



Selecting an Initial ART Regimen

January 2019

Table 1: Preferred Initial ART Regimens for Nonpregnant* Adults (listed alphabetically; for specific details, see <i>Specific Factors to Consider</i> or drug package inserts)		
Regimen	Comments	Rating
<i>Available as a Single-Tablet Formulation</i>		
Abacavir/lamivudine/ dolutegravir* (ABC/3TC/DTG; Triumeq)	<ul style="list-style-type: none"> Initiate only in patients confirmed to be negative for HLA-B*5701, including when a “rapid-start” or “test-and-treat” initiation of ART occurs before baseline laboratory test results are available. Initiate only in patients with CrCl \geq50 mL/min. Consider underlying risk of coronary heart disease. Documented DTG resistance after initiation in treatment-naive patients is rare. Magnesium- or aluminum-containing antacids may be taken 2 hours before or 6 hours after DTG; calcium-containing antacids or iron supplements may be taken simultaneously if taken with food. 	A1
Tenofovir alafenamide/ emtricitabine/bictegravir (TAF 25 mg/FTC/BIC; Biktarvy)	<ul style="list-style-type: none"> Initiate only in patients with CrCl \geq30 mL/min. Contains 25 mg of TAF, unboosted. Magnesium- or aluminum-containing antacids may be taken 2 hours before or 6 hours after BIC; calcium-containing antacids or iron supplements may be taken simultaneously if taken with food. 	A1
<i>Available as a Multi-Tablet Regimen with Once-Daily Dosing</i>		
Tenofovir alafenamide/ emtricitabine <i>and</i> dolutegravir* (TAF 25 mg/FTC <i>and</i> DTG; Descovy <i>and</i> Tivicay)	<ul style="list-style-type: none"> Initiate only in patients with CrCl \geq30 mL/min. Documented DTG resistance after initiation in treatment-naive patients is rare. Contains 25 mg of TAF, unboosted. Magnesium- or aluminum-containing antacids may be taken 2 hours before or 6 hours after DTG; calcium-containing antacids or iron supplements may be taken simultaneously if taken with food. 	A1
Tenofovir alafenamide/ emtricitabine <i>and</i> raltegravir (TAF 25 mg/FTC <i>and</i> RAL HD; Descovy <i>and</i> Isentress HD)	<ul style="list-style-type: none"> Initiate only in patients with CrCl \geq30 mL/min. To date, no clinical trials have been conducted with TAF and RAL; data are based on bioequivalence pharmacokinetic studies. Contains 25 mg of TAF, unboosted. Administer as TAF/FTC once daily and RAL HD 1200 mg once daily, dosed as two 600 mg HD tablets. Magnesium- or aluminum-containing antacids are contraindicated; co-administration of calcium-containing antacids is not recommended with RAL HD. 	A2



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Table 1: Preferred Initial ART Regimens for Nonpregnant* Adults

(listed alphabetically; for specific details, see *Specific Factors to Consider* or drug package inserts)

- **Additional abbreviations:** ART, antiretroviral therapy; CrCl, creatinine clearance.
- **ART Regimens for individuals of childbearing potential:** Refer to the DHHS guideline: *Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV Transmission in the United States*.
- **Substitutions:** 1) In all cases, FTC and 3TC are interchangeable. 2) TAF 10 mg and TAF 25 mg are not interchangeable.
- **Dose adjustments:** Refer to *Table 8: ARV Dose Adjustments for Renal and Hepatic Impairment* for adjustment based on renal or hepatic function.

*See *Use of Dolutegravir in Individuals of Childbearing Capacity*, February 2020.



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Table 2: Alternative Initial ART Regimens for Nonpregnant* Adults

(listed alphabetically; for specific details, see *Specific Factors to Consider* or drug package inserts)

Regimen	Comments	Rating
<i>Available as a Single-Tablet Formulation</i>		
Tenofovir alafenamide/ emtricitabine/cobicistat/ darunavir (TAF 10 mg/FTC/COBI/ DRV; Symtuza)	<ul style="list-style-type: none"> Initiate only in patients with CrCl \geq30 mL/min. Carefully consider drug-drug interactions with COBI [Eron, et al. 2018]. Contains 10 mg TAF, boosted. 	B2
Tenofovir alafenamide/ emtricitabine/cobicistat/ elvitegravir (TAF 10 mg/FTC/COBI/EVG; Genvoya)	<ul style="list-style-type: none"> Initiate only in patients with CrCl \geq30 mL/min. Carefully consider drug-drug interactions with COBI. Contains 10 mg of TAF, boosted with COBI. Separate dosing of antacids by 2 hours, either before or after dose of EVG. 	B1
Tenofovir alafenamide/ emtricitabine/rilpivirine (TAF 25 mg/FTC/RPV; Odefsey)	<ul style="list-style-type: none"> Initiate only in patients confirmed to have a CD4 cell count \geq200 cells/mm³ and viral load <100,000 copies/mL. When a “rapid-start” or “test-and-treat” initiation of ART occurs before a patient’s viral load and CD4 count are available, avoid use of RPV. Initiate only in patients with CrCl \geq30 mL/min. Use with caution in patients with depression or a history of suicidality. To date, no clinical trials have been conducted; data are based on bioequivalence pharmacokinetic studies of TAF compared with TDF. Contraindicated with PPIs. Use H₂-blockers with caution and separate dosing by 12 hours. Must take with food. Contains 25 mg of TAF, unboosted. 	B3
Tenofovir disoproxil fumarate/ lamivudine/doravirine (TDF/3TC/DOR; Delstrigo)	<ul style="list-style-type: none"> Initiate only in patients with CrCl \geq50 mL/min. Contraindicated when co-administered with drugs that are strong cytochrome P450 (CYP)3A enzyme inducers. Consider bone mineral density. 	B1
<i>Available as a Multi-Tablet Regimen with Once-Daily Dosing</i>		
Abacavir/lamivudine and doravirine (ABC/3TC and DOR; Epzicom and Pifeltro) [Molina, et al. 2018]	<ul style="list-style-type: none"> Initiate only in patients confirmed to be negative for HLA-B*5701. When a “rapid-start” or “test-and-treat” initiation of ART occurs before baseline laboratory test results are available, avoid use of ABC until a patient’s HLA-B*5701 test is confirmed negative. Consider underlying risk of coronary heart disease. Contraindicated when co-administered with drugs that are strong cytochrome P450 (CYP)3A enzyme inducers. 	B2
Tenofovir alafenamide/ emtricitabine and doravirine (TAF 25 mg/FTC and DOR; Descovy and Pifeltro)	<ul style="list-style-type: none"> Initiate only in patients with CrCl \geq30 mL/min. Contraindicated when co-administered with drugs that are strong CYP3A enzyme inducers. 	B2

Available at: hivguidelines.org/antiretroviral-therapy/what-to-start/#tab_1



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Table 2: Alternative Initial ART Regimens for Nonpregnant* Adults

(listed alphabetically; for specific details, see *Specific Factors to Consider* or drug package inserts)

Regimen	Comments	Rating
Tenofovir disoproxil fumarate/ emtricitabine <i>and</i> dolutegravir* (TDF/FTC <i>and</i> DTG; Truvada <i>and</i> Tivicay)	<ul style="list-style-type: none"> Initiate only in patients with CrCl \geq50 mL/min. Documented DTG resistance after initiation in treatment-naive patients is rare. Consider bone mineral density. Magnesium- or aluminum-containing antacids may be taken 2 hours before or 6 hours after DTG; calcium-containing antacids or iron supplements may be taken simultaneously if taken with food. 	B1
Tenofovir disoproxil fumarate/ emtricitabine <i>and</i> raltegravir (TDF/FTC <i>and</i> RAL HD; Truvada <i>and</i> Isentress HD)	<ul style="list-style-type: none"> Initiate only in patients with CrCl \geq50 mL/min. Consider bone mineral density. Administer as TDF/FTC once daily and RAL HD 1200 mg once daily, dosed as two 600 mg HD tablets. Magnesium- or aluminum-containing antacids are contraindicated; co-administration of calcium-containing antacids is not recommended with RAL HD. 	B1
<i>Available as a Multi-Tablet Regimen with Twice-Daily Dosing</i>		
Tenofovir alafenamide/ emtricitabine <i>and</i> raltegravir (TAF 25 mg/FTC <i>and</i> RAL; Descovy <i>and</i> Isentress)	<ul style="list-style-type: none"> Initiate only in patients with CrCl \geq30 mL/min. Administer as ABC/3TC once daily and RAL 400 mg twice daily. Magnesium- or aluminum-containing antacids are contraindicated; calcium-containing antacids are acceptable with RAL. 	B3
<ul style="list-style-type: none"> Additional abbreviations: ART, antiretroviral therapy; CrCl, creatinine clearance; PPI, proton-pump inhibitor. ART Regimens for individuals of childbearing potential: Refer to the DHHS guideline: <i>Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV Transmission in the United States</i>. Substitutions: 1) In all cases, FTC and 3TC are interchangeable. 2) TAF 10 mg and TAF 25 mg are not interchangeable. 3) COBI and RTV should not be considered interchangeable because of their drug-interaction profiles. Dose adjustments: Refer to <i>Table 8: ARV Dose Adjustments for Renal and Hepatic Impairment</i> for adjustment based on renal or hepatic function. <p>*See <i>Use of Dolutegravir in Individuals of Childbearing Capacity</i>, February 2020.</p>		

References

- Eron JJ, Orkin C, Gallant J, et al. A week-48 randomized phase-3 trial of darunavir/cobicistat/emtricitabine/tenofovir alafenamide in treatment-naive HIV-1 patients. *Aids* 2018;32(11):1431-1442. [PMID: 29683855] <https://www.ncbi.nlm.nih.gov/pubmed/29683855>
- Molina JM, Squires K, Sax PE, et al. Doravirine versus ritonavir-boosted darunavir in antiretroviral-naive adults with HIV-1 (DRIVE-FORWARD): 48-week results of a randomised, double-blind, phase 3, non-inferiority trial. *Lancet HIV* 2018;5(5):e211-e220. [PMID: 29592840] <https://www.ncbi.nlm.nih.gov/pubmed/29592840>



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Table 3: Other ART Regimens Not Included as Preferred or Alternative for Nonpregnant* Adults (listed alphabetically; for specific details, see <i>Specific Factors to Consider</i> and/or drug package inserts)		
Regimen	Comments	Rating
<i>Available as a Single-Tablet Regimen</i>		
Tenofovir disoproxil fumarate/emtricitabine/efavirenz (TDF/FTC/EFV; Atripla)	<ul style="list-style-type: none"> Initiate only in patients with CrCl \geq50 mL/min. Use with caution in patients with depression or a history of suicidality. Consider bone mineral density. 	B1
Tenofovir disoproxil fumarate/emtricitabine/rilpivirine [a] (TDF/FTC/RPV; Complera)	<ul style="list-style-type: none"> Initiate only in patients confirmed to have a CD4 cell count \geq200 cells/mm³ and viral load <100,000 copies/mL. Initiate only in patients with CrCl \geq50 mL/min. Use with caution in patients with depression or a history of suicidality. Contraindicated with PPIs. Use H₂-blockers with caution and separate dosing by 12 hours. Must take with food. Consider bone mineral density. 	B1
<i>Available as a Multi-Tablet Regimen with Once-Daily Dosing</i>		
Abacavir/lamivudine and atazanavir and ritonavir (ABC/3TC and ATV and RTV; Epzicom and Reyataz and Norvir)	<ul style="list-style-type: none"> Initiate only in patients confirmed to be negative for HLA-B*5701 [b]. Initiate only in patients with viral load <100,000 copies/mL. Carefully consider drug-drug interactions with RTV. Consider underlying risk of coronary heart disease. In treatment-naïve patients on boosted ATV, H₂-blockers should be either taken simultaneously with ATV or, if simultaneous dosing is not possible, separated from ATV by 10 hours; prescribe no more than 20 mg of famotidine or equivalent for one dose and no more than 40 mg twice daily of famotidine or equivalent for daily dose. Use no more than equivalent of 20 mg of omeprazole with ATV, separated by 12 hours. Scleral icterus from benign hyperbilirubinemia may be a concern. 	C1
Abacavir/lamivudine and darunavir/cobicistat (ABC/3TC and DRV/COBI; Epzicom and Prezcofix)	<ul style="list-style-type: none"> Initiate only in patients confirmed to be negative for HLA-B*5701 [b]. Carefully consider drug-drug interactions with COBI. Consider underlying risk of coronary heart disease. 	B3
Abacavir/lamivudine and darunavir and ritonavir (ABC/3TC and DRV and RTV; Epzicom and Prezista and Norvir)	<ul style="list-style-type: none"> Initiate only in patients confirmed to be negative for HLA-B*5701 [b]. Carefully consider drug-drug interactions with RTV. Consider underlying risk of coronary heart disease. 	B2
Abacavir/lamivudine and efavirenz (ABC/3TC and EFV; Epzicom and Sustiva)	<ul style="list-style-type: none"> Initiate only in patients confirmed to be negative for HLA-B*5701 [b]. Initiate only in patients with viral load <100,000 copies/mL. Use with caution in patients with depression or a history of suicidality. Consider underlying risk of coronary heart disease. 	C1

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Table 3: Other ART Regimens Not Included as Preferred or Alternative for Nonpregnant* Adults
(listed alphabetically; for specific details, see *Specific Factors to Consider* and/or drug package inserts)

Regimen	Comments	Rating
Tenofovir alafenamide/ emtricitabine <i>and</i> efavirenz (TAF 25 mg/FTC <i>and</i> EFV; Descovy <i>and</i> Sustiva)	<ul style="list-style-type: none"> Initiate only in patients with CrCl \geq50 mL/min. Use with caution in patients with depression or a history of suicidality. Contains 25 mg of TAF, unboosted. 	B3
Abacavir/lamivudine <i>and</i> raltegravir (ABC/3TC <i>and</i> RAL HD; Epzicom <i>and</i> Isentress HD)	<ul style="list-style-type: none"> Initiate only in patients confirmed to be negative for HLA-B*5701 [b]. Consider underlying risk of coronary heart disease. Administer as ABC/3TC once daily and RAL HD 1200 mg once daily, dosed as two 600 mg HD tablets. Magnesium- or aluminum-containing antacids are contraindicated; co-administration of calcium-containing antacids is not recommended with RAL HD. 	B3
<i>Available as a Multi-Tablet Regimen with Twice-Daily Dosing</i>		
Tenofovir disoproxil fumarate/ emtricitabine <i>and</i> raltegravir (TDF/FTC <i>and</i> RAL; Truvada <i>and</i> Isentress)	<ul style="list-style-type: none"> Initiate only in patients with CrCl \geq50 mL/min. Consider bone mineral density. TDF/FTC once daily and RAL 400 mg twice daily. Magnesium- or aluminum-containing antacids are contraindicated; calcium-containing antacids are acceptable with RAL. 	B1
Abacavir/lamivudine <i>and</i> raltegravir (ABC/3TC <i>and</i> RAL; Epzicom <i>and</i> Isentress)	<ul style="list-style-type: none"> Initiate only in patients confirmed to be negative for HLA-B*5701 [b]. Consider underlying risk of coronary heart disease. Administer as ABC/3TC once daily and RAL 400 mg twice daily. Magnesium- or aluminum-containing antacids are contraindicated; calcium-containing antacids are acceptable with RAL. 	B1
<ul style="list-style-type: none"> Additional abbreviations: ART, antiretroviral therapy; CrCl, creatinine clearance; PPI, proton-pump inhibitor. ART Regimens for individuals of childbearing potential: Refer to the DHHS guideline: <i>Recommendations for Use of Antiretroviral Drugs in Pregnant HIV-1-Infected Women for Maternal Health and Interventions to Reduce Perinatal HIV Transmission in the United States</i>. Substitutions: 1) In all cases, FTC and 3TC are interchangeable. 2) TAF 10 mg and TAF 25 mg are not interchangeable. 3) COBI and ritonavir should not be considered interchangeable because of their drug-interaction profiles. Dose adjustments: Refer to <i>Table 8: ARV Dose Adjustments for Renal and Hepatic Impairment</i> for adjustment based on renal or hepatic function. <p>Notes:</p> <ol style="list-style-type: none"> When a “rapid-start” or “test-and-treat” initiation of ART occurs before viral load and CD4 count are available, avoid use of RPV. When a “rapid-start” or “test-and-treat” initiation of ART occurs before baseline laboratory test results are available, avoid use of ABC until HLA-B*5701 is confirmed negative. 		