Selecting an Initial ART Regimen

October 2021

Table 2: Preferred Initial Antiretroviral Therapy Regimens for Nonpregnant Adults [a]
(listed alphabetically; for specific details, see *Specific Factors to Consider and Discuss With Patients* and drug package inserts)

Regimen	Comments	Rating
Available as a Single-Tablet Formulation		
Abacavir/lamivudine/dolutegravir [b,c] (ABC/3TC/DTG; Triumeq)	• 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 ≥30 mL/min [d]. • 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
Lamivudine/dolutegravir [b,c] (3TC/DTG; Dovato)	• Initiate ***only*** in patients with CrCl ≥30 mL/min [d]. • Do not use in patients with hepatitis B virus coinfection. • Do not initiate before HIV resistance tests results are available. • Do not initiate in patients with NRTI resistance, including the M184V/I mutation. • Do not initiate in patients with baseline HIV RNA levels >500,000 copies/mL until additional study data are available. • 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 [c] (TAF 25 mg/FTC/BIC; Biktarvy)	• Initiate ***only*** in patients with CrCl ≥30 mL/min [d]. • Contains 25 mg of TAF, unboosted [c]. • 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. • Documented DTG resistance after initiation in treatment-naive patients is rare.	A1

Table 2: Preferred Initial Antiretroviral Therapy Regimens for Nonpregnant Adults [a]

(listed alphabetically; for specific details, see *Specific Factors to Consider and Discuss With Patients* and drug package inserts)

Regimen	Comments	Rating
Available as a Multi-Tablet Regimen With Once-Daily Dosing		
Tenofovir alafenamide/emtricitabine or tenofovir disoproxil fumarate/emtricitabine *and* dolutegravir [b,c] (TAF 25 mg/FTC or TDF 300 mg/FTC *and* DTG; Descovy or Truvada *and* Tivicay)	• For TAF/FTC, initiate ***only*** in patients with CrCl ≥30 mL/min [d]. • Contains 25 mg of TAF, unboosted [c]. • For TDF/FTC, initiate ***only*** in patients with CrCl ≥50 mL/min [d]. • For TDF/FTC, 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. • Documented DTG resistance after initiation in treatment-naive patients is rare.	A1
Tenofovir alafenamide/emtricitabine or tenofovir disoproxil fumarate/emtricitabine *and* raltegravir HD [c] (TAF 25 mg/FTC or TDF 300 mg/FTC *and* RAL HD; Descovy or Truvada *and* Isentress HD)	• For TAF/FTC, initiate ***only*** in patients with CrCl ≥30 mL/min [d]. • Contains 25 mg of TAF, unboosted [c]. • For TDF/FTC, initiate ***only*** in patients with CrCl ≥50 mL/min [d]. • For TDF/FTC, consider bone mineral density. • Administer as TAF/FTC or TDF/FTC once daily and RAL HD 1200 mg once daily, dosed as two 600 mg HD tablets. • To date, no clinical trials have been conducted with TAF and RAL; data are based on bioequivalence pharmacokinetic studies. • Magnesium- or aluminum-containing antacids are contraindicated; coadministration of calcium-containing antacids is not recommended with RAL HD.	A2

Abbreviations: ART, antiretroviral therapy; CrCl, creatinine clearance; DHHS, U.S. Department of Health and Human Services; NRTI, nucleoside/nucleotide reverse transcriptase inhibitors; PEP, post-exposure prophylaxis.

Notes:

a. Refer to DHHS for ART regimens for individuals of childbearing potential: *Recommendations for the Use of Antiretroviral Drugs in Pregnant Women with HIV Infection and Interventions to Reduce Perinatal HIV Transmission in the United States.*

b. If DTG is prescribed for individuals of childbearing capacity, discuss the small risk of teratogenicity in the first trimester and counsel about the need to use birth control while completing the 28-day PEP regimen; there is no elevated risk beyond the first trimester (see *Use of Dolutegravir in Individuals of Childbearing Capacity*).

c. Substitutions:
   - In all cases, FTC and 3TC are interchangeable.
   - TAF 10 mg and TAF 25 mg are not interchangeable.

d. For dose adjustments, refer to *Table 9: Recommended Dose Adjustments for Use of Selected Fixed-Dose Combination Antiretroviral Medications in Patients With Hepatic or Renal Impairment*.

Table 3: Alternative Initial Antiretroviral Therapy Regimens for Nonpregnant Adults [a] (listed alphabetically; for specific details, see *Specific Factors to Consider and Discuss With Patients* and drug package inserts)		
Regimen	**Comments**	**Rating**
Available as a Single-Tablet Formulation		
Tenofovir alafenamide/emtricitabine/ darunavir/cobicistat [b] (TAF 10 mg/FTC/DRV/COBI; Symtuza)	• Initiate ***only*** in patients with CrCl ≥30 mL/min [c]. • Carefully consider drug-drug interactions with COBI [Eron, et al. 2018]. • Contains 10 mg TAF, boosted [b].	B2
Tenofovir alafenamide/emtricitabine/ elvitegravir/cobicistat [b] (TAF 10 mg/FTC/EVG/COBI; Genvoya)	• Initiate ***only*** in patients with CrCl ≥30 mL/min [c]. • Carefully consider drug-drug interactions with COBI. • Contains 10 mg of TAF, boosted with COBI [b]. • Separate dosing of cation-containing (Ca++, AL, Mg) antacids by 2 hours, either before or after dose of EVG.	B1
Tenofovir alafenamide/emtricitabine/ rilpivirine [b] (TAF 25 mg/FTC/RPV; Odefsey)	• Initiate ***only*** in patients confirmed to have a CD4 count ≥200 cells/mm^3 *and* HIV RNA level <100,000 copies/mL. Avoid use of RPV in a rapid-start or test-and-treat regimen if a patient's viral load and CD4 count results are not available. • Initiate ***only*** in patients with CrCl ≥30 mL/min [c]. • 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 proton pump inhibitors. • Use H_2-blockers with caution and separate dosing by 12 hours. • Must take with food. • Contains 25 mg of TAF, unboosted [b].	B3
Tenofovir disoproxil fumarate/ lamivudine/doravirine [b] (TDF/3TC/DOR; Delstrigo)	• Initiate ***only*** in patients with CrCl ≥50 mL/min [c]. • Contraindicated when coadministered with drugs that are strong CYP3A enzyme inducers. • Consider bone mineral density.	B1
Available as a Multi-Tablet Regimen With Once-Daily Dosing		
Abacavir/lamivudine *and* doravirine [b] (ABC/3TC *and* DOR; Epzicom *and* Pifeltro) [Molina, et al. 2018]	• 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 coadministered with drugs that are strong CYP3A enzyme inducers.	B2
Tenofovir alafenamide/emtricitabine *and* doravirine [b] (TAF 25 mg/FTC *and* DOR; Descovy *and* Pifeltro)	• Initiate ***only*** in patients with CrCl ≥30 mL/min [c]. • Contraindicated when coadministered with drugs that are strong CYP3A enzyme inducers.	B2

Table 3: Alternative Initial Antiretroviral Therapy Regimens for Nonpregnant Adults [a]

(listed alphabetically; for specific details, see *Specific Factors to Consider and Discuss With Patients* and drug package inserts)

Regimen	Comments	Rating
Available as a Multi-Tablet Regimen With Twice-Daily Dosing		
Tenofovir alafenamide/emtricitabine or tenofovir disoproxil fumarate/emtricitabine *and* raltegravir [b] (TAF 25 mg/FTC or TDF 300 mg/FTC *and* RAL; Descovy or Truvada *and* Isentress)	• For TAF/FTC, initiate ***only*** in patients with CrCl ≥30 mL/min [c]. • For TDF/FTC, initiate ***only*** in patients with CrCl ≥50 mL/min [c]. • For TDF/FTC, consider bone mineral density. • Administer as TAF/FTC or TDF/FTC once daily and RAL 400 mg twice daily. • Magnesium- or aluminum-containing antacids are contraindicated; calcium-containing antacids are acceptable with RAL.	B3

Abbreviations: ART, antiretroviral therapy; CrCl, creatinine clearance; CYP, cytochrome P450; DHHS, U.S. Department of Health and Human Services.

Notes:

a. Refer to DHHS for ART regimens for individuals of childbearing potential: *Recommendations for the Use of Antiretroviral Drugs in Pregnant Women with HIV Infection and Interventions to Reduce Perinatal HIV Transmission in the United States*.

b. Substitutions:
   - In all cases, FTC and 3TC are interchangeable.
   - TAF 10 mg and TAF 25 mg are not interchangeable.
   - COBI and RTV should not be considered interchangeable because of their drug-interaction profiles.

c. For dose adjustments, refer to *Table 9: Recommended Dose Adjustments for Use of Selected Fixed-Dose Combination Antiretroviral Medications in Patients With Hepatic or Renal Impairment*.

Table 4: Other Antiretroviral Therapy Regimens Not Included as Preferred or Alternative for Nonpregnant Adults [a]

(listed alphabetically; for specific details, see *Specific Factors to Consider and Discuss With Patients* and drug package inserts)

Regimen	Comments	Rating
Available as a Single-Tablet Formulation		
Tenofovir disoproxil fumarate/ emtricitabine/efavirenz [b] (TDF/FTC/EFV; Atripla)	• Initiate ***only*** in patients with CrCl ≥50 mL/min [c]. • Use with caution in patients with depression or a history of suicidality. • Consider bone mineral density.	B1
Tenofovir disoproxil fumarate/ emtricitabine/rilpivirine [b] (TDF/FTC/RPV; Complera)	• Initiate ***only*** in patients confirmed to have a CD4 count ≥200 cells/mm^3 *and* HIV RNA level <100,000 copies/mL [d]. • Initiate ***only*** in patients with CrCl ≥50 mL/min [c]. • Use with caution in patients with depression or a history of suicidality. • Contraindicated with PPIs. • Use H_2-blockers with caution and separate dosing by 12 hours. • Must take with food. • Consider bone mineral density.	B1

Table 4: Other Antiretroviral Therapy Regimens Not Included as Preferred or Alternative for Nonpregnant Adults [a] (listed alphabetically; for specific details, see *Specific Factors to Consider and Discuss With Patients* and drug package inserts)		
Regimen	**Comments**	**Rating**
Available as a Multi-Tablet Regimen With Once-Daily Dosing		
Abacavir/lamivudine *and* atazanavir *and* ritonavir [b,e] (ABC/3TC *and* ATV *and* RTV; Epzicom *and* Reyataz *and* Norvir)	• Initiate ***only*** in patients confirmed to be negative for HLA-B*5701 [b,e]. • 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-naive patients on boosted ATV, H_2-blockers should be taken simultaneously with ATV/RTV and food. If simultaneous dosing with food is not possible, ATV/RTV should be taken at least 10 hours *after* the H2-blocker. H_2-blocker doses should not exceed the equivalent of 40 mg famotidine twice daily for ART-naive patients or 20 mg famotidine twice daily for ART-experienced patients. • Use no more than the equivalent of 20 mg of omeprazole with ATV; administer PPIs at least 12 hours before ATV/RTV. • When combined with antacids, ATV should be given 2 hours before or 1 to 2 hours after antacids and buffered medications. • Scleral icterus from benign hyperbilirubinemia may be a concern.	C1
Abacavir/lamivudine *and* darunavir/ cobicistat [b,e] (ABC/3TC *and* DRV/COBI; Epzicom *and* Prezcobix)	• Initiate ***only*** in patients confirmed to be negative for HLA-B*5701 [b,e]. • Carefully consider drug-drug interactions with COBI. • Consider underlying risk of coronary heart disease.	B3
Abacavir/lamivudine *and* darunavir *and* ritonavir [b,e] (ABC/3TC *and* DRV *and* RTV; Epzicom *and* Prezista *and* Norvir)	• Initiate ***only*** in patients confirmed to be negative for HLA-B*5701 [b,e]. • Carefully consider drug-drug interactions with RTV. • Consider underlying risk of coronary heart disease.	B2
Abacavir/lamivudine *and* efavirenz [b,e] (ABC/3TC *and* EFV; Epzicom *and* Sustiva)	• Initiate ***only*** in patients confirmed to be negative for HLA-B*5701 [b,e]. • 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
Tenofovir alafenamide/emtricitabine *and* efavirenz [b] (TAF 25 mg/FTC *and* EFV; Descovy *and* Sustiva)	• Initiate ***only*** in patients with CrCl ≥50 mL/min [c]. • Use with caution in patients with depression or a history of suicidality. • Contains 25 mg of TAF, unboosted [b].	B3

Table 4: Other Antiretroviral Therapy Regimens Not Included as Preferred or Alternative for Nonpregnant Adults [a]

(listed alphabetically; for specific details, see *Specific Factors to Consider and Discuss With Patients* and drug package inserts)

Regimen	Comments	Rating
Abacavir/lamivudine *and* raltegravir HD [b,e] (ABC/3TC *and* RAL HD; Epzicom *and* Isentress HD)	• Initiate ***only*** in patients confirmed to be negative for HLA-B*5701 [b,e]. • 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; coadministration of calcium-containing antacids is not recommended with RAL HD.	B3
Available as a Multi-Tablet Regimen With Twice-Daily Dosing		
Tenofovir disoproxil fumarate/emtricitabine *and* raltegravir [b] (TDF/FTC *and* RAL; Truvada and Isentress)	• Initiate ***only*** in patients with CrCl ≥50 mL/min [c]. • 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 *and* raltegravir [b,e] (ABC/3TC *and* RAL; Epzicom *and* Isentress)	• Initiate ***only*** in patients confirmed to be negative for HLA-B*5701 [b,e]. • 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

Abbreviations: ART, antiretroviral therapy; CrCl, creatinine clearance; DHHS, U.S. Department of Health and Human Services; PPI, proton pump inhibitor.

Notes:

a. Refer to DHHS for ART regimens for individuals of childbearing potential: *Recommendations for the Use of Antiretroviral Drugs in Pregnant Women with HIV Infection and Interventions to Reduce Perinatal HIV Transmission in the United States.*
b. Substitutions:
   - In all cases, FTC and 3TC are interchangeable.
   - TAF 10 mg and TAF 25 mg are not interchangeable.
   - COBI and RTV should not be considered interchangeable because of their drug-interaction profiles.
c. For dose adjustments, refer to *Table 9: Recommended Dose Adjustments for Use of Selected Fixed-Dose Combination Antiretroviral Medications in Patients With Hepatic or Renal Impairment*.
d. When a "rapid-start" or "test-and-treat" initiation of ART occurs before viral load and CD4 count are available, avoid use of RPV.
e. 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.

References

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