Starting your appropriate treatment-naïve patients on VEMLIDY® (tenofovir alafenamide)

Because it's the moments that matterchoose VEMLIDY for the long term

Why you may want to consider VEMLIDY for your treatment-naïve patients



Not actual patients.

INDICATION

VEMLIDY is indicated for the treatment of chronic hepatitis B virus (HBV) infection in adults with compensated liver disease.

IMPORTANT SAFETY INFORMATION

BOXED WARNING: POSTTREATMENT SEVERE ACUTE EXACERBATION OF HEPATITIS B

• Discontinuation of anti-hepatitis B therapy, including VEMLIDY, may result in severe acute exacerbations of hepatitis B. Hepatic function should be monitored closely with both clinical and laboratory follow-up for at least several months in patients who discontinue anti-hepatitis B therapy, including VEMLIDY. If appropriate, resumption of anti-hepatitis B therapy may be warranted.





<u>Click here</u> for full Prescribing Information for VEMLIDY, including **BOXED WARNING** on posttreatment severe acute exacerbation of hepatitis B.

The efficacy and safety of VEMLIDY were evaluated in two large, clinical trials^{1,2}

~75% of patients in pivotal Trials 108/110 were treatment naïve²

The efficacy and safety of The primary endpoint VEMLIDY in the treatment for both studies was of adults with chronic HBV DNA <29 IU/mL hepatitis B (CHB) infection and noninferiority to with compensated liver tenofovir disoproxil disease are based on data fumarate (TDF) (10% from 2 randomized, doublemargin; 95% confidence blind, active-controlled, interval [CI] approach) at Week 48.^{1,3,4} noninferiority trials.1,3,4,a

Additional efficacy endpoints evaluated at Week 48, Week 96, and Week 144 for both trials include the proportion of subjects with HBV DNA <29 IU/mL, ALT normalization, and hepatitis B surface antigen (HBsAg) loss and seroconversion. Hepatitis B envelope antigen (HBeAg) loss and seroconversion were also assessed in Trial 110.^{1,3,4}



^aKey inclusion criteria: HBV DNA ≥20,000 IU/mL; alanine aminotransferase (ALT) >60 U/L (males) or >38 U/L (females) and ≤10 × upper limit of normal (ULN) by central laboratory range^{1,3,4}

^bThe numbers of subjects listed after Week 96 refer to those who entered the open-label phase or remained in the double-blind phase, and exclude subjects who prematurely discontinued double-blind study treatment by Week 96.²

- The original protocol was amended to extend the double-blind phase from 96 weeks to 144 weeks, followed by an open-label phase through Week 384⁵
- The original protocol was amended to extend the double-blind phase from 96 weeks to 144 weeks; however, before implementation of the protocol amendment, 540 patients entered the open-label phase at Week 96 (n=360 remained on VEMLIDY and n=180 switched from TDF to VEMLIDY)²
- At Week 144, all 1137 remaining HBeAg- and HBeAg+ patients (out of the original 1298) entered the open-label VEMLIDY phase for an extension trial that is still ongoing²
- The 5-year analysis is not presented in the VEMLIDY full Prescribing Information





Characteristics of the patients in Trials 108 and 110

~75% of patients in pivotal Trials 108/110 were treatment naïve²

	Pooled po		
Baseline characteristics ^{1,2}	VEMLIDY (n=866)	TDF (n=432)	
Mean age, y (range)	40 (18-80)	41 (18-72)	
Male, n (%)	544 (63)	275 (64)	-
Asian, n (%)	687 (79)	333 (77)	-
HBV genotype A, B, C, D, %	6, 18, 48, 26	7, 20, 46, 24	_
Mean HBV DNA, log ₁₀ IU/mL (range)	7.0 (1.8-9.9)	7.0 (1.4-9.9)	
Median ALT, U/L (Q1, Q3)	80 (56, 123)	80 (53, 130)	-
History of cirrhosis, n (%)ª	65/636 (10)	38/326 (12)	~75% of the
Treatment naïve, n (%)	655 (76)	324 (75)	subjects were
Prior oral antiviral therapy, n (%) ^ь			treatment naïve
Entecavir	109 (13)	49 (11)	-
Lamivudine	86 (10)	40 (9)	-
Adefovir dipivoxil	35 (4)	14 (3)	-
Telbivudine	21 (2)	12 (3)	-
Other ^c	14 (2)	6 (1)	_
Hip bone mineral density (BMD) osteopenia or osteoporosis, n (%)	268 (31)	133 (31)	-
Spine BMD osteopenia or osteoporosis, n (%)	366 (42)	181 (42)	-

Treatment-naïve subjects had <12 weeks of previous treatment with any nucleoside/nucleotide analog. Treatment-experienced subjects met all entry criteria (including HBV DNA \geq 20,000 IU/mL and serum ALT criteria) and had \geq 12 weeks of previous treatment with any nucleoside/nucleotide analog.

 $^{\rm a}\text{Excludes}$ patients with missing values. $^{\rm 2}$

^bExcluding interferon and TDF.²

^c"Other" category included clevudine, tenofovir alafenamide, and other oral nucleos(t)ide agents.²





VEMLIDY has efficacy you can trust

VEMLIDY demonstrated powerful antiviral efficacy with viral suppression at Weeks 48, 96, and 144 (HBV DNA <29 IU/mL)¹⁻⁴

Trial 108 (HBeAg- patients) ^{a,b}			Trial 110 (HBeAg+ patients) ^{a,b}				
94 %	93 %	87 %	85 %	64 %	67 %	74 %	71 %
268/285	130/140	248/285	63/74	371/581	195/292	428/581	127/178
Wee	k 48	Weel	< 144	Wee	k 48	Wee	k 144
VEMLIDY TDF							

- Trial 108 viral suppression at Week 96: VEMLIDY 90% (257/285), TDF 91% (127/140)⁵
- Trial 110 viral suppression at Week 96: VEMLIDY 73% (423/581), TDF 75% (218/292)⁵

Mean baseline plasma HBV DNA was 5.8 log₁₀ IU/mL in Trial 108 and 7.6 log₁₀ IU/mL in Trial 110.¹

Primary efficacy endpoint: The proportion of patients with HBV DNA <29 IU/mL and noninferiority to TDF (10% margin; 95% CI approach) at Week 48 for both trials.^{1,3,4}

Most common adverse reactions (incidence \geq 5%; all grades) in clinical studies through Week 144 were headache, upper respiratory tract infection, abdominal pain, cough, back pain, arthralgia, fatigue, nausea, diarrhea, dyspepsia, and pyrexia.²

^aSubject populations analyzed included all treatment-naïve and treatment-experienced subjects who were randomized into the trial and received at least 1 dose of study drug; a missing=failure approach was used.¹

^bThe Week 144 analysis did not include the 66 patients from the TDF group in Trial 108 and the 114 patients from the TDF group in Trial 110 who had rolled over from double-blind TDF to open-label VEMLIDY at Week 96 prior to the study amendment.²

IMPORTANT SAFETY INFORMATION

- **Risk of Development of HIV-1 Resistance in HBV/HIV-1 Coinfected Patients:** Due to this risk, VEMLIDY alone should not be used for the treatment of HIV-1 infection. Safety and efficacy of VEMLIDY have not been established in HBV/ HIV-1 coinfected patients. HIV antibody testing should be offered to all HBV-infected patients before initiating therapy with VEMLIDY, and, if positive, an appropriate antiretroviral combination regimen that is recommended for HBV/HIV-1 coinfected patients should be used.
- 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 TAF-containing products. Patients with impaired renal function and/or taking nephrotoxic agents (including NSAIDs) are at increased risk of renal-related adverse reactions. Discontinue VEMLIDY in patients who develop clinically significant decreases in renal function or evidence of Fanconi syndrome. Monitor renal function in all patients See Dosage and Administration.
- Lactic Acidosis and Severe Hepatomegaly with Steatosis: Fatal cases have been reported with the use of nucleoside analogs, including tenofovir disoproxil fumarate (TDF). Discontinue VEMLIDY if clinical or laboratory findings suggestive of lactic acidosis or pronounced hepatotoxicity develop, including hepatomegaly and steatosis in the absence of marked transaminase elevations.





Patients in Trials 108 and 110 experienced long-term viral suppression with VEMLIDY after 5 years

Pooled Open-Label Analysis: Pooled efficacy analysis from Trials 108 and 110 was assessed at Week 240 for the subset of patients who entered the open-label phase at Week 96 and Week 144. This analysis includes 741 subjects who continued on VEMLIDY (pooled), 150 subjects who switched from TDF to VEMLIDY at Week 96, and 202 subjects who switched from TDF to VEMLIDY at Week 96, and 202 subjects who switched from TDF to VEMLIDY at Week 144. Efficacy in the open-label phase was calculated using a missing=failure (M=F) subject analysis.^{2,a}



~75% of patients in pivotal Trials 108/110 were treatment naïve.²

Most common adverse reactions (incidence ≥2%; all grades) at Week 240 open-label extension (OLE) were headache, abdominal pain, cough, back pain, fatigue, nausea, arthralgia, diarrhea, and dyspepsia.²

^aThe open-label phase analysis excludes (n=69) patients whose site did not participate in open-label phase treatment at Week 144.² ^bMean baseline plasma HBV DNA: 5.8 log₁₀ IU/mL in Trial 108 and 7.6 log₁₀ IU/mL in Trial 110.¹

IMPORTANT SAFETY INFORMATION (CONT.)

- Risk of Development of HIV-1 Resistance in HBV/HIV-1 Coinfected Patients: Due to this risk, VEMLIDY alone should not be used for the treatment of HIV-1 infection. Safety and efficacy of VEMLIDY have not been established in HBV/ HIV-1 coinfected patients. HIV antibody testing should be offered to all HBV-infected patients before initiating therapy with VEMLIDY, and, if positive, an appropriate antiretroviral combination regimen that is recommended for HBV/HIV-1 coinfected patients should be used.
- 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 TAF-containing products. Patients with impaired renal function and/or taking nephrotoxic agents (including NSAIDs) are at increased risk of renal-related adverse reactions. Discontinue VEMLIDY in patients who develop clinically significant decreases in renal function or evidence of Fanconi syndrome. Monitor renal function in all patients See Dosage and Administration.
- Lactic Acidosis and Severe Hepatomegaly with Steatosis: Fatal cases have been reported with the use of nucleoside analogs, including tenofovir disoproxil fumarate (TDF). Discontinue VEMLIDY if clinical or laboratory findings suggestive of lactic acidosis or pronounced hepatotoxicity develop, including hepatomegaly and steatosis in the absence of marked transaminase elevations.





VEMLIDY has proven ALT normalization for your chronic HBV patients with compensated liver disease

ALT normalization rates at Weeks 48, 96, and 144 (2016 AASLD criteria)^{1,2,5,a,b}



At Week 48: ALT normalization was 50% (137/276) for VEMLIDY vs 32% (44/138) for TDF in Trial 108 and 45% (257/572) for VEMLIDY vs 36% (105/290) for TDF in Trial 110.¹

At Week 96: ALT normalization was 50% (139/276) for VEMLIDY vs 40% (55/138) for TDF in Trial 108 and 52% (299/572) for VEMLIDY vs 42% (121/290) for TDF in Trial 110.⁵

Most common adverse reactions (incidence \geq 5%; all grades) in clinical studies through Week 144 were headache, upper respiratory tract infection, abdominal pain, cough, back pain, arthralgia, fatigue, nausea, diarrhea, dyspepsia, and pyrexia.²

AASLD=American Association for the Study of Liver Diseases.

^aThe population used for analysis of ALT normalization included only patients with ALT above ULN based on the AASLD 2016 criteria (>30 U/L and >19 U/L for males and females, respectively) at baseline.¹

^bThe Week 144 analysis did not include the 66 patients from the TDF group in Trial 108 and the 114 patients from the TDF group in Trial 110 who had rolled over from double-blind TDF to open-label VEMLIDY at Week 96 prior to the study amendment.²

IMPORTANT SAFETY INFORMATION (CONT.)

- **Risk of Development of HIV-1 Resistance in HBV/HIV-1 Coinfected Patients:** Due to this risk, VEMLIDY alone should not be used for the treatment of HIV-1 infection. Safety and efficacy of VEMLIDY have not been established in HBV/ HIV-1 coinfected patients. HIV antibody testing should be offered to all HBV-infected patients before initiating therapy with VEMLIDY, and, if positive, an appropriate antiretroviral combination regimen that is recommended for HBV/HIV-1 coinfected patients should be used.
- 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 TAF-containing products. Patients with impaired renal function and/or taking nephrotoxic agents (including NSAIDs) are at increased risk of renal-related adverse reactions. Discontinue VEMLIDY in patients who develop clinically significant decreases in renal function or evidence of Fanconi syndrome. Monitor renal function in all patients See Dosage and Administration.
- Lactic Acidosis and Severe Hepatomegaly with Steatosis: Fatal cases have been reported with the use of nucleoside analogs, including tenofovir disoproxil fumarate (TDF). Discontinue VEMLIDY if clinical or laboratory findings suggestive of lactic acidosis or pronounced hepatotoxicity develop, including hepatomegaly and steatosis in the absence of marked transaminase elevations.





Patients in Trials 108 and 110 experienced long-term ALT normalization with VEMLIDY after 5 years

Pooled Open-Label Analysis: Pooled efficacy analysis from Trials 108 and 110 was assessed at Week 240 for the subset of patients who entered the open-label phase at Week 96 and Week 144. This analysis includes 741 subjects who continued on VEMLIDY (pooled), 150 subjects who switched from TDF to VEMLIDY at Week 96, and 202 subjects who switched from TDF to VEMLIDY at Week 144. Efficacy in the open-label phase was calculated using a missing=failure (M=F) subject analysis.²

~75% of patients in pivotal Trials 108/110 were treatment naïve.²



ALT normalization at Week 240 (2018 AASLD criteria)^{2,a,b}

Most common adverse reactions (incidence \geq 2%; all grades) at Week 240 OLE were headache, abdominal pain, cough, back pain, fatigue, nausea, arthralgia, diarrhea, and dyspepsia.²

^aThe open-label phase analysis excludes (n=69) patients whose site did not participate in open-label phase treatment at Week 144.² ^bThe population used for analysis of ALT normalization included only subjects with ALT >ULN per the 2018 AASLD criteria (≤35 U/L for males and ≤25 U/L for females) at baseline.²

IMPORTANT SAFETY INFORMATION (CONT.)

- Risk of Development of HIV-1 Resistance in HBV/HIV-1 Coinfected Patients: Due to this risk, VEMLIDY alone should not be used for the treatment of HIV-1 infection. Safety and efficacy of VEMLIDY have not been established in HBV/ HIV-1 coinfected patients. HIV antibody testing should be offered to all HBV-infected patients before initiating therapy with VEMLIDY, and, if positive, an appropriate antiretroviral combination regimen that is recommended for HBV/HIV-1 coinfected patients should be used.
- 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 TAF-containing products. Patients with impaired renal function and/or taking nephrotoxic agents (including NSAIDs) are at increased risk of renal-related adverse reactions. Discontinue VEMLIDY in patients who develop clinically significant decreases in renal function or evidence of Fanconi syndrome. Monitor renal function in all patients See Dosage and Administration.
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VEMLIDY showed reduced impact on renal safety parameters at Week 144

Change in eGFR_{cc} from baseline at Week 144 (pooled)²

Median baseline eGFR_{cc} was 106 mL/min and 105 mL/min for VEMLIDY and TDF, respectively.²



Median change from baseline to Week 96 in eGFR_{CG} was -1.2 mL/min in the VEMLIDY group (n=790) and -4.8 mL/min in those receiving TDF (n=390).^{1,2}

Renal effects of VEMLIDY and TDF were compared in Trials 108 and 110

The long-term clinical significance of these renal laboratory changes on adverse reaction frequencies between VEMLIDY and TDF is not known.¹

eGFR_{cc}=estimated glomerular filtration rate by Cockroft-Gault.

^aThe Week 144 analysis did not include the 180 subjects (HBeAg-: 66 subjects; HBeAg+: 114 subjects) who had rolled over from double-blind TDF to open-label VEMLIDY at Week 96 prior to the trial amendment.²

IMPORTANT SAFETY INFORMATION (CONT.)

Dosage and Administration

• **Renal Impairment:** Not recommended in patients with end stage renal disease (ESRD; eCrCl <15 mL/min) who are not receiving chronic hemodialysis; in patients on chronic hemodialysis, on hemodialysis days, administer VEMLIDY after completion of hemodialysis treatment.





Long-term renal safety parameters remained stable at Year 5 in patients taking VEMLIDY

Pooled Safety Analysis (Week 240): Pooled safety analysis (observed data) from Trials 108 and 110 was assessed at Week 240. This analysis includes 866 subjects who initiated VEMLIDY at baseline,^a 180 subjects who switched from TDF to VEMLIDY at Week 96, and 202 subjects who switched from TDF to VEMLIDY at Week 144.²

~75% of patients in pivotal Trials 108/110 were treatment naïve.²



Changes in eGFR_{cc} from baseline²

The long-term clinical significance of these renal laboratory changes on adverse reaction frequencies between VEMLIDY and TDF is not known.¹

Median change in eGFR_{cg} from Week 96 to 120: -0.6 mL/min in subjects who remained on VEMLIDY and +1.8 mL/min in subjects who switched from TDF to VEMLIDY.¹

^aVEMLIDY group includes VEMLIDY subjects who rolled over to open-label VEMLIDY at Week 96 or Week 144.

IMPORTANT SAFETY INFORMATION (CONT.)

Dosage and Administration

• **Renal Impairment:** Not recommended in patients with end stage renal disease (ESRD; eCrCl <15 mL/min) who are not receiving chronic hemodialysis; in patients on chronic hemodialysis, on hemodialysis days, administer VEMLIDY after completion of hemodialysis treatment.





VEMLIDY showed reduced impact on BMD at Week 144

Impacts on spine and hip BMD with VEMLIDY and TDF were compared in Trials 108 and 110²

Change in lumbar spine BMD from baseline at Week 144 (pooled)^{a,b}



Change in total hip BMD from baseline at Week 144 (pooled)^{a,b}



Subjects with \geq 5% BMD decline in the lumbar spine: 11% (VEMLIDY) vs 25% (TDF) at Week 96 12% (VEMLIDY) vs 24% (TDF) at Week 144^{1,2} **Subjects with ≥7% BMD decline in the femoral neck:** 5% (VEMLIDY) vs 13% (TDF) at Week 96 9% (VEMLIDY) vs 16% (TDF) at Week 144^{1,2}

The long-term clinical significance of these BMD changes is not known.¹

The mean percentage change in BMD from baseline to Week 96 was -0.7% with VEMLIDY (n=746) compared to -2.6% with TDF (n=371) at the lumbar spine, and -0.3% (n=740) compared to -2.5% (n=369) at the total hip.^{1,2}

^aOnly subjects with nonmissing baseline data for spine or hip BMD were included in the spine or hip dual-energy x-ray absorptiometry (DXA) analysis set.²

^bThe Week 144 analysis did not include the 180 subjects (HBeAg-: 66 subjects; HBeAg+: 114 subjects) who had rolled over from double-blind TDF to open-label VEMLIDY at Week 96 prior to the trial amendment.²

IMPORTANT SAFETY INFORMATION (CONT.)

Warnings and Precautions

• Lactic Acidosis and Severe Hepatomegaly with Steatosis: Fatal cases have been reported with the use of nucleoside analogs, including tenofovir disoproxil fumarate (TDF). Discontinue VEMLIDY if clinical or laboratory findings suggestive of lactic acidosis or pronounced hepatotoxicity develop, including hepatomegaly and steatosis in the absence of marked transaminase elevations.





Long-term BMD remained stable at Year 5 in patients taking VEMLIDY

Pooled Safety Analysis (Week 240): Pooled safety analysis (observed data) from Trials 108 and 110 was assessed at Week 240. This analysis includes 866 subjects who initiated VEMLIDY at baseline,^a 180 subjects who switched from TDF to VEMLIDY at Week 96, and 202 subjects who switched from TDF to VEMLIDY at Week 144. Only subjects with nonmissing baseline data for spine or hip BMD were included in the spine or hip DXA analysis set.²

~75% of patients in pivotal trials 108/110 were treatment naïve.²

The long-term clinical significance of these BMD changes is not known.¹

Spine and hip BMD remained stable in VEMLIDY patients, and there was an improvement seen in patients who switched to VEMLIDY from TDF.²

Mean % change in lumbar spine BMD from Week 96 to Week 120: +0.6% in subjects who remained on VEMLIDY; +1.7% in those who switched from TDF to VEMLIDY.¹

Mean % change in total hip BMD from Week 96 to Week 120: 0% in subjects who remained on VEMLIDY; +0.6% in those who switched from TDF to VEMLIDY.¹





^aVEMLIDY group includes VEMLIDY subjects who rolled over to open-label VEMLIDY at Week 96 or Week 144.

IMPORTANT SAFETY INFORMATION (CONT.)

Warnings and Precautions

• Lactic Acidosis and Severe Hepatomegaly with Steatosis: Fatal cases have been reported with the use of nucleoside analogs, including tenofovir disoproxil fumarate (TDF). Discontinue VEMLIDY if clinical or laboratory findings suggestive of lactic acidosis or pronounced hepatotoxicity develop, including hepatomegaly and steatosis in the absence of marked transaminase elevations.





It is important to know that there has been no known resistance with long-term VEMLIDY treatment

0[%] resistance

with long-term treatment on VEMLIDY through 5 years^{2*}

*Proven in Trials 108/110 through Week 240.

Genotypic resistance analysis was performed on patients experiencing either²:

- Virologic breakthrough (2 consecutive visits with HBV DNA ≥69 IU/mL [400 copies/mL] after having been
 <69 IU/mL, or ≥1.0-log₁₀ increase in HBV DNA from nadir)
- Early discontinuation at or after Week 24 with HBV DNA ≥69 IU/mL

IMPORTANT SAFETY INFORMATION (CONT.)

Drug Interactions

- Coadministration of VEMLIDY with drugs that reduce renal function or compete for active tubular secretion may increase concentrations of tenofovir and the risk of adverse reactions.
- Coadministration of VEMLIDY is not recommended with the following: oxcarbazepine, phenobarbital, phenytoin, rifabutin, rifampin, rifapentine, or St. John's wort. Such coadministration is expected to decrease the concentration of tenofovir alafenamide, reducing the therapeutic effect of VEMLIDY. Drugs that strongly affect P-glycoprotein (P-gp) and breast cancer resistance protein (BCRP) activity may lead to changes in VEMLIDY absorption.

Consult the full prescribing information for VEMLIDY for more information on potentially significant drug interactions, including clinical comments.

Dosage and Administration

- **Testing Prior to Initiation:** HIV infection.
- **Prior to or When Initiating, and During Treatment:** On a clinically appropriate schedule, assess serum creatinine, estimated creatinine clearance, urine glucose, and urine protein in all patients. In patients with chronic kidney disease, also assess serum phosphorus.
- Dosage in Adults: 1 tablet taken once daily with food.
- **Renal Impairment:** Not recommended in patients with end stage renal disease (ESRD; eCrCl <15 mL/min) who are not receiving chronic hemodialysis; in patients on chronic hemodialysis, on hemodialysis days, administer VEMLIDY after completion of hemodialysis treatment.
- Hepatic Impairment: Not recommended in patients with decompensated (Child-Pugh B or C) hepatic impairment.





Adverse events

Trials 108 and 110 (pooled)

The proportion of subjects who discontinued treatment at Week 96 due to adverse reactions (ARs) of any severity was 1.5% with VEMLIDY and 0.9% with TDF.¹ At Week 144, the discontinuation rates due to ARs of any severity were 1.6% with VEMLIDY and 1.6% with TDF.²

Adverse reactions^a (all grades) reported in ≥5% of subjects on VEMLIDY in Trials 108 and 110 (Week 96 and Week 144 analyses)

	VEMLIDY pooled population (n=866)		
Adverse reactions ^{1,2}	Week 96	Week 144	
Headache	12%	13%	
Upper respiratory tract infection	11%	13%	
Abdominal pain ^₅	9%	10%	
Cough	8%	9%	
Back pain	6%	7%	
Fatigue	6%	7%	
Nausea	6%	7%	
Arthralgia	5%	7%	
Diarrhea	5%	6%	
Dyspepsia	5%	5%	
Pyrexia	5%	5%	

Pooled analysis of 1157 subjects at Week 240 who entered the VEMLIDY open-label extension²:

 Most common ARs (incidence ≥2%; all grades) were headache, abdominal pain, cough, back pain, fatigue, nausea, arthralgia, diarrhea, and dyspepsia

At Week 240, there were a **total of 19 cases** (1.5% incidence) of hepatocellular carcinoma (HCC) observed in Trials 108 and 110.^{2,a,c}



HCC surveillance was included as part of the 96-week protocol amendments for Trials 108/110. These trials were not powered to look at any treatment effect on HCC, and no results should be drawn based on these observations. This information is not in the VEMLIDY Prescribing Information.²

^aFrequencies of adverse reactions are based on all treatment-emergent adverse events, regardless of relationship to study drug.¹

^bGrouped term including abdominal pain upper, abdominal pain, abdominal pain lower, and abdominal tenderness.¹

^c3 cases of HCC were observed in the open-label TDF→VEMLIDY group, all of which developed before Week 48 of the open-label phase.²



Vemlidy® tenofovir alafenamide

Lipids

Differences were observed between VEMLIDY and TDF in certain lipid parameters

In Trials 108 and 110:

- Week 96: Mean changes from baseline in low-density lipoprotein cholesterol (LDL-C) (fasted) and triglycerides (TG) (fasted) were +7 mg/dL and +13 mg/dL for VEMLIDY versus -10 mg/dL and -7 mg/dL for TDF¹
- Week 144: Mean changes from baseline in LDL-C (fasted) and TG (fasted) were +8 mg/dL and +18 mg/dL for VEMLIDY versus -8 mg/dL and -2 mg/dL for TDF²
- Week 240: Mean changes from baseline in LDL-C (fasted) and TG (fasted) were +23 mg/dL and +18 mg/dL for VEMLIDY 5-year patients, +22 mg/dL and +36 mg/dL for patients who switched from TDF to VEMLIDY at Week 96, and +19 mg/dL and +24 mg/dL for patients who switched from TDF to VEMLIDY at Week 144²

IMPORTANT SAFETY INFORMATION (CONT.)

Drug Interactions

- Coadministration of VEMLIDY with drugs that reduce renal function or compete for active tubular secretion may increase concentrations of tenofovir and the risk of adverse reactions.
- Coadministration of VEMLIDY is not recommended with the following: oxcarbazepine, phenobarbital, phenytoin, rifabutin, rifampin, rifapentine, or St. John's wort. Such coadministration is expected to decrease the concentration of tenofovir alafenamide, reducing the therapeutic effect of VEMLIDY. Drugs that strongly affect P-glycoprotein (P-gp) and breast cancer resistance protein (BCRP) activity may lead to changes in VEMLIDY absorption.

Consult the full prescribing information for VEMLIDY for more information on potentially significant drug interactions, including clinical comments.

Dosage and Administration

- Testing Prior to Initiation: HIV infection.
- **Prior to or When Initiating, and During Treatment:** On a clinically appropriate schedule, assess serum creatinine, estimated creatinine clearance, urine glucose, and urine protein in all patients. In patients with chronic kidney disease, also assess serum phosphorus.
- **Dosage in Adults:** 1 tablet taken once daily with food.
- Renal Impairment: Not recommended in patients with end stage renal disease (ESRD; eCrCl <15 mL/min) who are not
 receiving chronic hemodialysis; in patients on chronic hemodialysis, on hemodialysis days, administer VEMLIDY after
 completion of hemodialysis treatment.
- Hepatic Impairment: Not recommended in patients with decompensated (Child-Pugh B or C) hepatic impairment.





Important considerations for starting your patients on VEMLIDY

Choose VEMLIDY for your appropriate treatment-naïve patients—proven antiviral efficacy and a demonstrated safety profile in pivotal trials with 5 years of data^{1,2}



Proven efficacy demonstrated over 5 years^{1,2}



Demonstrated long-term renal and bone safety^{1,2}



0% resistance with long-term treatment, seen through 5 years²



The **only** oral antiviral therapy for chronic hepatitis B **without required renal dosage adjustment**^{1,6,7}

 VEMLIDY is not recommended in patients with ESRD who are not receiving chronic hemodialysis or in patients with decompensated (Child-Pugh B or C) hepatic impairment¹



An optimized **prodrug of tenofovir,** offering more efficient delivery to hepatocytes^{1,4,6,8-10}

IMPORTANT SAFETY INFORMATION (CONT.)

Adverse Reactions

Most common adverse reactions (incidence ≥5%; all grades) in clinical studies through week 144 were headache, upper respiratory tract infection, abdominal pain, cough, back pain, arthralgia, fatigue, nausea, diarrhea, dyspepsia, and pyrexia.

References: 1. VEMLIDY Prescribing Information. Foster City, CA: Gilead Sciences, Inc.; September 2021. **2.** Data on file. Gilead Sciences, Inc. **3.** Buti M, Gane E, Seto WK, et al. Tenofovir alafenamide versus tenofovir disoproxil fumarate for the treatment of patients with HBeAg-negative chronic hepatitis B virus infection: a randomised, double-blind, phase 3, non-inferiority trial. *Lancet Gastroenterol Hepatol.* 2016;1(3):196-206. **4.** Chan HL, Fung S, Seto WK, et al. Tenofovir alafenamide versus tenofovir disoproxil fumarate for the treatment of HBeAg positive chronic hepatitis B virus infection: a randomised, double-blind, phase 3, non-inferiority trial. *Lancet Gastroenterol Hepatol.* 2016;1(3):185-195. **5.** Agarwal K, Brunetto M, Seto WK, et al. 96 weeks treatment of tenofovir alafenamide vs. tenofovir disoproxil fumarate for hepatitis B virus infection. J *Hepatol.* 2018;68(4):672-681. **6.** VIREAD Prescribing Information. Foster City, CA: Gilead Sciences, Inc.; April 2019. **7.** BARACLUDE Prescribing Information. Princeton, NJ: Bristol-Myers Squibb Company; November 2019. **8.** Lee WA, He GX, Eisenberg E, et al. Selective intracellular activation of a novel prodrug of the human immunodeficiency virus reverse transcriptase inhibitor tenofovir lads to preferential distribution and accumulation in lymphatic tissue. *Antimicrob Agents Chemother.* 2005;49(5):1898-1906. **9.** Agarwal K, Fung SK, Nguyen TT, et al. Twenty-eight day safety, antiviral activity, and pharmacokinetics of tenofovir alafenamide for treatment of chronic hepatitis B infection. *J Hepatol.* 2015;62(3):533-540. **10.** Murakami E, Wang T, Park Y, et al. Implications of efficient hepatic delivery by tenofovir alafenamide (GS-7340) for hepatitis B virus therapy. *Antimicrob Agents Chemother.* 2015;59(6):3563-3569.





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^dData on File as of December 2021, VEMLIDY Co-pay Coupon Program. Gilead Sciences, Inc.





<u>Click here</u> for full Prescribing Information for VEMLIDY, including **BOXED WARNING** on posttreatment severe acute exacerbation of hepatitis B.

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Not an actual patient.

