



Second-Line ART After Treatment Failure or for Regimen Simplification

January 2023

Table 6: Common Adverse Effects Associated With Antiretroviral Medications

Drug	Adverse Effect(s)
<i>Nucleoside/Nucleotide Reverse Transcriptase Inhibitors</i>	
Abacavir [a]	Cardiovascular disease, hypersensitivity
Didanosine	Mitochondrial toxicity, lipodystrophy, lactic acidosis
Stavudine	Mitochondrial toxicity, lipodystrophy, lactic acidosis
Tenofovir alafenamide	Weight gain, lipids [Mallon, et al. 2021]
Tenofovir disoproxil fumarate	Proximal renal tubule injury, decrease in bone mineral density
Zidovudine	Mitochondrial toxicity, lipodystrophy, lactic acidosis
<i>Non-Nucleoside Reverse Transcriptase Inhibitors</i>	
Doravirine	CNS effects
Efavirenz	Hepatotoxicity, vitamin D deficiency, CNS effects, skin reactions, depression, morning somnolence
Nevirapine	Hepatotoxicity, hypersensitivity
Rilpivirine	CNS effects, skin reactions, effects on the measure of eGFR
<i>Protease Inhibitors</i> [Tsiodras, et al. 2000]	
Class effect [b]	Increased cholesterol [c], increased triglycerides [c], increased glucose, lipodystrophy
Atazanavir	Nephrolithiasis, renal insufficiency, hyperbilirubinemia
Darunavir	Cardiovascular disease, skin reactions
Lopinavir/ritonavir	Cardiovascular disease [Ryom, et al. 2018]
<i>Integrase Strand Transfer Inhibitors</i>	
Class effect [b]	Weight gain [Sax, et al. 2020]
Bictegravir	Effects on the measure of eGFR
Dolutegravir	CNS effects [Yombi 2018; Hoffmann, et al. 2017], effects on the measure of eGFR
Elvitegravir/cobicistat	Increased lipids, effects on the measure of eGFR
Abbreviations: CNS, central nervous system; eGFR, estimated glomerular filtration rate.	
Notes:	
a. Screen to document that the patient is negative for HLA-B*5701 before use	
b. Adverse effects apply to all drugs in this class	
c. Especially with ritonavir and cobicistat pharmacoenhancement	

References

- Hoffmann C, Welz T, Sabranski M, et al. Higher rates of neuropsychiatric adverse events leading to dolutegravir discontinuation in women and older patients. *HIV Med* 2017;18(1):56-63. [PMID: 27860104]
<https://pubmed.ncbi.nlm.nih.gov/27860104>
- Mallon PW, Brunet L, Hsu RK, et al. Weight gain before and after switch from TDF to TAF in a U.S. cohort study. *J Int AIDS Soc* 2021;24(4):e25702. [PMID: 33838004] <https://pubmed.ncbi.nlm.nih.gov/33838004>
- Ryom L, Lundgren JD, El-Sadr W, et al. Cardiovascular disease and use of contemporary protease inhibitors: the D:A:D international prospective multicohort study. *Lancet HIV* 2018;5(6):e291-e300. [PMID: 29731407]
<https://pubmed.ncbi.nlm.nih.gov/29731407>
- Sax PE, Erlandson KM, Lake JE, et al. Weight gain following initiation of antiretroviral therapy: risk factors in randomized comparative clinical trials. *Clin Infect Dis* 2020;71(6):1379-1389. [PMID: 31606734]
<https://pubmed.ncbi.nlm.nih.gov/31606734>
- Tsiodras S, Mantzoros C, Hammer S, et al. Effects of protease inhibitors on hyperglycemia, hyperlipidemia, and lipodystrophy: a 5-year cohort study. *Arch Intern Med* 2000;160(13):2050-2056. [PMID: 10888979]
<https://pubmed.ncbi.nlm.nih.gov/10888979>
- Yombi JC. Dolutegravir neuropsychiatric adverse events: Specific drug effect or class effect. *AIDS Rev* 2018;20(1):14-26. [PMID: 29628511] <https://pubmed.ncbi.nlm.nih.gov/29628511>