

Appendix B: Safety and Toxicity of Individual Antiretroviral Agents in Pregnancy

Table 11. Antiretroviral Drug Use in Pregnant People with HIV: Pharmacokinetic and Toxicity Data in Human Pregnancy and Recommendations for Use in Pregnancy

(Updated December 30, 2021; last reviewed December 30, 2021)

Note: When using fixed-dose combination (FDC) tablets, refer to other sections in [Appendix B](#) and [Table 11](#) in the Perinatal Guidelines for information about the dosing and safety of individual drug components of the FDC tablet during pregnancy.

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
NRTIs				
NRTIs interfere with HIV reverse transcriptase by competitive inhibition. Nucleoside analogue drugs require three intracellular phosphorylation steps to form the triphosphate nucleoside, which is the active drug moiety. The nucleotide analogue tenofovir contains a monophosphate component attached to the adenine base and requires only two phosphorylation steps to form the active moiety.				
Abacavir (ABC) <i>Ziagen</i> (ABC/3TC) <i>Epzicom</i> (ABC/DTG/3TC) <i>Triumeq</i> (ABC/3TC/ZDV) <i>Trizivir</i> Note: Generic products are available for some formulations.	ABC (Ziagen)^d <i>Tablet</i> <ul style="list-style-type: none"> 300 mg <i>Oral Solution</i> <ul style="list-style-type: none"> 20 mg/mL ABC/3TC (Epzicom)^d <ul style="list-style-type: none"> ABC 600 mg/ 3TC 300-mg tablet ABC/DTG/3TC (Triumeq) <ul style="list-style-type: none"> ABC 600 mg/ DTG 50 mg/ 3TC 300-mg tablet ABC/3TC/ZDV (Trizivir)^d	Standard Adult Doses <i>ABC (Ziagen)</i> <ul style="list-style-type: none"> ABC 300 mg twice daily or ABC 600 mg once daily, without regard to food <i>ABC/3TC (Epzicom)</i> <ul style="list-style-type: none"> One tablet once daily without regard to food <i>ABC/DTG/3TC (Triumeq)</i> <ul style="list-style-type: none"> One tablet once daily without regard to food <i>ABC/3TC/ZDV (Trizivir)</i> <ul style="list-style-type: none"> One tablet twice daily without regard to food Pregnancy <i>PKs in Pregnancy</i> <ul style="list-style-type: none"> PKs not significantly altered in pregnancy. <i>Dosing in Pregnancy</i>	High placental transfer to fetus. ^b No evidence of human teratogenicity (can rule out 1.5-fold increase in overall birth defects). HSRs occur in approximately 5% to 8% of nonpregnant individuals. A small percentage of reactions are fatal, and these fatal reactions are usually associated with re-challenge. Rate of reactions during pregnancy is unknown. Testing for HLA-B*5701 identifies patients at risk of reactions, and a patient's status should be documented as negative before initiating ABC. Patients should be educated regarding symptoms of HSR.	December 30, 2021

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
	<ul style="list-style-type: none"> • ABC 300 mg/ 3TC 150 mg/ ZDV 300-mg tablet 	<ul style="list-style-type: none"> • No change in dose indicated. <p>For guidance about use of combination products in pregnancy, please see the specific sections on other components (i.e., 3TC, ZDV, DTG).</p>		
<p>Emtricitabine (FTC) <i>Emtriva</i></p> <p>(FTC/EFV/TDF) <i>Atripla</i></p> <p>(FTC/BIC/TAF) <i>Biktarvy</i></p> <p>(FTC/RPV/TDF) <i>Complera</i></p> <p>(FTC/TAF) <i>Descovy</i></p> <p>(FTC/EVG/c/TAF) <i>Genvoya</i></p> <p>(FTC/RPV/TAF) <i>Odefsey</i></p> <p>(FTC/EVG/c/TDF) <i>Stribild</i></p> <p>(FTC/DRV/c/TAF) <i>Symtuza</i></p> <p>(FTC/TDF) <i>Truvada</i></p>	<p>FTC (Emtriva) <i>Capsule^d</i></p> <ul style="list-style-type: none"> • 200 mg <p><i>Oral Solution</i></p> <ul style="list-style-type: none"> • 10 mg/mL <p>FTC/EFV/TDF (Atripla)^d</p> <ul style="list-style-type: none"> • FTC 200 mg/ EFV 600 mg/ TDF 300-mg tablet <p>FTC/BIC/TAF (Biktarvy)</p> <ul style="list-style-type: none"> • FTC 200 mg/ BIC 50 mg/ TAF 25-mg tablet <p>FTC/RPV/TDF (Complera)</p> <ul style="list-style-type: none"> • FTC 200 mg/ RPV 25 mg/ TDF 300-mg tablet <p>FTC/TAF (Descovy)</p> <ul style="list-style-type: none"> • FTC 200 mg/ TAF 25-mg tablet <p>FTC/EVG/c/TAF (Genvoya)</p>	<p>Standard Adult Doses</p> <p><i>FTC (Emtriva) — Capsule</i></p> <ul style="list-style-type: none"> • FTC 200 mg once daily without regard to food <p><i>FTC (Emtriva) — Oral Solution</i></p> <ul style="list-style-type: none"> • FTC 240 mg (24 mL) once daily without regard to food <p><i>FTC/EFV/TDF (Atripla)</i></p> <ul style="list-style-type: none"> • One tablet once daily at or before bedtime • Take on an empty stomach to reduce or mitigate side effects. <p><i>FTC/BIC/TAF (Biktarvy)</i></p> <ul style="list-style-type: none"> • One tablet once daily with or without food <p><i>FTC/RPV/TDF (Complera)</i></p> <ul style="list-style-type: none"> • One tablet once daily with food <p><i>FTC/TAF (Descovy)</i></p> <ul style="list-style-type: none"> • One tablet once daily with or without food <p><i>FTC/EVG/c/TAF (Genvoya)</i></p> <ul style="list-style-type: none"> • One tablet once daily with food <p><i>FTC/RPV/TAF (Odefsey)</i></p> <ul style="list-style-type: none"> • One tablet once daily with food <p><i>FTC/EVG/c/TDF (Stribild)</i></p> <ul style="list-style-type: none"> • One tablet once daily with food 	<p>High placental transfer to fetus.^b</p> <p>No evidence of human teratogenicity (can rule out 1.5-fold increase in overall birth defects).</p> <p>If patient has HBV/HIV coinfection, it is possible that an HBV flare may occur if the drug is stopped; see Hepatitis B Virus/HIV Coinfection.</p>	<p>December 30, 2021</p>

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
<p>Note: Generic products are available for some formulations.</p>	<ul style="list-style-type: none"> FTC 200 mg/ EVG 150 mg/ COBI 150 mg/ TAF 10-mg tablet <p>FTC/RPV/TAF (Odefsey)</p> <ul style="list-style-type: none"> FTC 200 mg/ RPV 25 mg/ TAF 25-mg tablet <p>FTC/EVG/c/TDF (Stribild)</p> <ul style="list-style-type: none"> FTC 200 mg/ EVG 150 mg/ COBI 150 mg/ TDF 300-mg tablet <p>FTC/DRV/c/TAF (Symtuza)</p> <ul style="list-style-type: none"> FTC 200 mg/ DRV 800 mg/ COBI 150 mg/ TAF 10-mg tablet <p>FTC/TDF (Truvada)^d</p> <ul style="list-style-type: none"> FTC 200 mg/ TDF 300-mg tablet 	<p><i>FTC/DRV/c/TAF (Symtuza)</i></p> <ul style="list-style-type: none"> One tablet once daily with food <p><i>FTC/TDF (Truvada)</i></p> <ul style="list-style-type: none"> One tablet once daily without regard to food <p>Pregnancy <i>PKs in Pregnancy</i></p> <ul style="list-style-type: none"> PKs of FTC are not significantly altered in pregnancy. <p><i>Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> No change in dose indicated. <p>For guidance about the use of combination products in pregnancy, please see the specific sections on other components (i.e., TDF, TAF, EFV, RPV, DRV, EVG, BIC, COBI).</p>		
<p>Lamivudine (3TC) <i>Epivir</i></p> <p>(3TC/TDF)</p>	<p>3TC (Epivir)^d <i>Tablets</i></p> <ul style="list-style-type: none"> 150 mg 300 mg <p><i>Oral Solution</i></p> <ul style="list-style-type: none"> 10 mg/mL <p>3TC/TDF (Cimduo)</p>	<p>Standard Adult Doses <i>3TC (Epivir)</i></p> <ul style="list-style-type: none"> 3TC 150 mg twice daily or 300 mg once daily, without regard to food <p><i>3TC/TDF (Cimduo)</i></p>	<p>High placental transfer to fetus.^b</p> <p>No evidence of human teratogenicity (can rule out 1.5-fold increase in overall birth defects).</p> <p>If patient has HBV/HIV coinfection, it is possible that an HBV flare may occur if the drug is stopped; see Hepatitis B Virus/HIV Coinfection.</p>	<p>December 30, 2021</p>

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
<p><i>Cimduo</i></p> <p>(3TC/ZDV) <i>Combivir</i></p> <p>(3TC/DOR/TDF) <i>Delstrigo</i></p> <p>(3TC/DTG) <i>Dovato</i></p> <p>(3TC/ABC) <i>Epzicom</i></p> <p>(3TC/EFV/TDF) <i>Symfi</i></p> <p>(3TC/EFV/TDF) <i>Symfi Lo</i></p> <p>(3TC/TDF) <i>Temixys</i></p> <p>(3TC/ABC/DTG) <i>Triumeq</i></p>	<ul style="list-style-type: none"> • 3TC 300 mg/ TDF 300-mg tablet <p>3TC/ZDV (Combivir)^d</p> <ul style="list-style-type: none"> • 3TC 150 mg/ ZDV 300-mg tablet <p>3TC/DOR/TDF (Delstrigo)</p> <ul style="list-style-type: none"> • 3TC 300 mg/ DOR 100 mg/ TDF 300-mg tablet <p>3TC/DTG (Dovato)</p> <ul style="list-style-type: none"> • 3TC 300 mg/ DTG 50-mg tablet <p>3TC/ABC (Epzicom)^d</p> <ul style="list-style-type: none"> • 3TC 300 mg/ ABC 600-mg tablet <p>3TC/EFV/TDF (Symfi)^d</p> <ul style="list-style-type: none"> • 3TC 300 mg/ EFV 600 mg plus TDF 300-mg tablet <p>3TC/EFV/TDF (Symfi Lo)^d</p> <ul style="list-style-type: none"> • 3TC 300 mg/ EFV 400 mg/ TDF 300-mg tablet <p>3TC/TDF (Temixys)</p> <ul style="list-style-type: none"> • 3TC 300 mg/ TDF 300-mg tablet <p>3TC/ABC/DTG (Triumeq)</p>	<ul style="list-style-type: none"> • One tablet once daily without regard to food <p><i>3TC/ZDV (Combivir)</i></p> <ul style="list-style-type: none"> • One tablet twice daily without regard to food <p><i>3TC/DOR/TDF (Delstrigo)</i></p> <ul style="list-style-type: none"> • One tablet once daily without regard to food <p><i>3TC/DTG (Dovato)</i></p> <ul style="list-style-type: none"> • One tablet once daily without regard to food <p><i>3TC/ABC (Epzicom)</i></p> <ul style="list-style-type: none"> • One tablet once daily without regard to food <p><i>3TC/EFV/TDF (Symfi or Symfi Lo)</i></p> <ul style="list-style-type: none"> • One tablet once daily on an empty stomach and preferably at bedtime <p><i>3TC/TDF (Temixys)</i></p> <ul style="list-style-type: none"> • One tablet once daily without regard to food <p><i>3TC/ABC/DTG (Triumeq)</i></p>	<p>3TC products that were developed specifically for treatment of HBV (e.g., Epivir-HBV) contain a lower dose of 3TC that is not appropriate for treatment of HIV.</p>	

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
(3TC/ABC/ZDV) <i>Trizivir</i> Note: Generic products are available for some formulations.	<ul style="list-style-type: none"> 3TC 300 mg/ ABC 600 mg/ DTG 50-mg tablet 3TC/ABC/ZDV (Trizivir)^d <ul style="list-style-type: none"> 3TC 150 mg/ ABC 300 mg/ ZDV 300-mg tablet 	<ul style="list-style-type: none"> One tablet once daily without regard to food <i>3TC/ABC/ZDV (Trizivir)</i> <ul style="list-style-type: none"> One tablet twice daily without regard to food Pregnancy <i>PKs in Pregnancy</i> <ul style="list-style-type: none"> PKs not significantly altered in pregnancy. <i>Dosing in Pregnancy</i> <ul style="list-style-type: none"> No change in dose indicated. For guidance about the use of combination products in pregnancy, please see the specific sections on other components (i.e., ABC , DOR , DTG , EFV , TDF , ZDV).		
Tenofovir Alafenamide (TAF) <i>Vemlidy</i> (TAF/BIC/FTC) <i>Biktarvy</i> (TAF/FTC) <i>Descovy</i> (TAF/EVG/c/FTC)	TAF (Vemlidy) <i>Tablet</i> <ul style="list-style-type: none"> 25 mg TAF/BIC/FTC (Biktarvy) <ul style="list-style-type: none"> TAF 25 mg/ BIC 50 mg/ FTC 200-mg tablet TAF/FTC (Descovy) <ul style="list-style-type: none"> TAF 25 mg/ FTC 200-mg tablet TAF/EVG/c/FTC (Genvoya)	Standard Adult Doses <i>TAF (Vemlidy)</i> <ul style="list-style-type: none"> One tablet once daily with food <i>TAF/BIC/FTC (Biktarvy)</i> <ul style="list-style-type: none"> One tablet once daily with or without food <i>TAF/FTC Descovy</i> <ul style="list-style-type: none"> One tablet once daily with or without food Same dose (TAF 25 mg) can be used with or without PK enhancers. <i>TAF/EVG/c/FTC (Genvoya)</i>	Low placental transfer to fetus. ^b Insufficient data to assess for teratogenicity in humans. No evidence of teratogenicity in rats. Renal function should be monitored because of the potential for renal toxicity.	December 30, 2021

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
<p><i>Genvoya</i></p> <p>(TAF/FTC/RPV) <i>Odefsey</i></p> <p>(TAF/DRV/c/FTC) <i>Symtuza</i></p>	<ul style="list-style-type: none"> TAF 10 mg/ EVG 150 mg/ COBI 150 mg/ FTC 200-mg tablet <p>TAF/FTC/RPV (Odefsey)</p> <ul style="list-style-type: none"> TAF 25 mg/ FTC 200 mg/ RPV 25-mg tablet <p>TAF/DRV/c/FTC (Symtuza)</p> <ul style="list-style-type: none"> TAF 10 mg/ DRV 800 mg/ COBI 150 mg/ FTC 200-mg tablet 	<ul style="list-style-type: none"> One tablet once daily with food <p><i>TAF/FTC/RPV (Odefsey)</i></p> <ul style="list-style-type: none"> One tablet once daily with food <p><i>TAF/DRV/c/FTC (Symtuza)</i></p> <ul style="list-style-type: none"> One tablet once daily with food <p>Pregnancy <i>PKs in Pregnancy</i></p> <ul style="list-style-type: none"> Plasma PKs not significantly altered in pregnancy. <p><i>Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> No change in dose indicated. <p>For guidance about the use of combination products in pregnancy, please see the specific sections on other components (i.e., BIC, COBI, DRV, EVG, FTC, RPV).</p>		
<p>Tenofovir Disoproxil Fumarate (TDF) <i>Viread</i></p> <p>(TDF/EFV/FTC)</p>	<p>TDF (Viread)</p> <ul style="list-style-type: none"> Tablet^d <ul style="list-style-type: none"> 300 mg Powder <ul style="list-style-type: none"> 40 mg/ 1 g oral powder 	<p>Standard Adult Doses <i>TDF (Viread)</i></p> <ul style="list-style-type: none"> Tablet <ul style="list-style-type: none"> TDF 300 mg once daily without regard to food Powder <ul style="list-style-type: none"> TDF 8 mg/kg daily (up to a maximum of TDF 300 mg). Take with food. 	<p>High placental transfer to fetus.^b</p> <p>No evidence of human teratogenicity (can rule out 1.5-fold increase in overall birth defects).</p> <p>Studies in monkeys (at doses approximately twofold higher than those for human therapeutic use) show decreased fetal growth and reduction in fetal bone porosity within 2 months of starting maternal therapy. Human</p>	<p>December 30, 2021</p>

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
<p><i>Atripla</i></p> <p>(TDF/3TC) <i>Cimduo</i></p> <p>(TDF/FTC/RPV) <i>Complera</i></p> <p>(TDF/DOR/3TC) <i>Delstrigo</i></p> <p>(TDF/EVG/c/FTC) <i>Stribild</i></p> <p>(TDF/EFV/3TC) <i>Symfi</i></p> <p>(TDF/EFV/3TC) <i>Symfi Lo</i></p> <p>(TDF/3TC)</p>	<p>TDF/EFV/FTC (Atripla)</p> <ul style="list-style-type: none"> TDF 300 mg/ EFV 600 mg/ FTC 200 mg tablet <p>TDF/3TC (Cimduo)</p> <ul style="list-style-type: none"> TDF 300 mg/ 3TC 300 mg tablet <p>TDF/FTC/RPV (Complera)</p> <ul style="list-style-type: none"> TDF 300 mg/ FTC 200 mg/ RPV 25 mg tablet <p>TDF/DOR/3TC (Delstrigo)</p> <ul style="list-style-type: none"> TDF 300 mg/ DOR 100 mg/ 3TC 300 mg tablet <p>TDF/EVG/c/FTC (Stribild)</p> <ul style="list-style-type: none"> TDF 300 mg/ EVG 150 mg/ COBI 150 mg/ FTC 200 mg tablet <p>TDF/EFV/3TC (Symfi)</p> <ul style="list-style-type: none"> TDF 300 mg/ EFV 600 mg/ 3TC 300 mg tablet <p>TDF/EFV/3TC (Symfi Lo)</p> <ul style="list-style-type: none"> TDF 300 mg/ EFV 400 mg/ 3TC 300 mg tablet <p>TDF/3TC (Temixys)</p>	<p><i>TDF/EFV/FTC (Atripla)</i></p> <ul style="list-style-type: none"> One tablet once daily at or before bedtime. Take on an empty stomach to reduce side effects. <p><i>TDF/3TC (Cimduo)</i></p> <ul style="list-style-type: none"> One tablet once daily without regard to food <p><i>TDF/FTC/RPV (Complera)</i></p> <ul style="list-style-type: none"> One tablet once daily with food <p><i>TDF/DOR/3TC (Delstrigo)</i></p> <ul style="list-style-type: none"> One tablet once daily without regard to food <p><i>TDF/EVG/c/FTC (Stribild)</i></p> <ul style="list-style-type: none"> One tablet once daily with food <p><i>TDF/EFV/3TC (Symfi or Symfi Lo)</i></p> <ul style="list-style-type: none"> One tablet once daily on an empty stomach and preferably at bedtime <p><i>TDF/3TC (Temixys)</i></p>	<p>studies demonstrate no consistent link to low birth weight, but data are conflicting about potential effects on growth outcomes later in infancy.</p> <p>If patient has HBV/HIV coinfection, an HBV flare may occur if TDF is stopped; see Hepatitis B Virus/HIV Coinfection.</p> <p>Renal function should be monitored because of potential for renal toxicity.</p>	

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
<p><i>Temixys</i></p> <p>(TDF/FTC) <i>Truvada</i></p> <p>Note: Generic products are available for some formulations.</p>	<ul style="list-style-type: none"> TDF 300 mg/ 3TC 300 mg tablet <p>TDF/FTC (Truvada)</p> <ul style="list-style-type: none"> TDF 300 mg/ FTC 200 mg tablet 	<ul style="list-style-type: none"> One tablet once daily without regard to food <p><i>TDF/FTC (Truvada)</i></p> <ul style="list-style-type: none"> One tablet once daily without regard to food <p>Pregnancy</p> <p><i>PKs in Pregnancy</i></p> <ul style="list-style-type: none"> AUC is lower in third trimester than postpartum, but trough levels are adequate. <p><i>Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> No change in dose is indicated. <p>For guidance about the use of combination products in pregnancy, please see the specific sections on other components (i.e., 3TC, COBI, DOR, EFV, EVG, FTC, RPV).</p>		
<p>Zidovudine (ZDV) <i>Retrovir</i></p> <p>(ZDV/3TC) <i>Combivir</i></p> <p>(ZDV/ABC/3TC)</p>	<p>ZDV (Retrovir)</p> <p><i>Capsule</i></p> <ul style="list-style-type: none"> 100 mg <p><i>Tablet</i></p> <ul style="list-style-type: none"> 300 mg <p><i>Oral Solution</i></p> <ul style="list-style-type: none"> 10 mg/mL <p><i>IV Solution</i></p> <ul style="list-style-type: none"> 10 mg/mL <p>ZDV/3TC (Combivir)</p> <ul style="list-style-type: none"> ZDV 300 mg/ 3TC 150-mg tablet 	<p>Standard Adult Doses</p> <p><i>ZDV (Retrovir)</i></p> <ul style="list-style-type: none"> ZDV 300 mg twice daily or ZDV 200 mg three times a day without regard to food Patients in active labor should receive ZDV 2 mg/kg IV as a loading dose, followed by ZDV 1 mg/kg/hour continuous infusion from beginning of active labor until delivery <p><i>ZDV/3TC (Combivir)</i></p> <ul style="list-style-type: none"> One tablet twice daily without regard to food <p><i>ZDV/ABC/3TC (Trizivir)</i></p>	<p>High placental transfer to fetus.^b</p> <p>No evidence of human teratogenicity (can rule out 1.5-fold increase in overall birth defects).</p>	<p>December 30, 2021</p>

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
<i>Trizivir</i> Note: Generic products are available for all formulations.	ZDV/ABC/3TC (Trizivir) <ul style="list-style-type: none"> ZDV 300 mg/ ABC 300 mg/ 3TC 150-mg tablet 	<ul style="list-style-type: none"> One tablet twice daily without regard to food Pregnancy <i>PKs in Pregnancy</i> <ul style="list-style-type: none"> PKs not significantly altered in pregnancy. <i>Dosing in Pregnancy</i> <ul style="list-style-type: none"> No change in dose indicated. For guidance about the use of combination products in pregnancy, please see the specific sections on other components (i.e., ABC , 3TC).		
NNRTI NNRTIs interfere with HIV reverse transcriptase by binding directly to the enzyme.				
Doravirine (DOR) <i>Pifeltro</i> (DOR/3TC/TDF) <i>Delstrigo</i>	DOR (Pifeltro) <ul style="list-style-type: none"> 100 mg tablet DOR/3TC/TDF (Delstrigo) <ul style="list-style-type: none"> DOR 100 mg/ 3TC 300 mg/ TDF 300 mg tablet 	Standard Adult Doses <i>DOR (Pifeltro)</i> <ul style="list-style-type: none"> DOR 100 mg once daily with or without food <i>DOR/3TC/TDF (Delstrigo)</i> <ul style="list-style-type: none"> One tablet once daily with or without food Pregnancy <i>PKs in Pregnancy</i> <ul style="list-style-type: none"> No PK studies in human pregnancy. <i>Dosing in Pregnancy</i> <ul style="list-style-type: none"> Insufficient data to make dosing recommendations. For guidance about the use of combination ARV drug products in pregnancy, please see the specific sections on other drug components (i.e., 3TC , TDF).	No human <i>in vivo</i> data are available on the placental transfer of DOR, but passage is noted in an <i>ex vivo</i> model. Insufficient data are available to assess for teratogenicity in humans. No evidence exists of teratogenicity in rats or rabbits.	December 30, 2021
Efavirenz (EFV)	EFV (Sustiva)^d <i>Capsules</i> <ul style="list-style-type: none"> 50 mg 	Standard Adult Doses <i>EFV (Sustiva)</i> <ul style="list-style-type: none"> EFV 600 mg once daily at or before bedtime 	Moderate placental transfer to fetus. ^b The FDA advises women to avoid becoming pregnant while taking EFV	December 30, 2021

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
<p><i>Sustiva</i></p> <p>(EFV/FTC/TDF) <i>Atripla</i></p> <p>(EFV/3TC/TDF) <i>Symfi</i></p> <p>(EFV/3TC/TDF) <i>Symfi Lo</i></p> <p>Note: Generic products are available for some formulations.</p>	<ul style="list-style-type: none"> 200 mg <p><i>Tablet</i></p> <ul style="list-style-type: none"> 600 mg <p>EFV/FTC/TDF (Atripla)</p> <ul style="list-style-type: none"> EFV 600 mg/ FTC 200 mg/ TDF 300-mg tablet <p>EFV/3TC/TDF (Symfi)</p> <ul style="list-style-type: none"> EFV 600 mg/ 3TC 300 mg/ TDF 300-mg tablet <p>EFV/3TC/TDF (Symfi Lo)</p> <ul style="list-style-type: none"> EFV 400 mg/ 3TC 300 mg/ TDF 300-mg tablet 	<ul style="list-style-type: none"> Take on an empty stomach to reduce side effects. <p><i>EFV/FTC/TDF (Atripla)</i></p> <ul style="list-style-type: none"> One tablet once daily at or before bedtime Take on an empty stomach to reduce side effects. <p><i>EFV/3TC/TDF (Symfi or Symfi Lo)</i></p> <ul style="list-style-type: none"> One tablet once daily on an empty stomach and preferably at bedtime <p>Pregnancy <i>PKs in Pregnancy</i></p> <ul style="list-style-type: none"> AUC is decreased during the third trimester compared with postpartum, but nearly all third trimester participants exceeded target exposure. <p><i>Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> No change in dose is indicated. <p>For guidance about the use of combination products in pregnancy, please see the specific sections on other components (i.e., 3TC, FTC, TDF).</p>	<p>and advises health care providers to avoid administration during the first trimester of pregnancy because fetal harm may occur. However, the data on more than 7,900 periconception EFV exposures from Botswana rule out a threefold or greater increased risk of NTDs. As a result, the current Perinatal Guidelines do not restrict the use of EFV in pregnant women or in women who are planning to become pregnant. This is consistent with both the British HIV Association and WHO guidelines for use of ARV drugs in pregnancy.</p> <p>EFV should be continued in pregnant women who are on a virally suppressive, EFV-based regimen, because ARV drug changes during pregnancy may be associated with loss of viral control and an increased risk of perinatal transmission (see Pregnant People with HIV Who are Currently Receiving Antiretroviral Therapy).</p>	
<p>Etravirine (ETR) <i>Intence</i></p>	<p>Tablets</p> <ul style="list-style-type: none"> 25 mg 100 mg 200 mg <p>For patients who are unable to swallow tablets whole, the tablets may be</p>	<p>Standard Adult Doses</p> <ul style="list-style-type: none"> 200 mg twice daily with food <p>Pregnancy <i>PK in Pregnancy</i></p> <ul style="list-style-type: none"> PK data in pregnancy suggest 1.2-fold to 1.6-fold increases in ETR exposure during pregnancy. <p><i>Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> No change in dose is indicated. 	<p>Placental transfer varies; it is usually in the moderate-to-high categories, ranging 0.19–4.25.^b</p> <p>Insufficient data to assess for teratogenicity in humans. No evidence of teratogenicity in rats or rabbits.</p>	<p>December 30, 2021</p>

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
	dispersed in a glass of water.			
Nevirapine (NVP) <i>Viramune</i> <i>Viramune XR</i> Note: Generic products are available for some formulations.	NVP (Viramune) <i>Tablet</i> <ul style="list-style-type: none"> • 200 mg^d <i>Oral Suspension</i> <ul style="list-style-type: none"> • 50 mg/5 mL^d Viramune XR <i>Tablets</i> <ul style="list-style-type: none"> • 100 mg • 400 mg^d 	Standard Adult Doses <ul style="list-style-type: none"> • NVP 200 mg once daily (using Viramune immediate release) for a 14-day lead-in period; thereafter, NVP 200 mg twice daily or 400 mg (using Viramune XR tablet) once daily, without regard to food. • Repeat lead-in period if therapy is discontinued for >7 days. • In patients who develop mild-to-moderate rash without constitutional symptoms during the lead-in period, continue lead-in dosing until rash resolves, but administer for ≤28 days total. Pregnancy <i>PKs in Pregnancy</i> <ul style="list-style-type: none"> • PKs of immediate-release tablets not significantly altered in pregnancy. • No data available on extended-release formulations in pregnancy. <i>Dosing in Pregnancy</i> <ul style="list-style-type: none"> • No change in dose indicated. 	High placental transfer to fetus. ^b No evidence of human teratogenicity (can rule out 1.5-fold increase in overall birth defects and twofold increase in cardiovascular and genitourinary defects). An increased risk of symptomatic liver toxicity exists when first initiating therapy in women with CD4 counts ≥250/mm ³ . Liver toxicity is often associated with a rash and can be fatal. Pregnancy does not appear to increase this risk. NVP should be initiated in pregnant people with CD4 counts ≥250 cells/mm ³ only if benefit clearly outweighs risk. A potential increased risk of life-threatening hepatotoxicity exists in pregnant people with high CD4 counts. Elevated transaminase levels at baseline may increase the risk of NVP toxicity. Patients who become pregnant while taking NVP-containing regimens and who are tolerating their regimens well can continue taking those regimens, regardless of their CD4 counts.	December 30, 2021
Rilpivirine (RPV) <i>Edurant</i> (RPV/FTC/TDF)	RPV (Edurant) <i>Tablets</i> <ul style="list-style-type: none"> • 25 mg RPV/FTC/TDF (Complera)	Standard Adult Doses <i>RPV (Edurant)</i> <ul style="list-style-type: none"> • RPV 25 mg once daily with food <i>RPV/FTC/TDF (Complera)</i>	Moderate-to-high placental transfer to fetus. ^b No evidence of human teratogenicity (can rule out two-fold increase in overall birth defects).	December 30, 2021

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
<p><i>Complera</i></p> <p>(RPV/DTG) <i>Juluca</i></p> <p>(RPV/FTC/TAF) <i>Odefsey</i></p> <p>(CAB and RPV) <i>Cabenuva</i></p> <p>CAB and RPV is a two-drug co-packaged product for IM injection.</p>	<ul style="list-style-type: none"> RPV 25 mg/ FTC 200 mg/ TDF 300-mg tablet <p>RPV/DTG (Juluca)</p> <ul style="list-style-type: none"> RPV 25 mg/ DTG 50-mg tablet <p>RPV/FTC/TAF (Odefsey)</p> <ul style="list-style-type: none"> RPV 25 mg/ FTC 200 mg/ TAF 25-mg tablet 	<ul style="list-style-type: none"> One tablet once daily with food <p><i>RPV/DTG (Juluca)</i></p> <ul style="list-style-type: none"> One tablet once daily with food <p><i>RPV/FTC/TAF (Odefsey)</i></p> <ul style="list-style-type: none"> One tablet once daily with food <p>CAB and RPV (Cabenuva)</p> <ul style="list-style-type: none"> Refer to Cabotegravir for dosing and instructions. <p>Pregnancy</p> <p><i>PKs in Pregnancy</i></p> <ul style="list-style-type: none"> RPV PKs are highly variable during pregnancy. RPV AUC and trough concentrations are 20% to 50% lower in pregnancy than postpartum. Although most pregnant women exceeded target exposure, those with detectable viral loads had lower RPV troughs. <p><i>Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> Although RPV plasma concentration is reduced during pregnancy, higher-than-standard doses have not been studied, and not enough data are available to recommend a dosing change during pregnancy. Pregnant women receiving standard dosing should have their viral loads monitored more frequently than women who are not receiving RPV. <p>For guidance about the use of combination products in pregnancy, please see the specific sections on other components (i.e., DTG, FTC, TAF, TDF).</p>	<p>Two-drug regimens (e.g., the RPV/DTG FDC) are not recommended for use in pregnancy.</p>	
PIs				

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
PIs block the activity of the protease enzyme, which is required to assemble new HIV viral particles that are capable of infecting new cells.				
<p>Atazanavir (ATV) <i>Reyataz</i></p> <p>Note: Generic products are available for some formulations.</p> <p>Note: ATV must be combined with low-dose RTV boosting in pregnancy.</p> <p>(ATV/c) <i>Evotaz</i></p>	<p>ATV (Reyataz) <i>Capsules</i></p> <ul style="list-style-type: none"> • 100 mg (generic product only) • 150 mg^d • 200 mg^d • 300 mg^d <p><i>Oral Powder</i></p> <ul style="list-style-type: none"> • 50-mg packet <p>ATV/c (Evotaz)</p> <ul style="list-style-type: none"> • ATV 300 mg/COBI 150-mg tablet 	<p>Standard Adult Doses</p> <p><i>In ARV-Naive Patients Without RTV Boosting</i></p> <ul style="list-style-type: none"> • ATV 400 mg once daily with food; ATV without RTV boosting is not recommended when used with TDF, H2-receptor antagonists, PPIs, or during pregnancy. <p><i>In ARV-Naive Patients With RTV Boosting</i></p> <ul style="list-style-type: none"> • ATV/r 300 mg/100 mg once daily with food • When combined with EFV in ARV-naive patients: ATV/r 400 mg/100 mg once daily with food <p><i>In ARV-Experienced Patients</i></p> <ul style="list-style-type: none"> • ATV 300 mg plus RTV 100 mg once daily with food • Do not use with PPIs or EFV. <p><i>In ARV-Experienced Patients Who Are Receiving an H2-Receptor Antagonist</i></p> <ul style="list-style-type: none"> • ATV/r 300/100 mg once daily with food <p><i>In ARV-Experienced Patients Who Are Receiving an H2-Receptor Antagonist and TDF</i></p> <ul style="list-style-type: none"> • ATV/r 400 mg/100 mg once daily with food <p><i>Powder Formulation</i></p> <ul style="list-style-type: none"> • Oral powder is taken with RTV once daily with food at the same recommended adult dose as the capsules. <p><i>ATV/c (Evotaz)</i></p> <ul style="list-style-type: none"> • One tablet once daily with food 	<p>Low placental transfer to fetus^b</p> <p>No evidence of human teratogenicity (can rule out 1.5-fold increase in overall birth defects)</p> <p>Must be given with RTV boosting in pregnancy.</p> <p>Effect of <i>in utero</i> ATV exposure on infant indirect bilirubin levels is unclear. Nonpathologic elevations of neonatal bilirubin have been observed in some, but not all, clinical trials to date.</p> <p>Oral powder (but not capsules) contains phenylalanine, which can be harmful to patients with phenylketonuria.</p> <p>Use of ATV/c is not recommended during pregnancy. See Recommendations for Use of Antiretroviral Drugs During Pregnancy, Table 4 and Table 5 for discussions about avoiding the use of ATV/c during pregnancy.</p>	<p>December 30, 2021</p>

		<p>Pregnancy <i>PKs in Pregnancy</i></p> <ul style="list-style-type: none"> • <i>ATV (Reyataz)</i> <ul style="list-style-type: none"> ○ ATV concentrations are reduced during pregnancy, and they are further reduced when ATV is given concomitantly with TDF or an H2-receptor antagonist. • <i>ATV/c (Evotez)</i> <ul style="list-style-type: none"> ○ Use of <i>ATV/c</i> is not recommended during pregnancy, because ATV trough concentrations are 80% to 85% lower than the ATV concentrations seen in nonpregnant adults. <p><i>Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> • <i>ATV (Reyataz)</i> <ul style="list-style-type: none"> ○ Use of unboosted ATV is not recommended during pregnancy. ○ Use of ATV is not recommended during pregnancy for ARV-experienced patients who are taking TDF and an H2-receptor antagonist. ○ Use of an increased dose (ATV/r 400 mg/100 mg once daily with food) during the second and third trimesters results in plasma ATV concentrations equivalent to those seen in nonpregnant adults receiving standard dosing. Although some experts recommend increased ATV dosing in all patients during the second and third trimesters of pregnancy, the package insert recommends increased ATV dosing only for ARV-experienced pregnant women in the second and third trimesters who are also receiving either TDF or an H2-receptor antagonist. • <i>ATV/c (Evotez)</i> <ul style="list-style-type: none"> ○ Insufficient data to make dosing recommendation in pregnancy (see COBI) ○ For guidance about the use of combination products in pregnancy, please see the specific sections on other components (i.e., COBI). 		
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Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
<p>Darunavir (DRV) <i>Prezista</i></p> <p>Note: Must be combined with low-dose RTV or COBI boosting.</p> <p>(DRV/c) <i>Prezcobix</i></p> <p>(DRV/c/FTC/TAF) <i>Symtuza</i></p>	<p>DRV (Prezista) <i>Tablet</i></p> <ul style="list-style-type: none"> • 75 mg • 150 mg • 600 mg • 800 mg <p><i>Oral Suspension</i></p> <ul style="list-style-type: none"> • 100 mg/mL <p>DRV/c (Prezcobix)</p> <ul style="list-style-type: none"> • DRV/c 800 mg/150 mg tablet <p>DRV/c/FTC/TAF (Symtuza)</p> <ul style="list-style-type: none"> • DRV 800 mg/COBI 150 mg/FTC 200 mg/TAF 10 mg tablet 	<p>Standard Adult Doses</p> <p><i>ARV-Naive Patients</i></p> <ul style="list-style-type: none"> • DRV/r 800 mg/100 mg once daily with food • DRV/c 800 mg/150 mg once daily with food <p><i>ARV-Experienced Patients If Patient Has No DRV Resistance Mutations</i></p> <ul style="list-style-type: none"> • DRV/r 800 mg/100 mg once daily with food • DRV/c 800 mg/150 mg once daily with food <p><i>ARV-Experienced Patients If Any DRV Resistance Mutations Are Present</i></p> <ul style="list-style-type: none"> • DRV/r 600 mg/100 mg twice daily with food <p><i>DRV/c (Prezcobix)</i></p> <ul style="list-style-type: none"> • One tablet once daily with food <p><i>DRV/c/FTC/TAF (Symtuza)</i></p> <ul style="list-style-type: none"> • One tablet once daily with food <p>Pregnancy</p> <p><i>PKs in Pregnancy</i></p> <ul style="list-style-type: none"> • Decreased exposure in pregnancy with use of DRV/r. <p><i>Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> • The Panel does not recommend once-daily dosing with DRV/r during pregnancy or the use of DRV/c during pregnancy. • Twice-daily DRV/r dosing (DRV/r 600 mg/100 mg with food) is recommended for all pregnant women. 	<p>Low placental transfer to fetus.^b</p> <p>No evidence of teratogenicity in mice, rats, or rabbits. No evidence of human teratogenicity.</p> <p>Must be boosted with low-dose RTV.</p> <p>The Panel does not recommend once-daily dosing with DRV/r during pregnancy or the use of DRV/c during pregnancy. If a DRV/c regimen is continued during pregnancy, viral load should be monitored frequently.</p>	<p>December 30, 2021</p>

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
		<ul style="list-style-type: none"> Increased, twice-daily DRV dose (DRV/r 800 mg/100 mg with food) during pregnancy does not result in an increase in DRV exposure and is not recommended. <p>For guidance about use of combination products in pregnancy, please see the specific sections on other components (i.e., COBI, FTC, TAF).</p>		
Lopinavir/Ritonavir (LPV/r) <i>Kaletra</i>	LPV/r (Kaletra) <i>Tablets</i> <ul style="list-style-type: none"> LPV/r 200 mg/50 mg LPV/r 100 mg/25 mg <i>Oral Solution</i> <ul style="list-style-type: none"> Each 5 mL contains LPV/r 400 mg/100 mg^d 	Standard Adult Doses <ul style="list-style-type: none"> LPV/r 400 mg/100 mg twice daily, <i>or</i> LPV/r 800 mg/200 mg once daily <i>Tablets</i> <ul style="list-style-type: none"> Take without regard to food. <i>Oral Solution</i> <ul style="list-style-type: none"> Take with a meal. <i>With EFV or NVP in PI-Naive or PI-Experienced Patients</i> <ul style="list-style-type: none"> LPV/r 500 mg/125-mg tablets twice daily without regard to meals (use a combination of two LPV/r 200 mg/50 mg tablets and one LPV/r 100 mg/25-mg tablet), <i>or</i> LPV/r 520 mg/130 mg oral solution (6.5 mL) twice daily with food Pregnancy <i>PKs in Pregnancy</i> <ul style="list-style-type: none"> With twice-daily dosing, LPV exposure is reduced in pregnant women who receive standard adult doses; increasing the dose by 50% results in exposure equivalent to that seen in nonpregnant adults receiving standard doses. 	Low placental transfer to fetus. ^b No evidence of human teratogenicity (can rule out 1.5-fold increase in overall birth defects). Oral solution contains 42% alcohol and 15% propylene glycol and is not recommended for use in pregnancy. Once-daily LPV/r dosing is not recommended during pregnancy.	December 30, 2021

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
		<ul style="list-style-type: none"> No PK data are available for once-daily dosing in pregnancy. <p><i>Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> Once-daily dosing is not recommended during pregnancy. Some experts recommend that an increased dose (i.e., LPV/r 600 mg/150 mg twice daily without regard to meals or LPV/r 500 mg/125 mg twice daily without regard to meals) should be used in the second and third trimesters, especially in PI-experienced pregnant women and women who start treatment during pregnancy with a baseline viral load >50 copies/mL. When standard dosing is used, monitor virologic response and, if possible, LPV drug levels. 		
Entry Inhibitors Entry and attachment inhibitors block viral binding or fusion of HIV to host cells.				
Fostemsavir (FTR) <i>Rukobia</i>	FTR (Rukobia) <i>Extended-Release Tablet</i> <ul style="list-style-type: none"> 600 mg 	Standard Adult Doses (FTR) <i>Rukobia</i> <ul style="list-style-type: none"> FTR 600 mg twice daily with or without food Pregnancy <i>PK in Pregnancy</i> <ul style="list-style-type: none"> No PK studies in human pregnancy <i>Dosing in Pregnancy</i> <ul style="list-style-type: none"> Insufficient data to make dosing recommendation 	No human data are available regarding placental passage. A study in rats demonstrates placental passage of temsavir or other metabolites. Insufficient data to assess for teratogenicity in humans. No evidence of teratogenicity in rats or rabbits.	December 30, 2021
Ibalizumab-uiyk (IBA) <i>Trogarzo</i>	IBA (Trogarzo) <i>IV Solution</i> <ul style="list-style-type: none"> 150 mg/mL 	Standard Adult Doses <ul style="list-style-type: none"> IBA 2,000 mg loading dose, followed by IBA 800 mg maintenance doses administered every 2 weeks Pregnancy <i>PKs in Pregnancy</i>	No human data are available, but placental transfer of IBA, a monoclonal antibody, is possible and documented in monkeys.	December 30, 2021

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
		<ul style="list-style-type: none"> No PK studies in human pregnancy. <p><i>Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> Insufficient data to make dosing recommendations. 	<p>Based on data in cynomolgus monkeys with <i>in utero</i> exposure, potential exists for reversible immunosuppression (CD4 T cell and B cell lymphocytopenia) in infants born to mothers exposed to IBA during pregnancy.</p> <p>The FDA requires collection of prospective data in individuals exposed to IBA during pregnancy to monitor maternal and pregnancy outcomes, including adverse effects on the developing fetus, neonate, and infant.</p> <p>Insufficient data to assess for teratogenicity in humans.</p>	
Maraviroc (MVC) Selzentry	<p><i>Tablets</i></p> <ul style="list-style-type: none"> 150 mg 300 mg 	<p>Standard Adult Doses</p> <ul style="list-style-type: none"> MVC 300 mg twice daily with or without food. MVC should be used only for patients with CCR5-tropic virus (and no X4-tropic virus). <p><i>Dose Adjustments</i></p> <ul style="list-style-type: none"> Increase to MVC 600 mg twice daily when used with the potent CYP3A inducers EFV, ETR, and rifampin. Decrease to MVC 150 mg twice daily when used with CYP3A inhibitors, which includes all PIs except TPV/r and itraconazole. <p>Pregnancy</p> <p><i>PKs in Pregnancy</i></p> <ul style="list-style-type: none"> A PK study in human pregnancy demonstrated a 20% to 30% overall decrease in MVC AUC, but C_{trough} exceeded the recommended minimum concentration of 50 ng/mL. <p><i>Dosing in Pregnancy</i></p>	<p>Moderate placental transfer to fetus.^b</p> <p>No evidence of teratogenicity in rats or rabbits; insufficient data to assess teratogenicity in humans.</p>	<p>December 30, 2021</p>

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
		<ul style="list-style-type: none"> Adjusting the standard adult MVC dose for concomitant use with ARV drugs seems appropriate. 		
INSTIs INSTIs, the viral enzyme that catalyzes the two-step process that inserts HIV DNA into the genome of the host cell.				
Bictegravir/Emtricitabine/Tenofovir Alafenamide (BIC/FTC/TAF) <i>Biktarvy</i> Note: BIC is available only as part of an FDC tablet.	BIC/FTC/TAF (Biktarvy) <ul style="list-style-type: none"> BIC 50 mg/ FTC 200 mg/ TAF 25 mg tablet BIC 30 mg/ FTC 120 mg/ TAF 15 mg tablet 	Standard Adult Doses <ul style="list-style-type: none"> One tablet of BIC 50 mg/FTC 200 mg/TAF 25 once daily with or without food Pregnancy <i>PK in Pregnancy</i> <ul style="list-style-type: none"> No PK studies in human pregnancy <i>Dosing in Pregnancy</i> <ul style="list-style-type: none"> Insufficient data to make dosing recommendations For guidance about use of combination products in pregnancy, please see the specific sections on other components (i.e., FTC , TAF).	More data are needed to characterize the placental passage of BIC. Insufficient data exist to assess for teratogenicity in humans. No evidence of teratogenicity in rats or rabbits exists. BIC can be taken with food at the same time as any preparation containing iron or calcium—including prenatal vitamins—but should not be administered within 2 hours of these preparations when taken on an empty stomach. BIC can be taken at least 2 hours before or 6 hours after antacids containing aluminum or magnesium.	December 30, 2021
Cabotegravir (CAB) <i>Vocabria</i> (oral) <i>Apretude</i> (injection) (CAB RPV) <i>Cabenuva</i> CAB RPV is a two-drug co-packaged product for IM injection.	CAB <ul style="list-style-type: none"> CAB 30-mg tablets for oral administration CAB 200 mg/mL suspension for IM injection CAB RPV <ul style="list-style-type: none"> CAB 200 mg/mL suspension for IM injection RPV 300 mg/mL suspension for IM injection	Standard Adult Doses <i>Oral Lead-in Therapy</i> <i>CAB (Vocabria)</i> <ul style="list-style-type: none"> One 30-mg tablet once daily in combination with RPV (Edurant) 25 mg once daily taken with a meal for 4 weeks <i>CAB (Apretude) Initiation</i> <ul style="list-style-type: none"> CAB 600 mg (3 mL) injection given 1 month apart for 2 consecutive months on the last day of an oral lead-in if used or within 3 days <i>Continuation Therapy</i>	No human data are available regarding placental passage. Insufficient data to assess for teratogenicity in humans. No evidence of teratogenicity in rats or rabbits.	December 30, 2021

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
		<ul style="list-style-type: none"> • CAB 600 mg (3 mL) injections every 2 months thereafter <p><i>CAB RPV (Cabenuva)</i> <i>Loading Dose to Be Given on Last Day of Oral Therapy</i></p> <ul style="list-style-type: none"> • CAB 600 mg (3 mL) and RPV 900 mg (3 mL), given as two separate injections in separate ventrogluteal sites <p><i>Continuation Therapy</i></p> <ul style="list-style-type: none"> • CAB 400 mg (2 mL) and RPV 600 mg (2 mL), given as two separate injections in separate ventrogluteal sites once a month with allowance for a +/- 7-day administration window <ul style="list-style-type: none"> • Patients should be monitored for ~10 minutes for post-injection reactions. A 23-gauge, 1.5-inch IM needle is recommended for the injection and is provided in the packaging. Longer, 2-inch needles should be used in patients with BMIs >30 kg/m². <p>Pregnancy <i>PKs in Pregnancy</i></p> <ul style="list-style-type: none"> • No PK studies in human pregnancy <p><i>Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> • Insufficient data to make dosing recommendations <p>For guidance about the use of combination products in pregnancy, please see the specific sections on other components (i.e., RPV).</p>		

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
<p>Dolutegravir (DTG) <i>Tivicay</i></p> <p><i>Tivicay PD</i></p> <p>(DTG/3TC) <i>Dovato</i></p> <p>(DTG/RPV) <i>Juluca</i></p> <p>(DTG/ABC/3TC) <i>Triumeq</i></p>	<p>DTG (Tivicay)</p> <ul style="list-style-type: none"> DTG 10 mg, 25 mg, and 50 mg film-coated tablets <p>DTG (Tivicay PD)</p> <ul style="list-style-type: none"> DTG 5 mg dispersible tablet for oral suspension <p>DTG film-coated tablets and DTG dispersible tablets are not bioequivalent and are not interchangeable.</p> <p>DTG/3TC (Dovato)</p> <ul style="list-style-type: none"> DTG 50 mg/ 3TC 300 mg tablet <p>DTG/RPV (Juluca)</p> <ul style="list-style-type: none"> DTG 50 mg/ RPV 25 mg tablet <p>DTG/ABC/3TC (Triumeq)</p> <ul style="list-style-type: none"> DTG 50 mg/ ABC 600 mg/ 3TC 300 mg tablet 	<p>Standard Adult Doses <i>In ARV-Naive or ARV-Experienced (but INSTI-Naive) Patients</i></p> <p><i>DTG (Tivicay)</i></p> <ul style="list-style-type: none"> One 50 mg tablet once daily, without regard to food <p><i>DTG (Tivicay PD)</i></p> <ul style="list-style-type: none"> Six 5 mg tablets (30 mg) dissolved in water once daily, without regard to food <p><i>DTG/3TC (Dovato)</i></p> <ul style="list-style-type: none"> One tablet once daily, without regard to food <p><i>DTG/RPV (Juluca)</i></p> <ul style="list-style-type: none"> One tablet once daily, with food <p><i>DTG/ABC/3TC (Triumeq)</i></p> <ul style="list-style-type: none"> One tablet once daily, without regard to food <p><i>In ARV-Naive or ARV-Experienced (but INSTI-Naive) Patients Who Are Also Receiving EFV, FPV/r, TPV/r, or Rifampin</i></p> <p><i>DTG (Tivicay)</i></p> <ul style="list-style-type: none"> One 50 mg tablet twice daily, without regard to food <p><i>DTG (Tivicay PD)</i></p> <ul style="list-style-type: none"> Six 5 mg tablets (30 mg) dissolved in water twice daily, without regard to food 	<p>High placental transfer to fetus.^b</p> <p>No evidence of teratogenicity in rats or rabbits. The most recent data from Botswana indicates the prevalence of NTDs in infants born to pregnant women with HIV receiving DTG at conception is no longer statistically different than in those receiving other antiretrovirals.</p> <p>DTG is a <i>Preferred</i> antiretroviral drug for use during pregnancy, irrespective of trimester, and for people who are trying to conceive (see Recommendations for Use of Antiretroviral Drugs During Pregnancy and Table 5).</p> <p>To maximize DTG absorption, doses should not be administered within 2 hours of ingesting any preparation that contains such minerals as iron or calcium, including prenatal vitamins.</p>	<p>December 30, 2021</p>

Generic Name (Abbreviation) Trade Name	Formulation	Dosing Recommendations ^a	Use in Pregnancy	Last Reviewed
		<p><i>In INSTI-Experienced Patients</i> DTG (<i>Tivicay</i>)</p> <ul style="list-style-type: none"> One tablet twice daily, without regard to food <p>Pregnancy <i>PKs in Pregnancy</i></p> <ul style="list-style-type: none"> AUC may be decreased during the third trimester compared with postpartum, but exposures during pregnancy are well above those needed to inhibit viral replication. <p><i>Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> No change in dose indicated. <p>For guidance about the use of combination products in pregnancy, please see the specific sections on other components (i.e., ABC, 3TC, RPV).</p>		
<p>Elvitegravir (EVG)</p> <p>Note: As of October 2017, the single-drug formulation of EVG (<i>Vitekta</i>) is no longer available.</p> <p>(EVG/c/FTC/TAF) <i>Genvoya</i></p> <p>(EVG/c/FTC/TDF) <i>Stribild</i></p>	<p>EVG/c/FTC/TAF (Genvoya)</p> <ul style="list-style-type: none"> EVG 150 mg/ COBI 150 mg/ FTC 200 mg/ TAF 10-mg tablet <p>EVG/c/FTC/TDF (Stribild)</p> <ul style="list-style-type: none"> EVG 150 mg/ COBI 150 mg/ FTC 200 mg/ TDF 300-mg tablet 	<p>Standard Adult Doses <i>Genvoya and Stribild</i></p> <ul style="list-style-type: none"> One tablet once daily with food <p>Pregnancy <i>PKs in Pregnancy</i></p> <ul style="list-style-type: none"> PK studies in women who received EVG/c demonstrated significant reduction in EVG plasma exposure during pregnancy. <p><i>Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> EVG plasma concentrations are reduced with use of standard adult doses during pregnancy; however, higher-than-standard doses of EVG have not been studied. Insufficient data are available to recommend a dose for use in pregnancy. <p>For guidance about use of combination products in pregnancy, please see the specific sections on other components (i.e., COBI, FTC, TAF).</p>	<p>Evidence of high placental transfer of EVG and low transfer of COBI.^b</p> <p>Insufficient data to assess for teratogenicity in humans. No evidence of teratogenicity in rats or rabbits.</p> <p>EVG/c is not recommended for use in pregnancy. For persons who become pregnant while taking EVG/c, consider frequent viral load monitoring or switching to a more effective, recommended regimen. If a woman continues taking a regimen that contains EVG/c, doses should be administered with a meal and should not be administered within 2 hours of ingesting any preparation that contains minerals,</p>	<p>December 30, 2021</p>

Pharmacoenhancers

Pharmacoenhancers reduce the metabolism of antiretroviral drugs and prolong their presence in plasma, allowing for more convenient dosing regimens.

<p>Cobicistat (COBI) <i>Tybost</i></p> <p>(ATV/c) <i>Evotaz</i></p> <p>(EVG/c/FTC/TAF) <i>Genvoya</i></p> <p>(DRV/c) <i>Prezcobix</i></p> <p>(EVG/c/FTC/TDF) <i>Stribild</i></p> <p>(DRV/c/FTC/TAF) <i>Symtuza</i></p>	<p>COBI (Tybost) <i>Tablet:</i></p> <ul style="list-style-type: none"> • COBI 150 mg <p>ATV/c (Evotaz)</p> <ul style="list-style-type: none"> • ATV 300 mg/ COBI 50-mg tablet <p>EVG/c/FTC/TAF (Genvoya)</p> <ul style="list-style-type: none"> • EVG 150 mg/ COBI 150 mg/ FTC 200 mg/ TAF 10-mg tablet <p>DRV/c (Prezcobix)</p> <ul style="list-style-type: none"> • DRV 800 mg/ COBI 150-mg tablet <p>EVG/c/FTC/TDF (Stribild)</p> <ul style="list-style-type: none"> • EVG 150 mg/ COBI 150 mg/ FTC 200 mg/ TDF 300-mg tablet <p>DRV/c/FTC/TAF (Symtuza)</p> <ul style="list-style-type: none"> • DRV 800 mg/ COBI 150 mg/ FTC 200 mg/ TAF 10-mg tablet 	<p>Standard Adult Doses</p> <p><i>COBI (Tybost)</i></p> <ul style="list-style-type: none"> • When used as an alternative PK booster with ATV or DRV, the dose is one tablet once daily with food. <p><i>ATV/c (Evotaz)</i></p> <ul style="list-style-type: none"> • One tablet once daily with food <p><i>EVG/c/FTC/TAF (Genvoya)</i></p> <ul style="list-style-type: none"> • One tablet once daily with food <p><i>DRV/c (Prezcobix)</i></p> <ul style="list-style-type: none"> • One tablet once daily with food <p><i>EVG/c/FTC/TDF (Stribild)</i></p> <ul style="list-style-type: none"> • One tablet once daily with food <p><i>DRV/c/FTC/TAF (Symtuza)</i></p> <ul style="list-style-type: none"> • One tablet once daily with food <p>Pregnancy <i>PKs in Pregnancy</i></p> <ul style="list-style-type: none"> • Based on limited data, COBI exposure and its pharmacoenhancing effect on ATV, DRV, and EVG are reduced markedly in pregnancy. • When coadministered with COBI, TAF exposure is not significantly different between pregnancy and the postpartum period. 	<p>Low placental transfer to fetus^b</p> <p>No evidence of human teratogenicity (can rule out two-fold increase in overall birth defects).</p> <p>Use of COBI-boosted ATV, DRV, or EVG is not recommended in pregnancy.</p>	
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<p>Ritonavir (RTV) <i>Norvir</i></p> <p>(LPV/r) <i>Kaletra</i></p>	<p>RTV (Norvir) <i>Capsules</i></p> <ul style="list-style-type: none"> • RTV 100 mg <p><i>Tablets</i></p> <ul style="list-style-type: none"> • RTV 100 mg <p><i>Oral Solution</i></p> <ul style="list-style-type: none"> • RTV 80 mg/mL <p><i>Powder</i></p> <ul style="list-style-type: none"> • RTV 100 mg/sachet <p>LPV/r (Kaletra) <i>Tablets</i></p> <ul style="list-style-type: none"> • LPV/r 200 mg/50 mg • LPV/r 100 mg/25 mg <p><i>Oral Solution</i></p> <ul style="list-style-type: none"> • Each 5 mL contains LPV/r 400 mg/100 mg 	<p>Standard Adult Dose of RTV (Norvir) When Used as PK Booster for Other PIs</p> <ul style="list-style-type: none"> • RTV 100–400 mg per day in one or two divided doses (refer to other PI sections for specific dosing recommendations) <p><i>Tablet</i></p> <ul style="list-style-type: none"> • Take with food <p><i>Capsule or Oral Solution</i></p> <ul style="list-style-type: none"> • To improve tolerability, take with food, if possible. <p>Standard Adult Doses of LPV/r (Kaletra)</p> <ul style="list-style-type: none"> • LPV/r 400 mg/100 mg twice daily, <i>or</i> • LPV/r 800 mg/200 mg once daily <p><i>Tablets</i></p> <ul style="list-style-type: none"> • Take without regard to food. <p><i>Oral Solution</i></p> <ul style="list-style-type: none"> • Take with food. <p><i>With EFV or NVP in PI-Naive or PI-Experienced Patients</i></p> <ul style="list-style-type: none"> • LPV/r 500 mg/125 mg tablets twice daily without regard to meals (use a combination of two LPV/r 200 mg/50 mg tablets and one LPV/r 100 mg/25 mg tablet), <i>or</i> 	<p>Low placental transfer to fetus.^b</p> <p>No evidence of increased risk of human teratogenicity (can rule out 1.5-fold increase in overall birth defects).</p> <p>RTV should only be used as low-dose booster for other PIs.</p> <p>RTV oral solution contains 43% alcohol and, therefore, is not recommended for use during pregnancy because no safe level of alcohol exposure during pregnancy is known. LPV/r oral solution contains 42% alcohol and 15% propylene glycol and is not recommended for use in pregnancy.</p> <p>Once-daily LPV/r dosing is not recommended during pregnancy.</p>	<p>December 30, 2021</p>

		<ul style="list-style-type: none"> • LPV/r 520 mg/130 mg oral solution (6.5 mL) twice daily with food <p>Pregnancy <i>PKs in Pregnancy</i></p> <ul style="list-style-type: none"> • Lower RTV levels are seen during pregnancy than during postpartum, which may reduce the pharmacoenhancing effect of RTV in pregnancy. <p><i>RTV Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> • No dose adjustment is necessary when RTV is used as booster. <p><i>LPV/r Dosing in Pregnancy</i></p> <ul style="list-style-type: none"> • Once-daily dosing is not recommended during pregnancy. • Some experts recommend that an increased dose (i.e., LPV/r 600 mg/150 mg twice daily without regard to meals or LPV/r 500 mg/125 mg twice daily without regard to meals) should be used in the second and third trimesters of pregnancy, especially in patients who are PI-experienced and in those who start treatment during pregnancy with a baseline viral load >50 copies/mL. • When standard dosing is used, monitor virologic response and, if possible, LPV drug levels. <p>For guidance about use of combination products in pregnancy, please see the specific sections on other components (i.e., LPV/r).</p>		
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^a Individual ARV drug doses may need to be adjusted in patients with renal or hepatic insufficiency (for details, see the [Adult and Adolescent Antiretroviral Guidelines, Appendix B, Table 11](#)).

^b Placental transfer categories are determined by mean or median cord blood/maternal delivery plasma drug ratio:

High: >0.6

Moderate: 0.3–0.6

Low: <0.3

^c Only indicated for use in chronic HBV virus infection in adults.

^d Generic product available

Key: 3TC = lamivudine; ABC = abacavir; ART = antiretroviral therapy; ARV = antiretroviral; ATV = atazanavir; ATV/c = atazanavir/cobicistat; ATV/r = atazanavir/ritonavir; AUC = area under the curve; BIC = bictegravir; CAB = cabotegravir; CD4 = CD4 T lymphocyte; COBI = cobicistat; CYP = cytochrome P; DOR = doravirine; DRV = darunavir; DRV/c = darunavir/cobicistat; DRV/r = darunavir/ritonavir; DTG = dolutegravir; EFV = efavirenz; ETR = etravirine; EVG = elvitegravir; EVG/c = elvitegravir/cobicistat; FDA = Food and Drug Administration; FDC = fixed-dose combination; FTC = emtricitabine; FTR = fostemsavir; HBV = hepatitis b virus; HSR = hypersensitivity reaction; IBA =ibalizumab; INSTI = integrase strand transfer inhibitor; IV = intravenous; LPV = lopinavir; LPV/r = lopinavir/ritonavir; MVC = maraviroc; NNRTI = non-nucleoside reverse transcriptase inhibitor; NRTI = nucleoside reverse transcriptase inhibitor; NTD = neural tube defect; NVP = nevirapine; PI = protease inhibitor; PK = pharmacokinetic; PPI = proton pump inhibitor; RAL = raltegravir; RPV = rilpivirine; RTV = ritonavir; TAF = tenofovir alafenamide; TDF = tenofovir disoproxil fumarate; TPV = tipranavir; TPV/r = tipranavir/ritonavir; WHO = World Health Organization; ZDV = zidovudine