adherence
- Tolerability and toxicity considerations
- Potential drug-drug interactions
- Patient access

ACCORDING TO DHHS GUIDELINES

A regimen with a **high barrier to resistance** is recommended for PWH with adherence challenges.[7]

Continue to counsel patients to take their medication as prescribed.

ART, antiretroviral therapy; ARV, antiretroviral; DHHS, US Department of Health and Human Services; INSTI, integrase strand transfer inhibitor; NNRTI, non-nucleoside reverse transcriptase inhibitor; PI, protease inhibitor; PWH, people with HIV.

Powerful efficacy in treatment-naïve PWH: Studies 1489 & 1490

Study designs

The efficacy and safety of BIKTARVY® for treatment-naïve adults were evaluated in two phase 3, randomized, double-blind, active-controlled noninferiority studies. In Study 1489, treatment-naïve adults were randomized in a 1:1 ratio to receive either BIKTARVY (n=314) or ABC/DTG/3TC (n=315) once daily. In Study 1490, treatment-naïve adults were randomized in a 1:1 ratio to receive either BIKTARVY (n=320) or FTC/TAF+DTG (n=325) once daily. The primary endpoint for both studies was the proportion of adults with HIV-1 RNA <50 copies/mL at Week 48 using the FDA snapshot algorithm.[2,3]

RESULTS WITH BIKTARVY WERE NONINFERIOR TO COMPARATORS IN TREATMENT-NAÏVE ADULTS AT WEEK 48[2,3]

Virologic suppression (HIV-1 RNA <50 copies/mL) at Week 48[2,3]

Study 1489

92%	**93%**
of participants on BIKTARVY (n=314)	of participants on ABC/DTG/3TC (n=315)

were virologically suppressed

1% of participants on BIKTARVY (n=314) and **3%** of participants on ABC/DTG/3TC (n=315) experienced virologic failure (HIV-1 RNA ≥50 copies/mL)

Study 1490

89%	**93%**
of participants on BIKTARVY (n=320)	of participants on FTC/TAF+DTG (n=325)

were virologically suppressed

4% of participants on BIKTARVY (n=320) and **1%** of participants on FTC/TAF+DTG (n=325) experienced virologic failure (HIV-1 RNA ≥50 copies/mL)

IMPORTANT SAFETY INFORMATION (cont'd)

Contraindications

- **Coadministration:** Do not use BIKTARVY with dofetilide or rifampin.

Warnings and precautions

- **Drug interactions:** See Contraindications and Drug Interactions sections. Consider the potential for drug interactions prior to and during BIKTARVY therapy and monitor for adverse reactions.
- **Immune reconstitution syndrome,** including the occurrence of autoimmune disorders with variable time to onset, has been reported.

ZERO CASES OF RESISTANCE TO BIKTARVY® IN TREATMENT-NAÏVE ADULTS*

Among 634 treatment-naïve adults in Studies 1489 and 1490, 8 treatment failure subjects were tested, and no amino acid substitutions emerged that were associated with BIKTARVY resistance through Week 48.[2,3]

*Based on the resistance analysis population.

0 CASES of Resistance

ADVERSE REACTIONS THROUGH WEEK 48

In Studies 1489 and 1490, the most common adverse reactions (incidence ≥2%, all grades) reported in treatment-naïve adults who received BIKTARVY through Week 48 were diarrhea, nausea, headache, fatigue, abnormal dreams, dizziness, and insomnia.[8]

For long-term clinical trial data in treatment-naïve adults at 5 years, visit BiktarvyHCP.com/efficacy-resistance/treatment-naive

IMPORTANT SAFETY INFORMATION (cont'd)

Warnings and precautions (cont'd)

- **New onset or worsening renal impairment:** Postmarketing cases of renal impairment, including acute renal failure, proximal renal tubulopathy (PRT), and Fanconi syndrome have been reported with tenofovir alafenamide (TAF)–containing products. Do not initiate BIKTARVY in patients with estimated creatinine clearance (CrCl) <30 mL/min except in virologically suppressed adults <15 mL/min who are receiving chronic hemodialysis. Patients with impaired renal function and/or taking nephrotoxic agents (including NSAIDs) are at increased risk of renal-related adverse reactions. Discontinue BIKTARVY in patients who develop clinically significant decreases in renal function or evidence of Fanconi syndrome.
  Renal monitoring: Prior to or when initiating BIKTARVY and during therapy, assess serum creatinine, CrCl, urine glucose, and urine protein in all patients as clinically appropriate. In patients with chronic kidney disease, assess serum phosphorus.

Please see full Important Safety Information on page 11, and click to see full Prescribing Information for BIKTARVY, including **BOXED WARNING**.

3TC, lamivudine; ABC, abacavir; DTG, dolutegravir; FDA, US Food and Drug Administration; FTC, emtricitabine; PWH, people with HIV; RNA, ribonucleic acid; TAF, tenofovir alafenamide.

BIKTARVY®
bictegravir 50mg/emtricitabine 200mg/tenofovir alafenamide 25mg tablets

Powerful efficacy in virologically suppressed PWH: Studies 1844 & 1878

Study designs

The efficacy and safety of BIKTARVY® for virologically suppressed adults were evaluated in two phase 3, randomized, active-controlled noninferiority studies. Study 1844 was double-blind and Study 1878 was open-label. In Study 1844, virologically suppressed adults (HIV-1 RNA <50 copies /mL for ≥3 months) were randomized in a 1:1 ratio to either switch to BIKTARVY (n=282) or continue on their baseline regimen of ABC/DTG/3TC (n=281). In Study 1878, virologically suppressed adults were randomized in a 1:1 ratio to either switch to BIKTARVY (n=290) or stay on their baseline regimen of either ABC/3TC or FTC/TDF, plus boosted ATV or DRV (cobicistat or ritonavir) (n=287). The primary endpoint for both trials was the proportion of adults with HIV-1 RNA ≥50 copies/mL at Week 48 using the FDA snapshot algorithm.[4,5]

RESULTS WITH BIKTARVY WERE NONINFERIOR TO COMPARATORS IN VIROLOGICALLY SUPPRESSED ADULTS AT WEEK 48[4,5]

Virologic suppression (HIV-1 RNA <50 copies/mL) at Week 48[4,5]

Study 1844

94%	95%
of participants on BIKTARVY (n=282)	of participants on ABC/DTG/3TC (n=281)

remained virologically suppressed

1% of participants on BIKTARVY (n=282) and **<1%** of participants on ABC/DTG/3TC (n=281) experienced virologic failure (HIV-1 RNA ≥50 copies/mL)[4,5]

Study 1878

92%	89%
of participants on BIKTARVY (n=290)	of participants on ATV- or DRV-based regimen* (n=287)

remained virologically suppressed

2% of participants on BIKTARVY (n=290) and **2%** of participants on ATV- or DRV-based regimen* (n=287) experienced virologic failure (HIV-1 RNA ≥50 copies/mL)[4,5]

IMPORTANT SAFETY INFORMATION (cont'd)

Warnings and precautions (cont'd)

- **Lactic acidosis and severe hepatomegaly with steatosis:** Fatal cases have been reported with the use of nucleoside analogs, including FTC and TDF. Discontinue BIKTARVY if clinical or laboratory findings suggestive of lactic acidosis or pronounced hepatotoxicity develop, including hepatomegaly and steatosis in the absence of marked transaminase elevations.

ZERO CASES OF RESISTANCE TO BIKTARVY® IN VIROLOGICALLY SUPPRESSED ADULTS*

Among 572 virologically suppressed adults randomized to BIKTARVY in Studies 1844 and 1878 through Week 48, 2 participants with virologic rebound had genotypic and phenotypic data (1 for RT, 1 for IN and RT), and no treatment-emergent resistance to BIKTARVY was detected through Week 48.[4,5]

*Based on the resistance analysis population.

0 CASES of Resistance

ADVERSE REACTIONS THROUGH WEEK 48

In Studies 1844 and 1878, the most common adverse reactions (incidence ≥2%, all grades) reported in virologically suppressed adults who switched to BIKTARVY were headache, flatulence, nausea, and diarrhea.[4,5]

For long-term clinical trial data in virologically suppressed adults at 3 years, visit BiktarvyHCP.com/efficacy-resistance/virologically-suppressed

IMPORTANT SAFETY INFORMATION (cont'd)

Adverse reactions

- **Most common adverse reactions** (incidence ≥5%; all grades) in clinical studies through week 144 were diarrhea (6%), nausea (6%), and headache (5%).

Drug interactions

- **Prescribing information:** Consult the full prescribing information for BIKTARVY for more information on Contraindications, Warnings, and potentially significant drug interactions, including clinical comments.
- **Enzymes/transporters:** Drugs that induce P-gp or induce both CYP3A and UGT1A1 can substantially decrease the concentration of components of BIKTARVY. Drugs that inhibit P-gp, BCRP, or inhibit both CYP3A and UGT1A1 may significantly increase the concentrations of components of BIKTARVY. BIKTARVY can increase the concentration of drugs that are substrates of OCT2 or MATE1.
- **Drugs affecting renal function:** Coadministration of BIKTARVY with drugs that reduce renal function or compete for active tubular secretion may increase concentrations of FTC and tenofovir and the risk of adverse reactions.

Please see full Important Safety Information on page 11, and click to see full Prescribing Information for BIKTARVY, including **BOXED WARNING**.

*ABC/3TC or FTC/TDF + boosted ATV or DRV regimen (cobicistat or ritonavir).

3TC, lamivudine; ABC, abacavir; ATV, atazanavir; DRV, darunavir; DTG, dolutegravir; FDA, US Food and Drug Administration; FTC, emtricitabine; IN, integrase; PWH, people with HIV; RNA, ribonucleic acid; RT, reverse transcriptase; TDF, tenofovir disoproxil fumarate.

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bictegravir 50mg/emtricitabine 200mg/ tenofovir alafenamide 25mg tablets

BICSTaR: a real-world prospective observational study

BICSTaR assessed the effectiveness and safety of BIKTARVY® in treatment-naïve and treatment-experienced adults, including PWH with ART history and not virologically suppressed[1]

Total participants (N=1509) included[1]:

Treatment-naïve adults

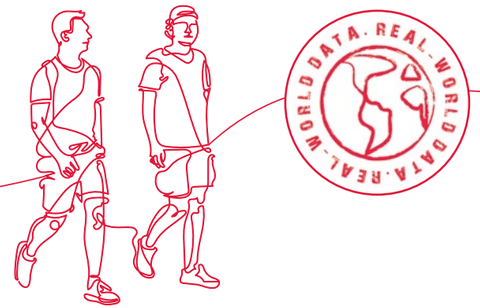
(n=279)

Virologically suppressed adults*

Adults with ART history and not virologically suppressed*

Treatment-experienced adults (All TE n=1230)

*Of All TE (n=1230), n=1083 had available viral load data at baseline with n=996 having HIV-1 RNA viral load <50 copies/mL and n=87 having HIV-1 RNA viral load ≥50 copies/mL.[1]



Study design[1]

Data collected: June 2018–February 2022

PRIMARY ENDPOINT

- Proportion of adults with HIV-1 RNA <50 copies/mL at Month 12

SECONDARY ENDPOINT

- Safety and tolerability were assessed through Month 12

EXPLORATORY ENDPOINTS

- Reasons for initiating or switching to BIKTARVY®
- Treatment satisfaction was assessed using the HIV Treatment Satisfaction Questionnaire status version (HIVTSQs) and the HIV Treatment Satisfaction Questionnaire change version (HIVTSQc)

STUDY DETAILS

- Study participants (≥18 years of age) were initiated on BIKTARVY following their physicians' independent decisions to prescribe BIKTARVY based on country prescribing information, local treatment guidelines, and/or consultation with the treating physician
- Data were retrieved from hospital files, clinical records, clinic visits, and electronic medical records
- Data were collected prospectively across the 5 cohorts using a common protocol: (1) France, Germany, Ireland, Italy, the Netherlands, Spain, Turkey, UK; (2) Canada; (3) Israel; (4) Singapore, South Korea and Taiwan; and (5) Japan
- Participants from 12 countries in the BICSTaR observational cohorts were included in the 12-month pooled analysis

STUDY LIMITATIONS

- Unmeasured confounding bias due to the non-randomized nature of the study and missing data could limit generalizability of findings

IMPORTANT SAFETY INFORMATION (cont'd)

Dosage and administration

- **Dosage:** Adult and pediatric patients weighing ≥25 kg: 1 tablet containing 50 mg bictegravir (BIC), 200 mg emtricitabine (FTC), and 25 mg tenofovir alafenamide (TAF) taken once daily with or without food. Pediatric patients weighing ≥14 kg to <25 kg: 1 tablet containing 30 mg BIC, 120 mg FTC, and 15 mg TAF taken once daily with or without food. For these pediatric patients, who are unable to swallow a whole tablet, the tablet can be split and each part taken separately as long as all parts are ingested within approximately 10 minutes.
- **Renal impairment:** For patients weighing ≥25 kg, not recommended in patients with CrCl 15 to <30 mL/min, or <15 mL/min who are not receiving chronic hemodialysis, or <15 mL/min who are receiving chronic hemodialysis and have no antiretroviral treatment history. For patients weighing ≥14 kg to <25 kg, not recommended in patients with CrCl <30 mL/min.
- **Hepatic impairment:** Not recommended in patients with severe hepatic impairment.

IMPORTANT SAFETY INFORMATION (cont'd)

Dosage and administration (cont'd)

- **Prior to or when initiating:** Test patients for HBV infection.
- **Prior to or when initiating, and during treatment:** As clinically appropriate, assess serum creatinine, CrCl, urine glucose, and urine protein in all patients. In patients with chronic kidney disease, assess serum phosphorus.

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ART, antiretroviral treatment; PWH, people with HIV; RNA, ribonucleic acid, TE, treatment experienced.

BIKTARVY®
bictegravir 50mg/emtricitabine 200mg/
tenofovir alafenamide 25mg tablets

BIKTARVY® was studied in cohorts that reflect the diversity of the HIV community[1]

BICSTaR REAL-WORLD EVIDENCE

Baseline characteristics[1]

		All (N=1509)	TN (n=279)	All TE* (n=1230)
Median age, years (IQR)		**47** (37-55)	**38** (30-47)	**49** (39-56)
≥50 years, %		**42**	**22**	**47**
Sex, as defined by the individual	Male, %	**84**	**90**	**83**
	Female, %	**16**	**10**	**17**
Race	White, %	**76**	**69**	**77**
	Black, %	**13**	**8**	**14**
	Asian, %	**6**	**16**	**4**
	American Indian/ Alaska Native, %	**<1**	**<1**	**<1**
	Other, %	**4**	**4**	**4**
Median HIV-1 RNA, log_{10} copies/mL (IQR)		**1.59** (1.28-1.90)	**4.79** (4.07-5.29)	**1.59** (1.28-1.59)
HIV-1 RNA <50 copies/mL, %†		**74**	**1**	**92**
HIV-1 RNA >100,000 copies/mL, %†		**8**	**37**	**<1**

	All TE* (n=1230)
Median (IQR) number of previous ART regimens	**2** (1-4)
Prior ART regimens (taken just prior to BIKTARVY), %	
INSTI	**66**
NNRTI	**19**
PI	**16**
TDF	**32**
TAF	**51**
History of prior virologic failure, n (%)	**141** (11.5)

*All treatment experienced (TE) includes virologically suppressed participants and those with ART history who were not virologically suppressed at baseline.

†Of All TE (n=1230), n=1083 had available viral load data at baseline with n=996 having HIV-1 RNA viral load <50 copies/mL and n=87 having HIV-1 RNA viral load ≥50 copies/mL.

ART, antiretroviral treatment; INSTI, integrase strand transfer inhibitor; IQR, interquartile range; NNRTI, non-nucleoside reverse transcriptase inhibitor; NRTI, nucleoside reverse transcriptase inhibitor; PI, protease inhibitor; RNA, ribonucleic acid; TAF, tenofovir alafenamide; TDF, tenofovir disoproxil fumarate; TE, treatment experienced; TN, treatment naïve.

Prevalence of primary drug-resistance mutations at baseline[1]

	All (N=1509)	TN (n=279)	All TE* (n=1230)
≥1 primary resistance mutation, n (%)‡			
Yes	**158** (10.5)	**21** (7.5)	**137** (11.1)
No	**554** (36.7)	**144** (51.6)	**410** (33.3)
NNRTI	**90** (6.0)	**14** (5.0)	**76** (6.2)
K103N/S	**42** (2.8)	**5** (1.8)	**37** (3.0)
PI	**40** (2.7)	**7** (2.5)	**33** (2.7)
M46I/L	**14** (0.9)	**0**	**14** (1.1)
NRTI	**89** (5.9)	**3** (1.1)	**86** (7.0)
M41LF	**19** (1.3)	**2** (0.7)	**17** (1.4)
K65R	**2** (0.1)	**1** (0.4)	**1** (0.1)
D67N	**17** (1.1)	**0**	**17** (1.4)
T69ins	**1** (0.1)	**0**	**1** (0.1)
M184V/I	**55** (3.6)	**0**	**55** (4.5)
T215Y/F	**21** (1.4)	**0**	**21** (1.7)
K219Q/E/N/R	**13** (0.9)	**0**	**13** (1.1)
INSTI	**2** (0.1)	**1** (0.4)	**1** (0.1)
T97A§	**2** (0.1)	**1** (0.4)	**1** (0.1)

IMPORTANT SAFETY INFORMATION (cont'd)

Pregnancy and lactation

- **Pregnancy:** BIKTARVY is recommended in pregnant individuals who are virologically suppressed on a stable ARV regimen with no known substitutions associated with resistance to any of the individual components of BIKTARVY. Lower plasma exposures of BIKTARVY were observed during pregnancy; therefore, viral load should be monitored closely during pregnancy. An Antiretroviral Pregnancy Registry (APR) has been established. Available data from the APR for BIC, FTC, or TAF show no difference in the rates of birth defects compared with a US reference population.

Please see full Important Safety Information on page 11, and click to see full Prescribing Information for BIKTARVY, including **BOXED WARNING**.

‡Genotype data were available for 712 participants at baseline (obtained either at the time of enrollment or from historic HIV-1 genotype tests); data were unavailable for n=797 (114 TN and 683 TE)—these participants were not considered to have primary resistance mutations.

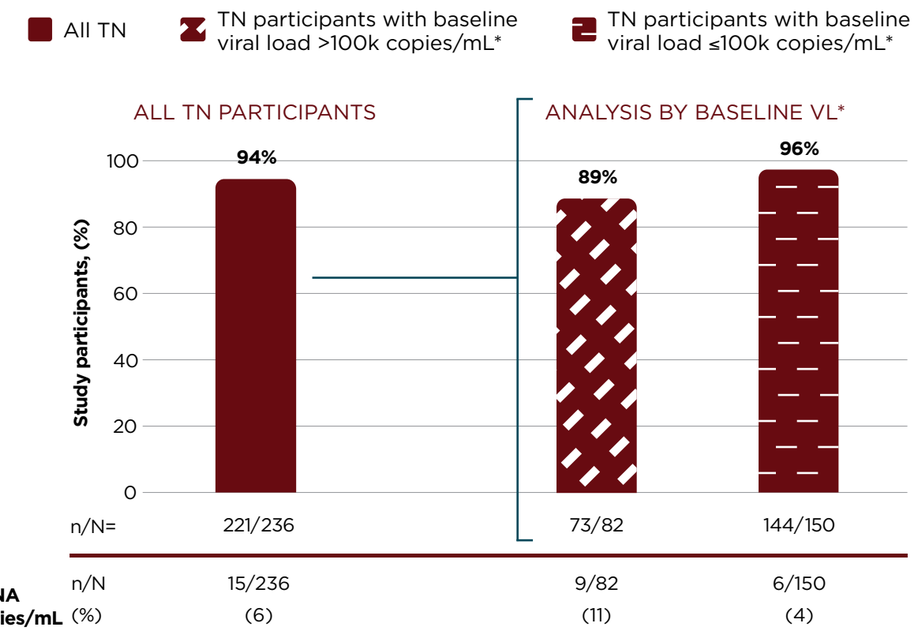
§T97A is a common polymorphic INSTI-resistance mutation, and alone does not reduce susceptibility to bictegravir.

BIKTARVY®
bictegravir 50mg/emtricitabine 200mg/ tenofovir alafenamide 25mg tablets

TREATMENT-NAÏVE PWH

High rates of virologic suppression with real-world use of BIKTARVY® at Month 12[1,8]

Virologic suppression (HIV-1 RNA <50 copies/mL)
Missing=Excluded (M=E)[1,8]

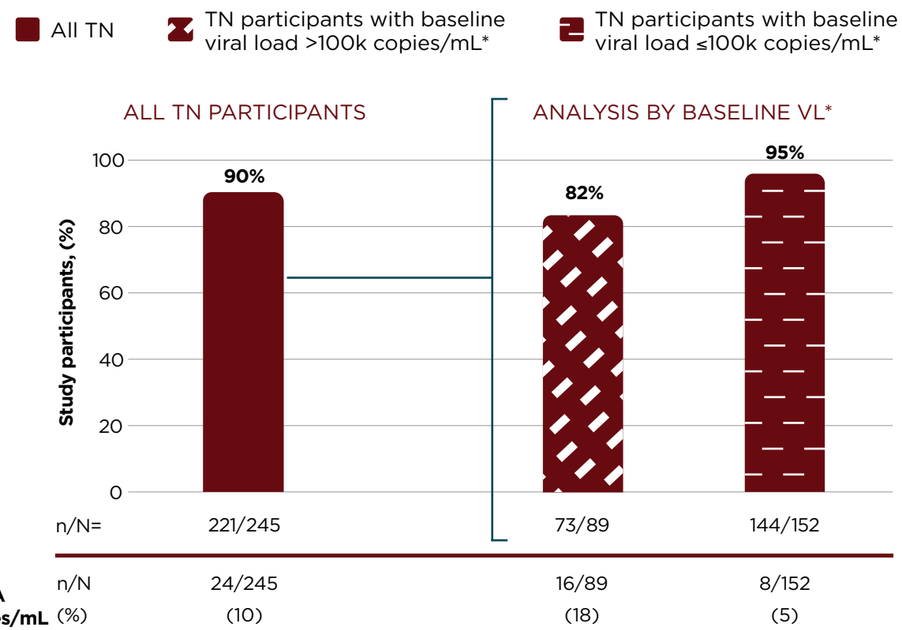


HIV-1 RNA ≥50 copies/mL	n/N	15/236	9/82	6/150
	(%)	(6)	(11)	(4)

In an M=E analysis, study participants with missing data are excluded when calculating the proportion of participants with HIV-1 RNA <50 copies/mL.[1]

High rates of virologic suppression in PWH with baseline viral load >100k and ≤100k

Virologic suppression (HIV-1 RNA <50 copies/mL)
Discontinuation=Failure (D=F)[1,8]



HIV-1 RNA ≥50 copies/mL	n/N	24/245	16/89	8/152
	(%)	(10)	(18)	(5)

In a D=F analysis, study participants who discontinued BIKTARVY® prior to the 12-month visit window are imputed as ≥50 copies/mL.[1]

IMPORTANT SAFETY INFORMATION (cont'd)

Pregnancy and lactation (cont'd)

- **Lactation:** Individuals with HIV-1 should be informed of the potential risks of breastfeeding.

BOXED WARNING: POST TREATMENT ACUTE EXACERBATION OF HEPATITIS B

- **Severe acute exacerbations of hepatitis B have been reported in patients with HIV-1 and HBV who have discontinued products containing emtricitabine (FTC) and/or tenofovir disoproxil fumarate (TDF), and may occur with discontinuation of BIKTARVY. Closely monitor hepatic function with both clinical and laboratory follow-up for at least several months in patients with HIV-1 and HBV who discontinue BIKTARVY. If appropriate, anti-hepatitis B therapy may be warranted.**

IMPORTANT SAFETY INFORMATION (cont'd)

Contraindications

- **Coadministration:** Do not use BIKTARVY with dofetilide or rifampin.

Warnings and precautions

- **Drug interactions:** See Contraindications and Drug Interactions sections. Consider the potential for drug interactions prior to and during BIKTARVY therapy and monitor for adverse reactions.
- **Immune reconstitution syndrome,** including the occurrence of autoimmune disorders with variable time to onset, has been reported.

Please see full Important Safety Information on page 11, and click to see full Prescribing Information for BIKTARVY, including **BOXED WARNING**.

*Subgroup analysis is limited to participants with available VL at baseline. Four participants (n=4) did not have VL data at baseline.[1,8]

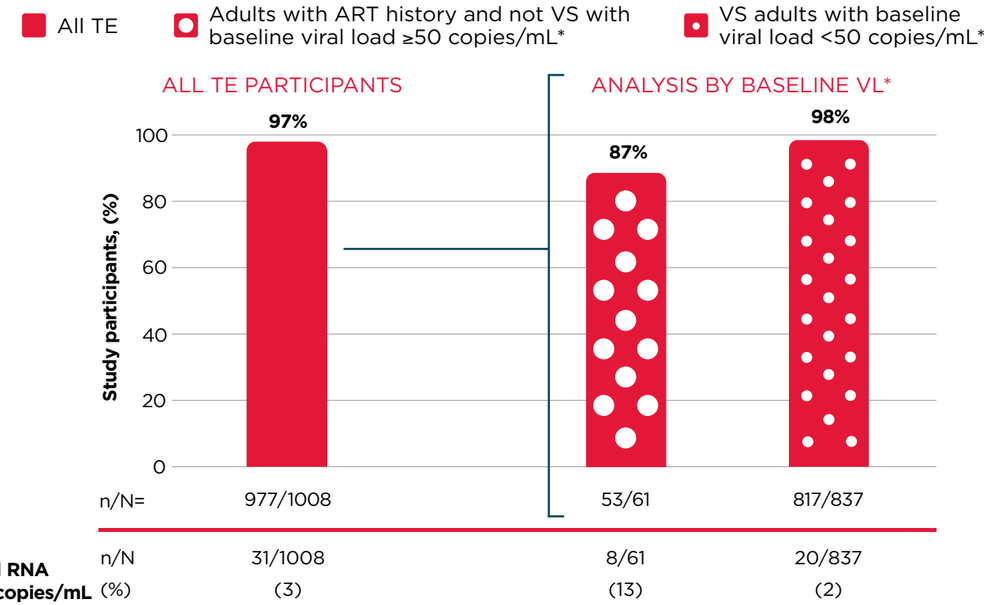
PWH, people with HIV; RNA, ribonucleic acid; TN, treatment naïve; VL, viral load.

BIKTARVY®
bictegravir 50mg/emtricitabine 200mg/
tenofovir alafenamide 25mg tablets

TREATMENT-EXPERIENCED PWH

High rates of virologic suppression with real-world use of BIKTARVY® at Month 12, including those with ART history and not virologically suppressed[1,8]

Virologic suppression (HIV-1 RNA <50 copies/mL)
Missing=Excluded (M=E)[1,8]



In an M=E analysis, study participants with missing data are excluded when calculating the proportion of participants with HIV-1 RNA <50 copies/mL.[1]

Treatment-experienced participants not virologically suppressed at baseline achieved high rates of virologic suppression after switching to BIKTARVY from their previous ARV regimen

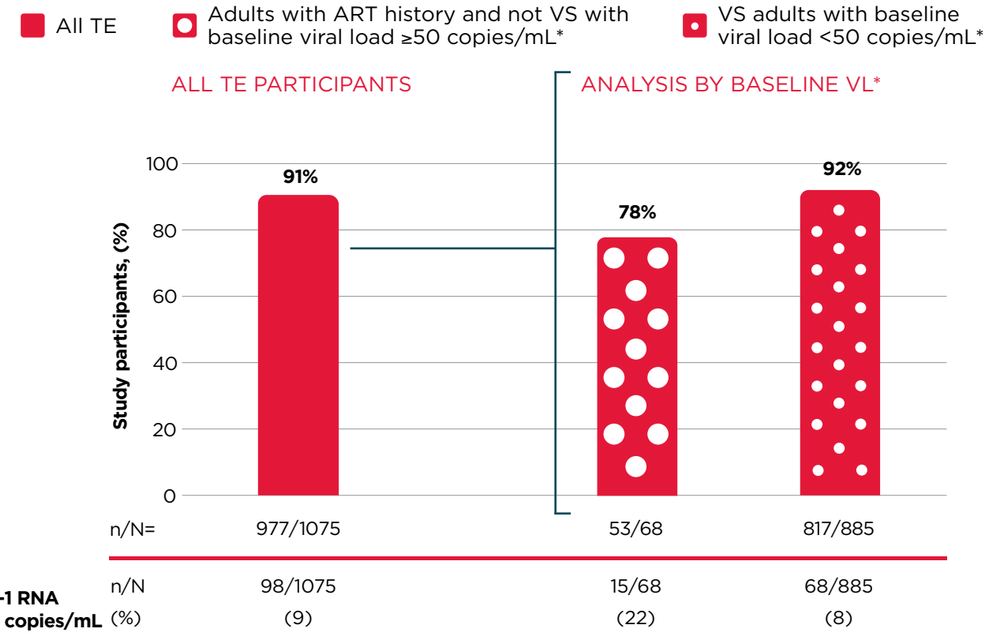
IMPORTANT SAFETY INFORMATION (cont'd)

Warnings and precautions (cont'd)

- **New onset or worsening renal impairment:** Postmarketing cases of renal impairment, including acute renal failure, proximal renal tubulopathy (PRT), and Fanconi syndrome have been reported with tenofovir alafenamide (TAF)–containing products. Do not initiate BIKTARVY in patients with estimated creatinine clearance (CrCl) <30 mL/min except in virologically suppressed adults <15 mL/min who are receiving chronic hemodialysis. Patients with impaired renal function and/or taking nephrotoxic agents (including NSAIDs) are at increased risk of renal-related adverse reactions. Discontinue BIKTARVY in patients who develop clinically significant decreases in renal function or evidence of Fanconi syndrome.

ART, antiretroviral therapy; ARV, antiretroviral; PWH, people with HIV; RNA, ribonucleic acid; TE, treatment experienced; VL, viral load; VS, virologically suppressed.

Virologic suppression (HIV-1 RNA <50 copies/mL)
Discontinuation=Failure (D=F)[1,8]



In a D=F analysis, study participants who discontinued BIKTARVY® prior to the 12-month visit window are imputed as ≥50 copies/mL.[1]

IMPORTANT SAFETY INFORMATION (cont'd)

Warnings and precautions (cont'd)

Renal monitoring: Prior to or when initiating BIKTARVY and during therapy, assess serum creatinine, CrCl, urine glucose, and urine protein in all patients as clinically appropriate. In patients with chronic kidney disease, assess serum phosphorus.

- **Lactic acidosis and severe hepatomegaly with steatosis:** Fatal cases have been reported with the use of nucleoside analogs, including FTC and TDF. Discontinue BIKTARVY if clinical or laboratory findings suggestive of lactic acidosis or pronounced hepatotoxicity develop, including hepatomegaly and steatosis in the absence of marked transaminase elevations.

Please see full Important Safety Information on page 11, and click to see full Prescribing Information for BIKTARVY, including **BOXED WARNING**.

*Subgroup analysis is limited to participants with available VL data at baseline. For M=E, n=110 did not have VL data at baseline. For D=F, n=122 did not have VL data at baseline.[1,8]

BIKTARVY®
bictegravir 50mg/emtricitabine 200mg/tenofovir alafenamide 25mg tablets

Zero cases of treatment-emergent resistance to BIKTARVY® in real-world cohorts through 12 months[1]

Treatment-naïve adults[1]	Treatment-experienced adults[1]	
	Virologically suppressed adults (baseline viral load <50 copies/mL)	**Adults with ART history and not virologically suppressed** (baseline viral load ≥50 copies/mL)
ZERO CASES OF RESISTANCE	ZERO CASES OF RESISTANCE	ZERO CASES OF RESISTANCE

There was no evidence of treatment-emergent resistance mutations to the components of BIKTARVY based on post-baseline genotyping reported in 20 participants, conducted at the discretion of investigators and local clinical practice.[1]

IMPORTANT SAFETY INFORMATION (cont'd)

Adverse reactions

- **Most common adverse reactions** (incidence ≥5%; all grades) in clinical studies through week 144 were diarrhea (6%), nausea (6%), and headache (5%).

Drug interactions

- **Prescribing information:** Consult the full prescribing information for BIKTARVY for more information on Contraindications, Warnings, and potentially significant drug interactions, including clinical comments.
- **Enzymes/transporters:** Drugs that induce P-gp or induce both CYP3A and UGT1A1 can substantially decrease the concentration of components of BIKTARVY. Drugs that inhibit P-gp, BCRP, or inhibit both CYP3A and UGT1A1 may significantly increase the concentrations of components of BIKTARVY. BIKTARVY can increase the concentration of drugs that are substrates of OCT2 or MATE1.
- **Drugs affecting renal function:** Coadministration of BIKTARVY with drugs that reduce renal function or compete for active tubular secretion may increase concentrations of FTC and tenofovir and the risk of adverse reactions.

Dosage and administration

- **Dosage:** Adult and pediatric patients weighing ≥25 kg: 1 tablet containing 50 mg bictegravir (BIC), 200 mg emtricitabine (FTC), and 25 mg tenofovir alafenamide (TAF) taken once daily with or without food. Pediatric patients weighing ≥14 kg to <25 kg: 1 tablet containing 30 mg BIC, 120 mg FTC, and 15 mg TAF taken once daily with or without food. For these pediatric patients, who are unable to swallow a whole tablet, the tablet can be split and each part taken separately as long as all parts are ingested within approximately 10 minutes.

Real-world BIKTARVY® safety and tolerability profile through 12 months

BICSTaR REAL-WORLD EVIDENCE

Most common (≥0.7% of all participants) adverse reactions reported through Month 12[1]

	All (N=1509)	TN (n=279)	All TE (n=1230)
Weight increased, %	3.4	3.6	3.4
Headache, %	1.2	1.4	1.1
Depression, %	0.8	0.4	0.9
Nausea, %	0.8	1.1	0.7
Fatigue, %	0.7	0.4	0.7

Discontinuations due to AEs[1]

	All (N=1509)	TN (n=279)	All TE (n=1230)
Percentage of participants, %	5.8	4.7	6.1

IMPORTANT SAFETY INFORMATION (cont'd)

Dosage and administration (cont'd)

- **Renal impairment:** For patients weighing ≥25 kg, not recommended in patients with CrCl 15 to <30 mL/min, or <15 mL/min who are not receiving chronic hemodialysis, or <15 mL/min who are receiving chronic hemodialysis and have no antiretroviral treatment history. For patients weighing ≥14 kg to <25 kg, not recommended in patients with CrCl <30 mL/min.
- **Hepatic impairment:** Not recommended in patients with severe hepatic impairment.
- **Prior to or when initiating:** Test patients for HBV infection.
- **Prior to or when initiating, and during treatment:** As clinically appropriate, assess serum creatinine, CrCl, urine glucose, and urine protein in all patients. In patients with chronic kidney disease, assess serum phosphorus.

Please see full Important Safety Information on page 11, and click to see full Prescribing Information for BIKTARVY, including **BOXED WARNING**.

AE, adverse event; ART, antiretroviral therapy; TE, treatment experienced; TN, treatment naïve.

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Real-world reasons for starting or switching to BIKTARVY®

Study participant-provided reasons[1]

n(%)	TN (n=279)
Treatment according to local guidelines	**228** (81.7)
Participant's wish	**75** (26.9)
Treatment as prevention*	**60** (21.5)
Other	**17** (6.1)

n(%)	TE (n=1230)
Simplification of ART	**707** (57.5)
Side effect of current ART	**277** (22.5)
Participant preference	**269** (21.9)
Other	**269** (21.9)

Reasons for initiating or switching to BIKTARVY were predefined in the case report form, and participants may have reported more than one reason. Reason for initiating or switching was an exploratory endpoint. Results are descriptive only and may not be generalizable.[1]

*According to DHHS guidelines, when PWH achieve and maintain an undetectable viral load for at least 6 months, it prevents sexual transmission of HIV.[7]

IMPORTANT SAFETY INFORMATION (cont'd)

Pregnancy and lactation

- **Pregnancy:** BIKTARVY is recommended in pregnant individuals who are virologically suppressed on a stable ARV regimen with no known substitutions associated with resistance to any of the individual components of BIKTARVY. Lower plasma exposures of BIKTARVY were observed during pregnancy; therefore, viral load should be monitored closely during pregnancy. An Antiretroviral Pregnancy Registry (APR) has been established. Available data from the APR for BIC, FTC, or TAF show no difference in the rates of birth defects compared with a US reference population.
- **Lactation:** Individuals with HIV-1 should be informed of the potential risks of breastfeeding.

ART, antiretroviral therapy; DHHS, US Department of Health and Human Services; PWH, people with HIV; Q, quartile; RNA, ribonucleic acid; TE, treatment experienced; TN, treatment naïve.

Real-world patient reported outcomes in treatment-experienced PWH

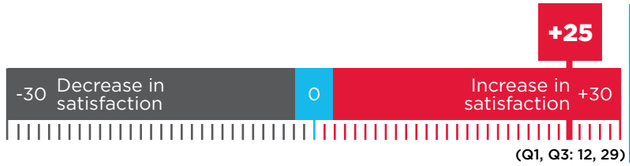
BICSTaR REAL-WORLD EVIDENCE

HIVTSQs: Treatment satisfaction with current ART at baseline[1]

56 median satisfaction score with ART at baseline out of a possible 60 (n=1134)

Treatment satisfaction was assessed using the HIV Treatment Satisfaction Questionnaire status version (HIVTSQs), a validated 10-item assessment. Responses are summed to produce a total satisfaction score ranging from 0 to 60, with higher scores indicating greater satisfaction. Results are descriptive only and may not be generalizable.[1,9]

HIVTSQc: Relative treatment satisfaction change score after switching to BIKTARVY® at 12 months



MEDIAN TOTAL CHANGE SCORE

+25 improvement in treatment satisfaction out of a maximum +30 at Month 12 on BIKTARVY (n=842)

Relative change in treatment satisfaction was assessed using the HIV Treatment Satisfaction Questionnaire change version (HIVTSQc). The HIVTSQc is a validated 10-item assessment that represents the change in satisfaction, allowing for an improvement in satisfaction to be expressed, even by participants with high levels of satisfaction at baseline. Responses are summed to produce a satisfaction change score from -30 (deterioration in satisfaction) to +30 (improvement in satisfaction). Results are descriptive only and may not be generalizable.[1,9]

References: 1. Esser S, Brunetta J, Inciarte A, et al. Twelve-month effectiveness and safety of bictegravir/emtricitabine/tenofovir alafenamide in people with HIV: real-world insights from BICSTaR cohorts. *HIV Med*. 2024;25(4):440-453. **2.** Gallant J, Lazzarin A, Mills A, et al. Bictegravir, emtricitabine, and tenofovir alafenamide versus dolutegravir, abacavir, and lamivudine for initial treatment of HIV-1 infection (GS-US-380-1489): a double-blind, multicentre, phase 3, randomised controlled non-inferiority trial. *Lancet*. 2017;390(10107):2063-2072. **3.** Sax PE, Pozniak A, Montes ML, et al. Coformulated bictegravir, emtricitabine, and tenofovir alafenamide versus dolutegravir with emtricitabine and tenofovir alafenamide for initial treatment of HIV-1 infection (GS-US-380-1490): a randomised, double-blind, multicentre, phase 3, non-inferiority trial. *Lancet*. 2017;390(10107):2073-2082. **4.** Molina JM, Ward D, Brar I, et al. Switching to fixed-dose bictegravir, emtricitabine, and tenofovir alafenamide from dolutegravir plus abacavir and lamivudine in virologically suppressed adults with HIV-1: 48 week results of a randomised, double-blind, multicentre, active-controlled, phase 3, non-inferiority trial. *Lancet HIV*. 2018;5(7):e357-e365. **5.** Daar ES, DeJesus E, Ruane P, et al. Efficacy and safety of switching to fixed-dose bictegravir, emtricitabine, and tenofovir alafenamide from boosted protease inhibitor-based regimens in virologically suppressed adults with HIV-1: 48 week results of a randomised, open-label, multicentre, phase 3, non-inferiority trial. *Lancet HIV*. 2018;5(7):e347-e356. **6.** Li P, Prajapati G, Geng Z, et al. Antiretroviral Treatment Gaps and Adherence Among People with HIV in the U.S. Medicare Program. *AIDS Behav*. 2024;28(3):1002-1014. **7.** Panel on Antiretroviral Guidelines for Adults and Adolescents. Guidelines for the use of antiretroviral agents in adults and adolescents with HIV. Department of Health and Human Services. Updated September 12, 2024. Accessed June 4, 2025. https://clinicalinfo.hiv.gov/sites/default/files/guidelines/documents/adult-adolescent-arv/guidelines-adult-adolescent-arv.pdf **8.** Data on file. Gilead Sciences, Inc. **9.** Woodcock A, Bradley C. Validation of the revised 10-item HIV Treatment Satisfaction Questionnaire status version and new change version. *Value Health*. 2006;9(5):320-333. **10.** BIKTARVY. Prescribing information. Gilead Sciences, Inc.; 2025. **11.** Kagan RM, Baxter JD, Kim T, Marlowe EM. HIV-1 drug resistance trends in the era of modern antiretrovirals: 2018-2024. Poster presented at: Conference on Retroviruses and Opportunistic Infections 2025; Poster 730. **12.** Bajema KL, Nance RM, Delaney JAC, et al. Substantial decline in heavily treated therapy-experienced persons with HIV with limited antiretroviral treatment options. *AIDS*. 2020;34(14):2051-2059.

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BIKTARVY®
bictegravir 50mg/emtricitabine 200mg/ tenofovir alafenamide 25mg tablets

INDICATION

BIKTARVY® is indicated as a complete regimen for the treatment of HIV-1 infection in adult and pediatric patients weighing ≥14 kg with no antiretroviral (ARV) treatment history; or with an ARV treatment history and not virologically suppressed, with no known or suspected substitutions associated with resistance to the integrase strand inhibitor class, emtricitabine, or tenofovir; or to replace the current ARV regimen in those who are virologically suppressed (HIV-1 RNA <50 copies per mL) on a stable ARV regimen with no known or suspected substitutions associated with resistance to bictegravir or tenofovir.

IMPORTANT SAFETY INFORMATION

BOXED WARNING: POST TREATMENT ACUTE EXACERBATION OF HEPATITIS B

- **Severe acute exacerbations of hepatitis B have been reported in patients with HIV-1 and HBV who have discontinued products containing emtricitabine (FTC) and/or tenofovir disoproxil fumarate (TDF), and may occur with discontinuation of BIKTARVY. Closely monitor hepatic function with both clinical and laboratory follow-up for at least several months in patients with HIV-1 and HBV who discontinue BIKTARVY. If appropriate, anti-hepatitis B therapy may be warranted.**

Contraindications

- **Coadministration:** Do not use BIKTARVY with dofetilide or rifampin.

Warnings and precautions

- **Drug interactions:** See Contraindications and Drug Interactions sections. Consider the potential for drug interactions prior to and during BIKTARVY therapy and monitor for adverse reactions.
- **Immune reconstitution syndrome,** including the occurrence of autoimmune disorders with variable time to onset, has been reported.
- **New onset or worsening renal impairment:** Postmarketing cases of renal impairment, including acute renal failure, proximal renal tubulopathy (PRT), and Fanconi syndrome have been reported with tenofovir alafenamide (TAF)–containing products. Do not initiate BIKTARVY in patients with estimated creatinine clearance (CrCl) <30 mL/min except in virologically suppressed adults <15 mL/min who are receiving chronic hemodialysis. Patients with impaired renal function and/or taking nephrotoxic agents (including NSAIDs) are at increased risk of renal-related adverse reactions. Discontinue BIKTARVY in patients who develop clinically significant decreases in renal function or evidence of Fanconi syndrome.
  Renal monitoring: Prior to or when initiating BIKTARVY and during therapy, assess serum creatinine, CrCl, urine glucose, and urine protein in all patients as clinically appropriate. In patients with chronic kidney disease, assess serum phosphorus.
- **Lactic acidosis and severe hepatomegaly with steatosis:** Fatal cases have been reported with the use of nucleoside analogs, including FTC and TDF. Discontinue BIKTARVY if clinical or laboratory findings suggestive of lactic acidosis or pronounced hepatotoxicity develop, including hepatomegaly and steatosis in the absence of marked transaminase elevations.

Adverse reactions

- **Most common adverse reactions** (incidence ≥5%; all grades) in clinical studies through week 144 were diarrhea (6%), nausea (6%), and headache (5%).

Drug interactions

- **Prescribing information:** Consult the full prescribing information for BIKTARVY® for more information on Contraindications, Warnings, and potentially significant drug interactions, including clinical comments.
- **Enzymes/transporters:** Drugs that induce P-gp or induce both CYP3A and UGT1A1 can substantially decrease the concentration of components of BIKTARVY. Drugs that inhibit P-gp, BCRP, or inhibit both CYP3A and UGT1A1 may significantly increase the concentrations of components of BIKTARVY. BIKTARVY can increase the concentration of drugs that are substrates of OCT2 or MATE1.
- **Drugs affecting renal function:** Coadministration of BIKTARVY with drugs that reduce renal function or compete for active tubular secretion may increase concentrations of FTC and tenofovir and the risk of adverse reactions.

Dosage and administration

- **Dosage:** Adult and pediatric patients weighing ≥25 kg: 1 tablet containing 50 mg bictegravir (BIC), 200 mg emtricitabine (FTC), and 25 mg tenofovir alafenamide (TAF) taken once daily with or without food. Pediatric patients weighing ≥14 kg to <25 kg: 1 tablet containing 30 mg BIC, 120 mg FTC, and 15 mg TAF taken once daily with or without food. For these pediatric patients, who are unable to swallow a whole tablet, the tablet can be split and each part taken separately as long as all parts are ingested within approximately 10 minutes.
- **Renal impairment:** For patients weighing ≥25 kg, not recommended in patients with CrCl 15 to <30 mL/min, or <15 mL/min who are not receiving chronic hemodialysis, or <15 mL/min who are receiving chronic hemodialysis and have no antiretroviral treatment history. For patients weighing ≥14 kg to <25 kg, not recommended in patients with CrCl <30 mL/min.
- **Hepatic impairment:** Not recommended in patients with severe hepatic impairment.
- **Prior to or when initiating:** Test patients for HBV infection.
- **Prior to or when initiating, and during treatment:** As clinically appropriate, assess serum creatinine, CrCl, urine glucose, and urine protein in all patients. In patients with chronic kidney disease, assess serum phosphorus.

Pregnancy and lactation

- **Pregnancy:** BIKTARVY is recommended in pregnant individuals who are virologically suppressed on a stable ARV regimen with no known substitutions associated with resistance to any of the individual components of BIKTARVY. Lower plasma exposures of BIKTARVY were observed during pregnancy; therefore, viral load should be monitored closely during pregnancy. An Antiretroviral Pregnancy Registry (APR) has been established. Available data from the APR for BIC, FTC, or TAF show no difference in the rates of birth defects compared with a US reference population.
- **Lactation:** Individuals with HIV-1 should be informed of the potential risks of breastfeeding.

Please see full Prescribing Information for BIKTARVY, including **BOXED WARNING**.

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Consider BIKTARVY® for *Rapid Restart*

For clinically appropriate individuals, BIKTARVY can be restarted immediately[7,10]

Management strategies should be individualized including assessment of: viral load, resistance testing, ART history, adherence, and potential drug interactions[7,10]

BIKTARVY is indicated as a complete regimen for the treatment of HIV-1 infection in adult and pediatric patients weighing ≥14 kg with an antiretroviral (ARV) treatment history and not virologically suppressed, with no known or suspected substitutions associated with resistance to the integrase strand inhibitor class, emtricitabine, or tenofovir.

BIKTARVY is not recommended in patients with severe hepatic impairment (Child-Pugh Class C). For patients weighing ≥25 kg, BIKTARVY is not recommended in patients with severe renal impairment (estimated CrCl <30 mL/min) except in virologically suppressed patients with CrCl <15 mL/min on chronic hemodialysis. BIKTARVY is not recommended for patients weighing ≥14 kg to <25 kg with CrCl <30 mL/min[10]

Testing with BIKTARVY according to the Prescribing Information:

- Prior to or when initiating BIKTARVY, and during treatment, assess serum creatinine, estimated creatinine clearance, urine glucose, and urine protein in all patients as clinically appropriate. In patients with chronic kidney disease, assess serum phosphorus[10]
- Prior to or when initiating BIKTARVY, test for hepatitis B virus infection[10]

BIKTARVY is **indicated for most people with HIV-1** when **STARTING, RESTARTING, OR SWITCHING ART**[10-12]

INDICATION

BIKTARVY is indicated as a complete regimen for the treatment of HIV-1 infection in adult and pediatric patients weighing ≥14 kg with no antiretroviral (ARV) treatment history; or with an ARV treatment history and not virologically suppressed, with no known or suspected substitutions associated with resistance to the integrase strand inhibitor class, emtricitabine, or tenofovir; or to replace the current ARV regimen in those who are virologically suppressed (HIV-1 RNA <50 copies per mL) on a stable ARV regimen with no known or suspected substitutions associated with resistance to bictegravir or tenofovir.

IMPORTANT SAFETY INFORMATION

BOXED WARNING: POST TREATMENT ACUTE EXACERBATION OF HEPATITIS B

- **Severe acute exacerbations of hepatitis B have been reported in patients with HIV-1 and HBV who have discontinued products containing emtricitabine (FTC) and/or tenofovir disoproxil fumarate (TDF), and may occur with discontinuation of BIKTARVY. Closely monitor hepatic function with both clinical and laboratory follow-up for at least several months in patients with HIV-1 and HBV who discontinue BIKTARVY. If appropriate, anti-hepatitis B therapy may be warranted.**

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ART, antiretroviral therapy; CrCl, creatinine clearance; RNA, ribonucleic acid.

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