

Appendix B, Table 3. Characteristics of Nucleoside Reverse Transcriptase Inhibitors

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The older nucleoside reverse transcriptase inhibitors (NRTIs) didanosine (ddI), stavudine (d4T), and zidovudine (ZDV) are no longer used commonly in clinical practice and have been removed from this table. Please refer to the Food and Drug Administration product labels for ddI, d4T, and ZDV for information regarding these drugs.

Generic Name (Abbreviation) Trade Name	Formulations	Dosing Recommendations ^a	Elimination/ Metabolic Pathway	Serum/ Intracellular Half-Lives	Adverse Events ^b
Abacavir (ABC) <i>Ziagen</i> Note: Generic tablet formulation is available.	Ziagen: <ul style="list-style-type: none"> • 300-mg tablet • 20-mg/mL oral solution Generic: <ul style="list-style-type: none"> • 300-mg tablet • Also available as FDC with 3TC FDC Tablets That Contain ABC:^c <ul style="list-style-type: none"> • Epzicom (ABC/3TC) STRs That Contain ABC:^d <ul style="list-style-type: none"> • Trimeq (DTG/ABC/3TC) 	Ziagen: <ul style="list-style-type: none"> • ABC 600 mg PO once daily, or • ABC 300 mg PO twice daily See Appendix B, Tables 1 and 2 for dosing information for FDC tablets that contain ABC.	Metabolized by alcohol dehydrogenase and glucuronyl transferase 82% of ABC dose is excreted in the urine as metabolites of ABC. Dose adjustment is recommended in patients with hepatic insufficiency (see Appendix B, Table 11).	1.5 hours/12–26 hours	Patients who test positive for HLA-B*5701 are at the highest risk of experiencing HSRs. HLA screening should be done before initiating ABC. For patients with a history of HSRs, rechallenge is not recommended . Symptoms of HSRs may include fever, rash, nausea, vomiting, diarrhea, abdominal pain, malaise, fatigue, or respiratory symptoms (e.g., sore throat, cough, or shortness of breath). Some cohort studies suggest an increased risk of MI with recent or current use of ABC, but this risk is not substantiated in other studies.

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Generic Name (Abbreviation) Trade Name	Formulations	Dosing Recommendations ^a	Elimination/ Metabolic Pathway	Serum/ Intracellular Half-Lives	Adverse Events ^b
<p>Emtricitabine (FTC) <i>Emtriva</i></p>	<p>Emtriva:</p> <ul style="list-style-type: none"> • 200-mg hard gelatin capsule • 10-mg/mL oral solution <p>FDC Tablets That Contain FTC:^c</p> <ul style="list-style-type: none"> • Descovy (TAF/FTC) • Truvada (TDF/FTC) <p>STRs That Contain FTC:^d</p> <ul style="list-style-type: none"> • Atripla (EFV/TDF/FTC) • Biktarvy (BIC/TAF/FTC) • Complera (RPV/TDF/FTC) • Genvoya (EVG/c/TAF/FTC) • Odefsey (RPV/TAF/FTC) • Stribild (EVG/c/TDF/FTC) • Symtuza (DRV/c/TAF/FTC) 	<p>Emtriva <i>Capsule:</i></p> <ul style="list-style-type: none"> • FTC 200 mg PO once daily <p><i>Oral Solution:</i></p> <ul style="list-style-type: none"> • FTC 240 mg (24 mL) PO once daily <p>See Appendix B, Tables 1 and 2 for dosing information for FDC tablets that contain FTC.</p>	<p>86% of FTC dose is excreted renally</p> <p>See Appendix B, Table 11 for dosing recommendations in patients with renal insufficiency.</p>	<p>10 hours/>20 hours</p>	<p>Minimal toxicity</p> <p>Hyperpigmentation/skin discoloration</p> <p>Severe acute exacerbation of hepatitis may occur in patients with HBV/HIV coinfection who discontinue FTC.</p>

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Generic Name (Abbreviation) Trade Name	Formulations	Dosing Recommendations ^a	Elimination/ Metabolic Pathway	Serum/ Intracellular Half-Lives	Adverse Events ^b
<p>Lamivudine (3TC) <i>Epivir</i></p> <p>Note: Generic products are available.</p>	<p>Epivir:</p> <ul style="list-style-type: none"> • 150-mg and 300-mg tablets • 10-mg/mL oral solution <p>Generic:</p> <ul style="list-style-type: none"> • 150-mg and 300-mg tablets • Also available as FDC with ABC <p>FDC Tablets That Contain 3TC:^c</p> <ul style="list-style-type: none"> • Cimduo (TDF/3TC) • Epzicom (ABC/3TC) • Temixys (TDF/3TC) <p>STRs That Contain 3TC:^d</p> <ul style="list-style-type: none"> • Delstrigo (DOR/TDF/3TC) • Dovato (DTG/3TC) • Symfi (EFV 600 mg/TDF/3TC) • Symfi Lo (EFV 400 mg/TDF/3TC) • Triumeq (DTG/ABC/3TC) 	<p>Epivir:</p> <ul style="list-style-type: none"> • 3TC 300 mg PO once daily, <i>or</i> • 3TC 150 mg PO twice daily <p>See Appendix B, Tables 1 and 2 for dosing information for FDC tablets that contain 3TC.</p>	<p>70% of 3TC dose is excreted renally</p> <p>See Appendix B, Table 11 for dose recommendations in patients with renal insufficiency.</p>	<p>5–7 hours/18–22 hours</p>	<p>Minimal toxicity</p> <p>Severe acute exacerbation of hepatitis may occur in patients with HBV/HIV coinfection who discontinue 3TC.</p>

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Generic Name (Abbreviation) Trade Name	Formulations	Dosing Recommendations ^a	Elimination/ Metabolic Pathway	Serum/ Intracellular Half-Lives	Adverse Events ^b
<p>Tenofovir Alafenamide (TAF) <i>Vemlidy</i></p> <p>Note: Vemlidy is available as a 25-mg tablet for the treatment of HBV.</p>	<p>FDC Tablets That Contain TAF:^c</p> <ul style="list-style-type: none"> • Descovy (TAF/FTC) <p>STRs That Contain TAF:^d</p> <ul style="list-style-type: none"> • Biktarvy (BIC/TAF/FTC) • Genvoya (EVG/c/TAF/FTC) • Odefsey (RPV/TAF/FTC) • Symtuza (DRV/c/TAF/FTC) 	<p>See Appendix B, Tables 1 and 2 for dosing information for FDC tablets that contain TAF.</p>	<p>Metabolized by cathepsin A</p> <p>See Appendix B, Table 11 for dosing recommendations in patients with renal insufficiency.</p>	<p>0.5 hour/150–180 hours</p>	<p>Renal insufficiency, Fanconi syndrome, and proximal renal tubulopathy are less likely to occur with TAF than with TDF.</p> <p>Osteomalacia and decreases in BMD are less likely to occur with TAF than with TDF.</p> <p>Severe acute exacerbation of hepatitis may occur in patients with HBV/HIV coinfection who discontinue TAF.</p> <p>Diarrhea, nausea, headache</p> <p>Greater weight increase has been reported with TAF than with TDF.</p>

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Generic Name (Abbreviation) Trade Name	Formulations	Dosing Recommendations ^a	Elimination/ Metabolic Pathway	Serum/ Intracellular Half-Lives	Adverse Events ^b
<p>Tenofovir Disoproxil Fumarate (TDF) <i>Viread</i></p> <p>Note: Generic product is available.</p>	<p>Viread:</p> <ul style="list-style-type: none"> 150-mg, 200-mg, 250-mg, and 300-mg tablets 40 mg/g oral powder <p>Generic:</p> <ul style="list-style-type: none"> 300-mg tablet <p>FDC Tablets that Contain TDF:^c</p> <ul style="list-style-type: none"> Cimduo (TDF/3TC) Temixys (TDF/3TC) Truvada (TDF/FTC) <p>STRs that Contain TDF:^d</p> <ul style="list-style-type: none"> Atripla (EFV/TDF/FTC) Complera (RPV/TDF/FTC) Delstrigo (DOR/TDF/3TC) Stribild (EVG/c/TDF/FTC) Symfi (EFV 600 mg/TDF/3TC) Symfi Lo (EFV 400 mg/TDF/3TC) 	<p>Viread:</p> <ul style="list-style-type: none"> TDF 300 mg PO once daily, <i>or</i> 7.5 level scoops of oral powder PO once daily (dosing scoop dispensed with each bottle; one level scoop contains 1 g of oral powder). <p>Mix oral powder with 2–4 ounces of a soft food that does not require chewing (e.g., applesauce, yogurt). Do not mix oral powder with liquid.</p> <p>See Appendix B, Tables 1 and 2 for dosing information for FDC tablets that contain TDF.</p>	<p>Renal excretion is the primary route of elimination.</p> <p>See Appendix B, Table 11 for dose recommendations in patients with renal insufficiency.</p>	<p>17 hours/>60 hours</p>	<p>Renal insufficiency, Fanconi syndrome, proximal renal tubulopathy</p> <p>Osteomalacia, decrease in BMD</p> <p>Severe acute exacerbation of hepatitis may occur in patients with HBV/HIV coinfection who discontinue TDF.</p> <p>Asthenia, headache, diarrhea, nausea, vomiting, flatulence</p>

^a For dose adjustments in patients with renal or hepatic insufficiency, see [Appendix B, Table 11](#). When no food restriction is listed, the ARV drug can be taken with or without food.

^b Also see [Table 20](#).

^c See [Appendix B, Table 2](#) for information about these formulations.

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^d See [Appendix B, Table 1](#) for information about these formulations.

Key: 3TC = lamivudine; ABC = abacavir; BIC = bictegravir; BMD = bone mineral density; DOR = doravirine; DRV/c = darunavir/cobicistat; DTG = dolutegravir; EVG/c = elvitegravir/cobicistat; EFV = efavirenz; FDC = fixed-dose combination; FTC = emtricitabine; HBV = hepatitis B virus; HLA = human leukocyte antigen; HSR = hypersensitivity reaction; MI = myocardial infarction; **PO = orally**; RPV = rilpivirine; STR = single-tablet regimen; TAF = tenofovir alafenamide; TDF = tenofovir disoproxil fumarate