Table I. Recommended and Alternative Antiretroviral Regimens (DHHS Guidelines, May 1, 2014)

Recommended Regimens			
Nucleoside Analog Reverse Transcriptase Inhibitor (NRTI) Component	**Third Agent**	**Advantages**	**Disadvantages**
Tenofovir/emtricitabine (TDF/FTC) 300/200 mg (coformulated with EFV as *Atripla*) 1 tab once daily	non-nucleoside reverse transcriptase inhibitor (NNRTI): efavirenz (EFV, *Sustiva*) 600 mg (coformulated with TDF/FTC as *Atripla*) 1 tab once daily	single-tablet regimen available well studied, with excellent efficacy and durability long half-lives; forgiving of missed/delayed doses	**EFV** early central nervous system (CNS) side effects (i.e., dizziness, vivid dreams, insomnia, concentration difficulties, mood changes); generally resolve over days/weeks; increased risk of suicidality in meta-analysis of clinical trials teratogenicity suspected on the basis of animal studies (avoid during first trimester of pregnancy) early rash (self-limited, rarely requires discontinuation) modest lipid elevation long half-life; risk of NNRTI resistance if treatment

			interrupted **TDF** potential for nephrotoxicity (decreased GFR, proximal tubular dysfunction) greater short-term loss of bone density than with other agents
TDF/FTC 300/200 mg (*Truvada*) 1 tab once daily	protease inhibitor (PI): atazanavir (ATV, *Reyataz*) 300 mg 1 cap once daily with food + ritonavir (RTV, *Norvir*) 100 mg 1 tab once daily	as effective as EFV with less lipid effects resistance unlikely with virologic failure unlike darunavir, has activity without boosting ATV/r: a preferred PI in pregnancy	**ATV** inferior to darunavir/ritonavir- and raltegravir-based therapy due to tolerability differences (jaundice, GI side effects) elevated total (indirect) bilirubin harmless, but sometimes results in jaundice or scleral icterus nephrolithiasis, nephrotoxicity, cholelithiasis more bone loss than with other regimens when combined with TDF/FTC must be dosed with food for absorption decreased absorption with PPIs, H2 blockers,

			antacids **RTV**: inhibition of tubular creatinine excretion causes increase in creatinine and decrease in eGFR, but not true GFR increase in tenofovir levels may increase risk of nephrotoxicity **TDF** as above
TDF/FTC 300/200 mg 1 tab once daily	PI: Darunavir (DRV, *Prezista*) 800 mg 1 tab once daily with food + RTV 100 mg 1 tab once daily	superior to ATV/r due to better tolerability can be taken with PPIs (vs. ATV) resistance unlikely with virologic failure	**DRV** inferior to RAL- and DTG-based therapy due to tolerability potential for allergic rash, sometimes requiring discontinuation **RTV**: inhibition of tubular creatinine excretion causes increase in creatinine and decrease in eGFR, but not true GFR increase in tenofovir levels may increase risk of nephrotoxicity **TDF**

			as above
TDF/FTC 300/200 mg 1 tab once daily *or* abacavir/lamivudine (ABC/3TC, *Epzicom*) 600/300 mg 1 tab once daily (coformulated with DTG 50 mg as *Triumeq*)	INSTI: dolutegravir (DTG, *Tivicay*) 50 mg once daily or ABC/3TC/DTG (*Triumeq*) 600/300/50 mg 1 tab once daily	superior to EFV- and DRV/r-based therapy due to tolerability higher barrier to resistance than RAL and EVG no resistance observed yet in initial therapy studies DTG/ABC/3TC is the only non-TDF-containing single-tablet regimen few drug interactions	**DTG** inhibition of tubular creatinine excretion causes increase in creatinine and decrease in eGFR, but not true GFR **TDF** As above **ABC** *may* increase risk of myocardial infarction (conflicting data); avoid in patients with high cardiac risk pre-screening with HLA B*5701 required to avoid hypersensitivity reaction
TDF/FTC 300/200 mg (coformulated in single-tablet regimen with EVG/COBI 150/150 mg as *Stribild*) 1 tab once daily	INSTI: elvitegravir (EVG) with pharmacoenhancer cobicistat (COBI) 150/150 mg (coformulated with TDF/FTC as *Stribild*) 1 tab once daily	single-tablet regimen available non-inferior to EFV- and ATV/r-based regimens with tolerability advantages	**EVG/COBI** multiple COBI drug interactions (similar to RTV) inhibition of tubular creatinine excretion causes increase in creatinine and decrease in eGFR, but not true GFR (greater effect than DTG or RTV)

			TDF see above
TDF/FTC 300/200 mg 1 tab once daily	integrase strand transfer inhibitor (INSTI): raltegravir (RAL, *Isentress*) 400 mg 1 tab twice daily	superior to DRV/r and ATV/r due to better tolerability well tolerated, no lipid effects rapid virologic suppression (clinical significance unclear) least drug interactions among INSTIs	**RAL** twice-daily dosing integrase inhibitor resistance can occur with virologic failure **TDF** as above
Recommended regimens of patients with baseline viral load < 100,000 copies/mL (in addition to the regimens listed above)			
ABC/3TC 600/300 mg 1 tab once daily	NNRTI: EFV 600 mg once daily	option for patients with negative HLA B*5701 and VL <100,000 copies/mL who cannot take TDF	**EFV** see above **ABC** see above
TDF/FTC 300/200 mg (coformulated with RPV as *Complera*) 1 tab once daily	NNRTI: RPV 25 mg (coformulated with TDF/FTC as *Complera*) 1 tab once daily	better tolerated than EFV-based therapy; superior to EFV at VL <100,000 copies/mL due to tolerability active against virus with K103N mutation	**RPV** must be taken with meal decreased absorption with proton pump inhibitors, H2 blockers virologic failure with resistance can result in etravirine cross-resistance

			(138K mutation) **TDF** see above
ABC/3TC 600/300 mg 1 tab once daily	ATV/r 300/100 mg once daily	option for patients with negative HLA B*5701 and VL <100,000 copies/mL who cannot take TDF	**ATV** see above **ABC** see above
Alternative Regimens (Regimens that are effective and tolerable, but that have potential disadvantages when compared with the recommended regimens listedabove or have less data from randomized clinical trials. An alternative regimen may be the preferred regimen for some patients)			
ABC/3TC 600/300 mg 1 tab once daily	DRV/r 800/100 mg once daily	**DRV/r** see above	**DRV/r** see above **ABC** see above
ABC/3TC 600/300 mg 1 tab once daily *or* TDF/FTC 300/200 mg 1 tab once daily	lopinavir/ritonavir (LPV/r, *Kaletra*) 200/50 mg 2 tabs twice daily or 4 tabs once daily	currently the only PI coformulated with a booster [until ATV/COBI and DRV/COBI coformulations approved]; prevents selective non-adherence a preferred PI in pregnancy resistance unlikely with virologic failure	**LPV/r** requires use of RTV at dose of 200 mg/d: more GI side effects, hyperlipidemia higher pill burden than recommended regimens **ABC** see above **TDF** see above

ABC/3TC 600/300 mg 1 tab once daily	RAL 400 mg twice daily	**RAL** see above	**RAL** see above **ABC** see above