ANTIRETROVIRAL CONTRAINDICATIONS AND DRUG INTERACTIONS (Part 1 of 9)

Generic	Brand	Contraindications and Drug Interactions*
CCR5 CO-RECEPTOR ANTAGONISTS		
maraviroc (MVC)	**Selzentry**	• **Severe renal impairment or ESRD (CrCl <30mL/min) in patients taking concomitant potent CYP3A inhibitors or inducers.** • Concomitant St. John's wort: not recommended. • May affect, or be affected by, inhibitors or inducers of CYP3A and P-gp (eg, potentiated by ketoconazole, boceprevir, lopinavir/ritonavir, ritonavir, darunavir/ritonavir, saquinavir/ritonavir, atazanavir; antagonized by rifampin, etravirine, efavirenz). • May be affected by inhibitors of OATP1B1 and MRP2. • Caution with antihypertensives.
FUSION INHIBITORS		
enfuvirtide (ENF, T-20)	**Fuzeon**	• May cause false (+) ELISA test for HIV. • Increased risk of post-injection bleed with concomitant anticoagulants.
HIV-1 GP120-DIRECTED ATTACHMENT INHIBITOR		
fostemsavir	**Rukobia**	• **Concomitant strong CYP3A4 inducers (eg, enzalutamide, carbamazepine, phenytoin, rifampin, mitotane, St. John's wort).** • May be antagonized by strong CYP3A4 inducers. • May potentiate HCV direct-acting antivirals (eg, grazoprevir, voxilaprevir), statins drugs (eg, rosuvastatin, atorvastatin, fluvastatin, pitavastatin, simvastatin), ethinyl estradiol. • Caution when concomitant drugs with a known risk for Torsade de Pointes.
HIV-1 INTEGRASE STRAND TRANSFER INHIBITORS		
dolutegravir	**Tivicay**	• **Concomitant dofetilide.** • Avoid concomitant nevirapine, oxcarbazepine, phenytoin, phenobarbital, St. John's wort. • Avoid etravirine unless co-administered with atazanavir/ritonavir, darunavir/ritonavir, or lopinavir/ritonavir. • Concomitant efavirenz, fosamprenavir/ritonavir, tipranavir/ritonavir, rifampin, or carbamazepine: adjust dose to 50mg twice daily. • May be affected by drugs that induce or inhibit UGT1A1, UGT1A3, UGT1A9, BCRP, and P-gp enzymes or transporters. • May potentiate drugs eliminated via OCT2 or MATE1 (eg, dofetilide, dalfampridine, metformin). • Concomitant cation-containing antacids, laxatives, sucralfate, buffered drugs, or oral iron/calcium supplements (also can give together with a meal): give dolutegravir 2hrs before or 6hrs after.
raltegravir (RAL)	**Isentress**	• May be antagonized by UGT1A1 inducers (eg, rifampin) and potentiated by UGT1A1 inhibitors. • Concomitant aluminum and/or magnesium-containing antacids, other strong enzyme inducers (eg, carbamazepine, phenobarbital, phenytoin): not recommended. • Caution with concomitant drugs known to cause myopathy or rhabdomyolysis (eg, statins). • Isentress HD: concomitant calcium carbonate antacid, rifampin, tipranavir/ritonavir, etravirine: not recommended.
	Isentress HD	
NON-NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITORS (NNRTIS)		
doravirine	**Pifeltro**	• **Concomitant strong CYP3A inducers (eg, carbamazepine, oxcarbazepine, phenobarbital, phenytoin, enzalutamide, rifampin, rifapentine, mitotane, St. John's wort): discontinue for ≥4wks prior to starting Pifeltro.** • Concomitant efavirenz, etravirine, nevirapine: not recommended. • May be antagonized by CYP3A inducers (see Contraindications). • May be potentiated by CYP3A inhibitors.
efavirenz (EVF)	**Sustiva**	• Avoid concomitant other efavirenz-containing products (eg, Atripla unless needed for dose adjustment with rifampin), atazanavir (treatment-experienced), posaconazole, boceprevir, simeprevir, atovaquone/proguanil, alcohol, psychoactive, other NNRTIs or hepatotoxic drugs. • Caution with drugs metabolized by, or that affect activity of, CYP2B6, CYP2C9, CYP2C19, CYP3A4. • Efavirenz levels decreased by carbamazepine, phenytoin, phenobarbital, rifampin (adjust dose). • May decrease levels of indinavir, amprenavir, atazanavir, saquinavir, anticonvulsants, clarithromycin, calcium channel blockers (eg, diltiazem, felodipine, nicardipine, nifedipine, verapamil), itraconazole, ketoconazole, lopinavir (adjust dose: see full labeling), maraviroc, bupropion, methadone, rifabutin (increase dose: see labeling), sertraline, simvastatin, atorvastatin, pravastatin, hormonal contraceptives (eg, norgestimate, etonogestrel), immunosuppressants (eg, cyclosporine, sirolimus, tacrolimus), artemether/lumefantrine. • May affect or be affected by voriconazole (adjust dose). • Levels of both drugs increased with ritonavir (monitor liver function and for adverse events). • Closely monitor warfarin, anticonvulsants (esp. phenytoin, phenobarbital, carbamazepine), rifabutin, others. • Consider alternatives when concomitant drugs with a risk of QT prolongation (eg, clarithromycin, artemether/lumefantrine). • May cause false (+) cannabis screening test results..
etravirine (ETR)	**Intelence**	• Concomitant tipranivir/ritonavir, fosamprenavir/ritonavir, atazanavir/cobicistat, darunavir/cobicistat, PIs without ritonavir (eg, atazanavir, fosamprenavir, nelfinavir, indinavir), ritonavir (600mg twice daily), NNRTIs (eg, efavirenz, nevirapine, delavirdine, rilpivirine), anticonvulsants (eg, carbamazepine, phenobarbital, phenytoin), rifampin, rifapentine, St. John's wort, elbasvir/grazoprevir, simeprevir: not recommended. • Antagonizes dolutegravir (should only be used with etravirine when concomitant with darunavir/ritonavir, lopinavir/ritonavir, or atazanavir/ritonavir). • May affect, or be affected by, drugs that induce or inhibit, or that are substrates of, CYP3A4, CYP2C9, CYP2C19 (eg, azole antifungals, immunosuppressants); monitor. • May antagonize antiarrhythmics (eg, amiodarone, bepridil, disopyramide, flecainide, lidocaine, mexiletine, propafenone, quinidine) (monitor), sildenafil, clopidogrel (consider alternatives), antimalarials (eg, artemether/lumefantrine). • May be antagonized by systemic dexamethasone (consider alternatives). • May potentiate diazepam. • Clarithromycin (consider azithromycin for treating MAC). • Adjust statin (except pravastatin, rosuvastatin), maraviroc, daclatasvir dose. • Monitor digoxin, warfarin, buprenorphine, buprenorphine/naloxone, methadone. • Rifabutin (adjust dose with etravirine monotherapy).

(continued)

ANTIRETROVIRAL CONTRAINDICATIONS AND DRUG INTERACTIONS (Part 2 of 9)

Generic	Brand	Contraindications and Drug Interactions*
NON-NUCLEOSIDE REVERSE TRANSCRIPTASE INHIBITORS (NNRTIS) (continued)		
nevirapine (NVP)	**Viramune** **Viramune XR**	• **Moderate to severe (Child-Pugh B or C) hepatic impairment. Use as part of occupational or non-occupational post-exposure prophylaxis regimens.** • Possible increased adverse reactions with concomitant efavirenz: not recommended. • Concomitant other NNRTIs: not recommended. • Potentiated by fluconazole (monitor). • Antagonizes atazanavir, fosamprenavir without ritonavir, ketoconazole, itraconazole, boceprevir, telaprevir: not recommended, clarithromycin (consider alternative). • Antagonized by St. John's wort, rifampin: not recommended. • Antagonizes methadone (monitor for withdrawal symptoms; increase methadone dose if needed), oral contraceptives (use nonhormonal contraception; monitor). • May antagonize other drugs metabolized by CYP3A4 or CYP2B6. • Do not give lopinavir/ritonavir tabs or oral soln once daily with nevirapine (see full labeling). •Monitor warfarin, carbamazepine, clonazepam, ethosuximide, rifabutin (caution), other CYP450 substrates.
rilpivirine	**Edurant**	• **Concomitant carbamazepine, oxcarbazepine, phenobarbital, phenytoin, rifampin, rifapentine, esomeprazole, lansoprazole, omeprazole, pantoprazole, rabeprazole, systemic dexamethasone (more than single dose), St. John's wort.** • Concomitant NNRTIs: not recommended. • Antagonized by CYP3A inducers (see Contraindications). • May be potentiated by CYP3A inhibitors (eg, azole antifungals [monitor for breakthrough fungal infections], clarithromycin, erythromycin, telithromycin [consider azithromycin use]). • Concomitant methadone; monitor. • Separate didanosine, antacids (by at least 2hrs before or at least 4hrs after) and H_2-receptor antagonists (by at least 12hrs before or 4hrs after rilpivirine); drugs that increase gastric pH may result in decreased plasma concentrations. • Caution with drugs with a known risk for torsades de pointes.
NUCLEOSIDE/NUCLEOTIDE REVERSE TRANSCRIPTASE INHIBITORS (NRTIS)		
abacavir sulfate (ABC)	**Ziagen**	• **Presence of HLA-B*5701 allele.** • **Prior hypersensitivity reaction to abacavir (see full labeling).** • **Moderate or severe hepatic impairment.** • May antagonize methadone. • May be potentiated by ethanol.
abacavir (ABC)/ lamivudine (3TC)	**Epzicom**	• **Presence of HLA-B*5701 allele.** • **Prior hypersensitivity reaction to any of the components (see full labeling).** • **Moderate or severe hepatic impairment.** • Avoid concomitant sorbitol-containing products. • May antagonize methadone. • Monitor for treatment-associated toxicities (esp. hepatic decompensation) with interferon-alpha with or without ribavirin.
abacavir (ABC)/ lamivudine (3TC)/ zidovudine (ZDV)	**Trizivir**	• **Presence of HLA-B*5701 allele.** • **Prior hypersensitivity reaction to any of the components (see full labeling).** • **Moderate or severe hepatic impairment.** • Avoid concomitant stavudine, doxorubicin, nucleoside analogues (eg, ribavirin), sorbitol-containing products. • Increased hematologic toxicity with ganciclovir, interferon alfa, ribavirin, other bone marrow suppressants or cytotoxic drugs. • Abacavir may antagonize methadone. • Monitor for treatment-associated toxicities (esp. hepatic decompensation) with interferon-alpha with or without ribavirin.
didanosine (ddI)	—	• **Concomitant stavudine, allopurinol, ribavirin.** • Avoid with hydroxyurea. • Potentiated by ganciclovir, tenofovir DF (reduce didanosine dose). • Antagonized by methadone. • Caution with neurotoxic drugs or those that may cause pancreatic toxicity. • Separate dosing of delavirdine, indinavir, nelfinavir by 1hr; give ketoconazole, itraconazole ≥2hrs prior. • May antagonize quinolones, tetracyclines. • Give at least 6hrs before or 2hrs after ciprofloxacin.
emtricitabine (FTC)	**Emtriva**	• Avoid concomitant drugs that contain emtricitabine or lamivudine.
emtricitabine (FTC)/tenofovir alafenamide (TAF)	**Descovy**	• **PrEP in individuals with unknown or positive HIV-1 status.** • Concomitant drugs that strongly affect P-gp activity may lead to changes inTAF absorption. • Avoid with concurrent or recent use of nephrotoxic agents. • Concomitant tipranavir/ritonavir, antimycobacterials (eg, rifabutin, rifampin, rifapentine), St. John's wort: not recommended. • May be antagonized by anticonvulsants (eg, carbamazepine, oxcarbazepine, phenobarbital, phenytoin; consider alternatives). • May be potentiated by drugs that decrease renal function or compete for active tubular secretion (eg, acyclovir, cidofovir, ganciclovir, valacyclovir, valganciclovir, aminoglycosides, NSAIDs).

(continued)

Generic	Brand	Contraindications and Drug Interactions*
NUCLEOSIDE/NUCLEOTIDE REVERSE TRANSCRIPTASE INHIBITORS (NRTIS) (continued)		
emtricitabine (FTC)/tenofovir disoproxil fumarate (TDF)	**Truvada**	• **PrEP in individuals with unknown or positive HIV-1 status.** • Potentiates didanosine toxicity (>60kg: reduce dose of didanosine); discontinue didanosine if toxicity develops. • Monitor drugs that reduce renal function or compete for renal tubular secretion (eg, adefovir dipivoxil, cidofovir, acyclovir, valacyclovir, ganciclovir, valganciclovir, aminoglycosides, high-dose NSAIDs). • Avoid concomitant or recent use of nephrotoxic agents. • Potentiated by lopinavir/ritonavir, ritonavir-boosted atazanavir or darunavir; monitor for toxicity; discontinue if occurs. • Concomitant atazanavir: must give with ritonavir. • Tenofovir levels increased by concomitant ledipasvir/sofosbuvir, sofosbuvir/velpatasvir, or sofosbuvir/velpatasvir/voxilaprevir; monitor for toxicity.
lamivudine (3TC)	**Epivir**	• Avoid concomitant sorbitol-containing products. • Caution with drugs eliminated by active organic cationic secretion (eg, trimethoprim). • Monitor for treatment-associated toxicities (esp. hepatic decompensation) with interferon-alpha with or without ribavirin.
lamivudine/ tenofovir disoproxil fumarate	**Cimduo**	• Avoid concomitant sorbitol-containing drugs. • Caution with drugs eliminated by active organic cationic secretion (eg, trimethoprim). • Monitor for toxicity (eg, hepatic decompensation) with interferon-alfa (+/– ribavirin); reduce or discontinue one or both drugs as needed. • Concomitant atazanavir 300mg: give with ritonavir. • Tenofovir levels increased by lopinavir/ritonavir, atazanavir/ritonavir, darunavir/ritonavir, ledipasvir/sofosbuvir, sofosbuvir/velpatasvir: monitor for adverse reactions and discontinue if occurs. • Concomitant ledipasvir/sofosbuvir: if without protease inhibitor/ritonavir or protease inhibitor/cobicistat combination: monitor; if with protease inhibitor/ritonavir or protease inhibitor/cobicistat combination: consider alternative HCV or antiretroviral therapy; if coadministration necessary, monitor. • Avoid concomitant or recent use of nephrotoxic agents. • Monitor drugs that decrease renal function or compete for renal tubular secretion (eg, acyclovir, cidofovir, ganciclovir, valacyclovir, valganciclovir, aminoglycosides, high-dose or multiple NSAIDs); consider alternatives to NSAIDs.
	Temixys	• Avoid concomitant adefovir dipivoxil, sorbitol-containing drugs. • Caution with drugs eliminated by active organic cationic secretion (eg, trimethoprim). • Monitor for toxicity (eg, hepatic decompensation) with interferon-alfa ± ribavirin; reduce or discontinue one or both drugs as needed. • Potentiates didanosine; monitor for adverse reactions and discontinue if occurs. • Concomitant atazanavir 300mg: give with ritonavir. • Tenofovir levels increased by lopinavir/ritonavir, atazanavir/ritonavir, darunavir/ritonavir, ledipasvir/sofosbuvir, sofosbuvir/velpatasvir, sofosbuvir/velpatasvir/voxilaprevir: monitor for adverse reactions and discontinue if occurs. • Concomitant ledipasvir/sofosbuvir: if without protease inhibitor/ritonavir or protease inhibitor/cobicistat combination: monitor; if with protease inhibitor/ritonavir or protease inhibitor/cobicistat combination: consider alternative HCV or antiretroviral therapy; if coadministration necessary, monitor. • Avoid concomitant or recent use of nephrotoxic agents. • Monitor drugs that decrease renal function or compete for renal tubular secretion (eg, acyclovir, cidofovir, ganciclovir, valacyclovir, valganciclovir, aminoglycosides, high-dose or multiple NSAIDs); consider alternatives to NSAIDs.
lamivudine (3TC)/ zidovudine (ZDV)	**Combivir**	• Avoid concomitant stavudine, doxorubicin, nucleoside analogues (eg, ribavirin), sorbitol-containing products. • Increased hematologic toxicity with ganciclovir, interferon alpha, ribavirin, other bone marrow suppressants or cytotoxic drugs. • Monitor for treatment-associated toxicities (eg, hepatic decompensation) with interferon-alpha with or without ribavirin.
stavudine (d4T)	—	• Avoid concomitant zidovudine. • Increased risk of toxicity with neurotoxic, hepatotoxic, or pancreatotoxic drugs (eg, didanosine and/or hydroxyurea); avoid. • Caution with doxorubicin, ribavirin. • Monitor for treatment-associated toxicities with interferon-alpha with or without ribavirin.
tenofovir disoproxil fumarate (TDF)	**Viread**	• Concomitant adefovir dipivoxil for chronic HBV: not recommended. • Avoid concomitant or recent use of nephrotoxic agents. • Potentiates didanosine levels; monitor closely. • Monitor drugs that reduce renal function or compete for renal tubular secretion (eg, cidofovir, acyclovir, valacyclovir, ganciclovir, valganciclovir, aminoglycosides, high-dose or multiple NSAIDs). • Concomitant atazanavir: must give with ritonavir. • Potentiated by concomitant lopinavir/ritonavir, ritonavir-boosted atazanavir or darunavir, ledipasvir/sofosbuvir, sofosbuvir/velpatasvir; monitor for toxicity.
zidovudine (ZDV)	**Retrovir**	• Avoid concomitant stavudine, doxorubicin, nucleoside analogues (eg, ribavirin). • Increased hematologic toxicity with ganciclovir, interferon alpha, ribavirin, other bone marrow suppressants or cytotoxic drugs. • Monitor for treatment-associated toxicities (eg, hepatic decompensation) with interferon alpha with or without ribavirin.

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ANTIRETROVIRAL CONTRAINDICATIONS AND DRUG INTERACTIONS (Part 4 of 9)

Generic	Brand	Contraindications and Drug Interactions*
PHARMACOKINETIC ENHANCER		
cobicistat	**Tybost**	• **Concomitant alfuzosin, ranolazine, dronedarone, carbamazepine, phenobarbital, phenytoin, colchicine (in renal and/or hepatic impairment), rifampin, irinotecan (with atazanavir only), lurasidone, pimozide, ergots, cisapride, St. John's wort, lomitapide, lovastatin, simvastatin, drospirenone/ethinyl estradiol (with atazanavir only), nevirapine (with atazanavir only), sildenafil (as Revatio for PAH), indinavir (with atazanavir only), triazolam, oral midazolam.** • Concomitant nephrotoxic agent with cobicistat + tenofovir disoproxil fumarate: not recommended. • Concomitant darunavir 600mg twice daily or darunavir in combination with efavirenz, nevirapine, etravirine; atazanavir in combination with etravirine or efavirenz (in treatment-experienced); more than 1 antiretroviral that requires PK enhancement, other HIV-1 protease inhibitors (eg, fosamprenavir, saquinavir, tipranavir), rivaroxaban, voriconazole, boceprevir, simeprevir, salmeterol, avanafil: not recommended. • Concomitant lopinavir/ritonavir, other ritonavir- or cobicistat-containing fixed-dose combination tabs or regimens: not recommended. • May need to adjust dose of dasatinib, nilotinib, colchicine, sildenafil, tadalafil, vardenafil, perphenazine, risperidone, thioridazine, buprenorphine, buprenorphine/naloxone, methadone, tramadol, bosentan, rifabutin, and sedatives/hypnotics; see full labeling. • May potentiate apixaban (with atazanavir or darunavir); betrixaban, dabigatran, edoxaban (with atazanavir). • Concomitant maraviroc: give maraviroc 150mg twice daily. • Concomitant quetiapine: consider alternative antiretrovirals; if necessary, reduce quetiapine to $^1/_6$ of current dose and monitor. • Monitor with antiarrhythmics, digoxin, warfarin, clonazepam, SSRIs, TCAs, trazodone, antifungals, fentanyl, immunosuppressants, other statins (eg, atorvastatin, rosuvastatin), β-blockers, calcium channel blockers. • Concomitant antibacterials (eg, clarithromycin, erythromycin, telithromycin), CYP3A-inducing anticonvulsants that are not contraindicated (eg, eslicarbazepine, oxcarbazepine), corticosteroids (eg, oral dexamethasone, betamethasone): consider alternatives. • Concomitant vincristine, vinblastine: monitor for hematologic or GI adverse effects. • Concomitant hormonal contraceptives: consider additional or alternative (non-hormonal) contraception. • Separate dosing with concomitant H_2 receptor antagonists, PPIs (not recommended in treatment-experienced), or antacids (at least 2hrs).
PROTEASE INHIBITORS (PIS)		
atazanavir sulfate (ATV)	**Reyataz**	• **Concomitant alfuzosin, amiodarone (with ritonavir), rifampin, irinotecan, lurasidone (with ritonavir), pimozide, quinidine (with ritonavir), triazolam, oral midazolam, ergots, cisapride, elbasvir/grazoprevir, glecaprevir/pibrentasvir, St. John's wort, lomitapide, lovastatin, simvastatin, sildenafil (for PAH), indinavir, nevirapine.** • Concomitant other protease inhibitors (excluding ritonavir and saquinavir), sofosbuvir/velpatasvir/voxilaprevir, colchicine (in those with renal or hepatic impairment), salmeterol: not recommended. • Avoid atazanavir + ritonavir with boceprevir, fluticasone, rivaroxaban, voriconazole. • Concomitant paclitaxel, repaglinide, carbamazepine, phenytoin, phenobarbital, bosentan, or buprenorphine without ritonavir: not recommended. • Caution with UGT1A1 or CYP3A substrates (eg, IV midazolam, CCBs, statins [eg, atorvastatin, rosuvastatin (max 10mg/day); use lowest dose necessary], PDE5 inhibitors: reduce doses of these to treat ED; max 25mg sildenafil in 48hrs; max 2.5mg vardenafil in 24hrs [atazanavir] or 72hrs [atazanavir + ritonavir]; max 10mg tadalafil in 72hrs; tadalafil to treat PAH [see full labeling]). • May be antagonized by CYP3A inducers. • Consider reducing diltiazem or clarithromycin dose by 50%; rifabutin dose by 75%. • Antagonized by H2-blockers (see full labeling). • Give PPIs 12hrs before atazanavir + ritonavir; avoid in therapy-experienced. • Give 2hrs before or 1hr after antacids, buffered or enteric coated didanosine. • Antagonized by efavirenz, bosentan, tenofovir DF (see dose). • Potentiates saquinavir, tenofovir DF, trazodone (caution), fluticasone, ketoconazole, itraconazole, buprenorphine (reduce dose), quetiapine (if co-administration needed, reduce quetiapine dose to 1/6 of current dose). • Atazanavir + ritonavir may potentiate direct-acting oral anticoagulants (eg, betrixaban, dabigatran, edoxaban). • Caution with oral contraceptives (eg, ethinyl estradiol + norgestimate or norethindrone). • Concomitant other hormonal contraceptives (eg, patches, vaginal rings, injectables, other progestogen-containing products, or <25mcg ethinyl estradiol): use alternative methods. • Monitor with antiarrhythmics, warfarin, tricyclics, rifabutin, apixaban, rivaroxaban, immunosuppressants.
darunavir (DRV)	**Prezista**	• **Concomitant alfuzosin, colchicine (in renal and/or hepatic impairment), dronedarone, ivabradine, ranolazine, rifampin, lurasidone, pimozide, ergots, cisapride, oral midazolam, triazolam, St. John's wort, elbasvir/grazoprevir, lomitapide, lovastatin, simvastatin, naloxegol, sildenafil (for PAH).** • Concomitant voriconazole, salmeterol, boceprevir, glecaprevir/pibrentasvir, simeprevir, apixaban (see full labeling), rivaroxaban, rifapentine, everolimus, irinotecan (unless no alternatives), avanafil, ticagrelor, clopidogrel, protease inhibitors (eg, lopinavir/ritonavir, saquinavir, others): not recommended. • Potentiates carbamazepine, antipsychotics (eg, perphenazine, risperidone, thioridazine), TCAs, trazodone, IV midazolam, rifabutin, digoxin, HMG-CoA reductase inhibitors (eg, pravastatin, atorvastatin, rosuvastatin; use lowest dose necessary; max atorvastatin dose is 20mg/day), sildenafil, vardenafil, tadalafil (adjust doses), other sedatives/hypnotics, bosentan (see full labeling), maraviroc (max 150mg twice daily), colchicine (dose adjustments: see full labeling), quetiapine (reduce quetiapine dose by $^1/_6$ or consider alternative antiretrovirals), dasatinib, nilotinib, vinca alkaloids, fesoterodine (max 4mg/day), solifenacin (max 5mg/day). • Potentiates, and is potentiated by, indinavir, ketoconazole, itraconazole, isavuconazole; monitor. • Antagonizes sertraline, paroxetine, phenytoin, phenobarbital (monitor levels), omeprazole (max 40mg/day). • Antagonized by CYP3A-inducing corticosteroids (eg, systemic dexamethasone or others); consider alternatives. • Caution with antimalarials (artemether, lumefantrine). • Monitor carbamazepine, antiarrhythmics (eg, amiodarone, bepridil, disopyramide, flecainide, systemic lidocaine, mexiletine, propafenone, quinidine), calcium channel blockers, β-blockers, warfarin, digoxin, clonazepam, immunosuppressants (eg, tacrolimus, sirolimus, cyclosporine), fentanyl, oxycodone, tramadol, buprenorphine, buprenorphine/naloxone, methadone. • Reduce concomitant clarithromycin dose in renal impairment. • Concomitant hormonal contraceptives (eg, drosperinone): monitor for hyperkalemia; estrogen-containing contraceptives: consider additional or alternative (non-hormonal) contraception. • Separate dosing of didanosine at least 1hr before or 2hrs after.

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ANTIRETROVIRAL CONTRAINDICATIONS AND DRUG INTERACTIONS (Part 5 of 9)

Generic	Brand	Contraindications and Drug Interactions*
PROTEASE INHIBITORS (PIS) (continued)		
fosamprenavir calcium (FOS-APV)	**Lexiva**	• **Concomitant alfuzosin, cisapride, lurasidone, pimozide, ergots, midazolam, triazolam, St. John's wort, rifampin, lovastatin, simvastatin, delavirdine, sildenafil (as Revatio for PAH).** • **Concomitant flecainide, or propafenone with ritonavir-boosted fosamprenavir.** • Life-threatening arrhythmias possible with amiodarone, lidocaine (systemic), quinidine. • Concomitant salmeterol, boceprevir, simeprevir, ketoconazole or itraconazole (doses >200mg/day), paritaprevir/ritonavir/ombitasvir/dasabuvir, or nevirapine without ritonavir: not recommended. • Reduce rifabutin dose by at least ½ (or by 75% if with ritonavir) and monitor for neutropenia (do weekly CBCs). • Potentiates atorvastatin (max atorvastatin 20mg/day), sildenafil, tadalafil, vardenafil; reduce doses of these. • May potentiate fluticasone (consider alternative therapy), trazodone (reduce trazodone dose). • Monitor antiarrhythmics (eg, amiodarone), anticonvulsants (eg, phenytoin), H_2 blockers, immunosuppressants, tricyclics, warfarin, drugs that affect or are affected by CYP3A4 (eg, azole antifungals, benzodiazepines, calcium channel blockers, NNRTIs, protease inhibitors, statins, steroids). • May antagonize, or be antagonized by hormonal contraceptives (use non-hormonal methods), methadone, paroxetine. • Concomitant dolutegravir (with ritonavir-boosted fosamprenavir): give dolutegravir 50mg twice daily; use alternative if known or suspected integrase inhibitor resistance. • Concomitant bosentan, colchicine, quetiapine, maraviroc (adjust doses; see full labeling).
indinavir sulfate (IDV)	**Crixivan**	• **Concomitant alfuzosin, amiodarone, lurasidone, pimozide, ergots, cisapride, lovastatin, simvastatin, sildenafil (for PAH), oral midazolam, triazolam, alprazolam.** • Rifampin, St. John's wort, atazanavir, salmeterol, fluticasone (w. concomitant potent CYP3A4 inhibitor): not recommended. • Caution with atorvastatin and rosuvastatin; titrate, use lowest necessary dose and monitor. • Potentiates PDE5 inhibitors, IV midazolam, trazodone, bosentan (reduce doses; see literature); antiarrhythmics, rifabutin, calcium channel blockers, clarithromycin, immunosuppressants, others metabolized by CYP3A4. • Plasma levels increased by itraconazole, ketoconazole, delavirdine, CYP3A4 inhibitors. • Plasma levels reduced by efavirenz, rifabutin, venlafaxine, phenobarbital, phenytoin, carbamazepine, other CYP3A4 inducers. • Avoid concomitant colchicine if renal or hepatic impairment; otherwise: reduce dose: see literature. • Separate dosing of indinavir and didanosine by at least 1hr and give both on empty stomach.
lopinavir (LPV)/ritonavir (RTV)	**Kaletra**	• **Concomitant alfuzosin, ranolazine, dronedarone, colchicine (in renal and/or hepatic impairment), lurasidone, pimozide, ergots, cisapride, elbasvir/grazoprevir, lomitapide, lovastatin, simvastatin, sildenafil [as Revatio for PAH], oral midazolam, triazolam, apalutamide, rifampin, St. John's wort.** • Concomitant salmeterol, boceprevir, simeprevir, glecaprevir/pibrentasvir, sofosbuvir/velpatasvir/voxilaprevir, ombitasvir/paritaprevir/ritonavir and dasabuvir: not recommended. • Avoid oral soln with metronidazole, disulfiram. • Potentiates statins metabolized by CYP3A; use atorvastatin with caution and at the lowest necessary doses; do not exceed rosuvastatin 10mg daily. • Potentiates sildenafil, vardenafil, tadalafil (reduce dose of these); avanafil (avoid). • Potentiates anticancer agents (eg, abemaciclib, dasatinib, encorafenib, ibrutinib, ivosidenib, neratinib, nilotinib, venetoclax, vinblastine, vincristine); avoid or reduce doses (see full labeling). • Potentiates fostamatinib; monitor for toxicities; may require dose reduction. • Concomitant elagolix 200mg twice daily for >1 month: not recommended. • Concomitant colchicine (see full labeling). • Potentiates bosentan (see full labeling). • Increases levels of antiarrhythmics (eg, amiodarone, bepridil, systemic lidocaine, quinidine), dihydropyridine CCBs, immunosuppressants (monitor); ketoconazole, itraconazole (avoid high doses), isavuconazonium sulfate (caution); bedaquiline (use only if benefit outweighs the risk); rifabutin (reduce rifabutin dose and monitor); clarithromycin (reduce clarithromycin dose in renal dysfunction), trazodone (reduce trazodone dose), maraviroc (give max maraviroc 150mg twice daily), quetiapine (reduce dose). • Monitor with other antiretrovirals (eg, tenofovir disoproxil), warfarin. • Avoid concomitant rivaroxaban; increased bleeding risk. • Decrease levels of atovaquone, methadone, bupropion, estrogen-containing oral contraceptives (use alternative method or additional barrier contraception), voriconazole (avoid and use alternatives). • Lopinavir levels decreased by anticonvulsants (eg, carbamazepine, phenobarbital, phenytoin), efavirenz, nevirapine, tipranavir. • Lopinavir levels may be increased by delavirdine, CYP3A inhibitors. • May decrease lamotrigine, valproate, zidovudine or abacavir levels. • Give didanosine 1 hour before or 2 hours after. • Avoid concomitant with other drugs that prolong the QT interval. • Antagonized by corticosteroids (eg, oral dexamethasone, betamethasone, budesonide); consider alternatives.
nelfinavir mesylate (NFV)	**Viracept**	• **CYP3A substrates that may cause serious events if blood levels are elevated (eg, cisapride, pimozide, oral midazolam, triazolam, lovastatin, simvastatin, ergots, amiodarone, quinidine, alfuzosin, rifampin, St. John's wort, sildenafil [Revatio; when used to treat PAH]).** • Salmeterol: not recommended. • Potentiates CYP3A substrates (eg, dihydropyridine calcium channel blockers, cyclosporine, tacrolimus, sirolimus, rifabutin, rosuvastatin, atorvastatin [use lowest dose necessary; max atorvastatin dose is 40mg/day]), PDE5 inhibitors (adjust dose: see literature), phenytoin (monitor). • Potentiates fluticasone (caution and consider alternatives w. long-term use), trazodone (use lower dose), bosentan, colchicine (adjust dose: see literature). • Nelfinavir levels decreased by CYP3A inducers (eg, phenytoin, carbamazepine, phenobarbital) or CYP2C19 inducers. • Nelfinavir levels increased by CYP3A or CYP2C19 inhibitors. • Antagonizes methadone, oral contraceptives (use additional or alternative contraception). • Indinavir, ritonavir, saquinavir increase nelfinavir levels. • Concomitant azithromycin: monitor for azithromycin toxicity (eg, elevated liver enzymes). • Administer didanosine 1hr before or 2hrs after nelfinavir. • Monitor INR with warfarin. • Others: see full labeling.

(continued)

ANTIRETROVIRAL CONTRAINDICATIONS AND DRUG INTERACTIONS (Part 6 of 9)

Generic	Brand	Contraindications and Drug Interactions*
PROTEASE INHIBITORS (PIS) (continued)		
ritonavir (RTV)	**Norvir**	• **Concomitant alfuzosin, ranolazine, amiodarone, dronedarone, flecainide, quinidine, propafenone, voriconazole (w. ritonavir ≥400mg every 12hrs), colchicine (in renal and/or hepatic impairment), lurasidone, pimozide, ergots, cisapride, lomitapide, lovastatin, simvastatin, sildenafil (as Revatio for PAH), oral midazolam, triazolam, apalutamide, St. John's Wort.** • Concomitant glecaprevir/pibrentasvir, simeprevir, salmeterol, high-dose or long-term meperidine, ketoconazole or itraconazole >200mg/day, elagolix 400mg/day for >1 month: not recommended. • May affect or be affected by CYP3A4, 2D6, 2C9, 1A2, 2C19, 2B6, or glucuronyl transferase substrates. • Potentiates other protease inhibitors, maraviroc, tramadol, propoxyphene, antidepressants (eg, SSRIs, tricyclics, nefazodone, desipramine, trazodone), dronabinol, quinine, bosentan, β-blockers (eg, metoprolol, timolol), CCBs (eg, diltiazem, nifedipine, verapamil), PDE-5 inhibitors (eg, avanafil, sildenafil, tadalafil, vardenafil), antipsychotics (eg, perphenazine, risperidone, thioridazine), sedative/hypnotics (eg, buspirone, clorazepate, diazepam, estazolam, flurazepam, zolpidem), statins (eg, atorvastatin, rosuvastatin), methamphetamine; may need dose reductions. • Potentiates anticancer agents (eg, abemaciclib, dasatinib, encorafenib, ibrutinib, ivosidenib, neratinib, nilotinib, venetoclax, vinblastine, vincristine); avoid or reduce doses (see full labeling). • Increases levels of disopyramide, lidocaine, mexiletine, carbamazepine, clonazepam, ethosuximide, digoxin, immunosuppressants, glucocorticoids (eg, dexamethasone, betamethasone, fluticasone, budesonide, prednisone; consider alternatives); monitor. • Antagonizes raltegravir, divalproex, lamotrigine, phenytoin, bupropion, atovaquone, theophylline (monitor), methadone (consider dose increase), oral contraceptives (consider alternatives). • Antagonized by rifampin. • Potentiated by delavirdine. • Avoid metronidazole, disulfiram, rivaroxaban (increased bleeding risk). • Reduce rifabutin dose by at least ¾, quetiapine to 1/6 of current dose, clarithromycin dose in renal dysfunction. • Concomitant bedaquiline: use only if benefit outweighs the risk. • Monitor fentanyl, parenteral midazolam, warfarin.
saquinavir mesylate (SQV)	**Invirase**	• **Congenital long QT syndrome.** • **Refractory hypokalemia or hypomagnesemia.** • **Complete AV block without implanted pacemakers, or those who are at high risk.** • **Severe hepatic impairment.** • **Use in combination with drugs that both increase saquinavir plasma concentrations and prolong the QT interval.** • **Concomitant alfuzosin, amiodarone, bepridil, dofetilide, flecainide, lidocaine (systemic), propafenone, quinidine, trazodone, clarithromycin, erythromycin, halofantrine, pentamidine, rifampin, lurasidone, clozapine, haloperidol, pimozide, sertindole, ziprasidone, phenothiazines, chlorpromazine, mesoridazine, thioridazine, ergots, atazanavir, lovastatin, simvastatin, tacrolimus, rilpivirine (concomitant use and switching to Invirase/ritonavir without ≥2wks washout period), sildenafil (as Revatio for PAH), triazolam, oral midazolam, dasatinib, sunatinib, disopyramide, quinine.** • Concomitant cobicistat, delavirdine, efavirenz, nevirapine, indinavir, nelfinavir, ibutilide, sotalol, fusidic acid, dapsone, tipranavir/ritonavir, salmeterol, St. John's wort, garlic caps, ketoconazole >200mg/day, carbamazepine, phenobarbital, phenytoin, colchicine (in renal/hepatic impairment): not recommended. • Potentiates atorvastatin (max 20mg/day), maraviroc (max 150mg twice daily), colchicine (see full labeling), quetiapine (reduce dose to 1/6), benzodiazepines, IV midazolam, CCBs, bosentan (see full labeling), sildenafil, vardenafil, tadalafil (reduce dose of these), fentanyl, alfentanil; monitor. • Antagonizes methadone (may need to increase dose), oral contraceptives (consider alternative or additional contraceptive). • Antagonized by CYP3A-inducing corticosteroids (eg, systemic dexamethasone or others): consider alternatives. • Monitor warfarin, TCAs, digoxin, cyclosporine, rapamycin. • Caution with lopinavir/ritonavir, nefazodone, itraconazole, quinupristin/dalfopristin, omeprazole, IV vincamine; monitor for toxicity. • Concomitant rifabutin: reduce rifabutin dose by at least 75%; monitor.
tipranavir (TPV)	**Aptivus**	• **Moderate to severe hepatic impairment (Child-Pugh B–C).** • **Concomitant potent CYP3A inducers or substrates (eg, alfuzosin, amiodarone, bepridil, flecainide, propafenone, quinidine, rifampin, ergots, cisapride, St. John's wort, lovastatin, simvastatin, pimozide, lurasidone, sildenafil [as Revatio for PAH], oral midazolam, triazolam).** • **Concomitant colchicine (in renal or hepatic impairment).** • Concomitant etravirine, fosamprenavir, lopinavir, saquinavir, atazanavir, salmeterol, fluticasone, atorvastatin, or fluconazole, ketoconazole, itraconazole >200mg/day: not recommended. • May be potentiated by enfuvirtide. • Antagonized by carbamazepine, phenobarbital, phenytoin, buprenorphine/naloxone. • Potentiates sildenafil, tadalafil, vardenafil, IV midazolam, trazodone, colchicine, desipramine (monitor), SSRIs, clarithromycin (in renal impairment); reduce dose: see full labeling. • Antagonizes abacavir, didanosine, zidovudine, estrogens (as HRT; monitor for deficiency), methadone, meperidine, omeprazole, dolutegravir, raltegravir, valproic acid. • Reduce rifabutin dose by 75%, quetiapine to 1/6 of current dose (if no alternative). • Monitor hypoglycemics, immunosuppressants, CCBs, warfarin. • Increased risk of bleeding with concomitant anticoagulants, antiplatelet agents, high-dose Vit.E. • Separate dosing of didanosine by ≥2hrs. • Bosentan: adjust dose (see full labeling). • Caps: avoid metronidazole, disulfiram. • Oral soln: avoid high-dose Vit.E supplements.

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ANTIRETROVIRAL CONTRAINDICATIONS AND DRUG INTERACTIONS (Part 7 of 9)

Generic	Brand	Contraindications and Drug Interactions*
MULTICLASS FIXED-DOSE COMBINATION		
abacavir/ dolutegravir/ lamivudine	**Triumeq**	• **Presence of HLA-B*5701 allele. Previous hypersensitivity reaction to any of the components. Concomitant dofetilide. Moderate or severe hepatic impairment.** • Dolutegravir may be affected by drugs that induce or inhibit UGT1A1, CYP3A, UGT1A3, UGT1A9, BCRP, and P-gp enzymes or transporters. • Avoid concomitant nevirapine, oxcarbazepine, phenytoin, phenobarbital, St. John's wort. • Concomitant etravirine without atazanavir/ritonavir, darunavir/ritonavir, or lopinavir/ritonavir: not recommended. • Concomitant efavirenz, fosamprenavir/ritonavir, tipranavir/ritonavir, carbamazepine, rifampin: give additional dolutegravir 50mg separated by 12hrs from Triumeq. • May potentiate drugs eliminated via OCT2 or MATE1 (eg, dofetilide, dalfampridine, metformin). • Avoid concomitant sorbitol-containing products. • Concomitant cation-containing antacids, laxatives, sucralfate, buffered drugs, or oral iron/calcium supplements (also can give together with a meal): give Triumeq 2hrs before or 6hrs after. • Ethanol may increase abacavir levels. • Abacavir may antagonize methadone.
atazanavir/ cobicistat	**Evotaz**	• **Concomitant alfuzosin, ranolazine, dronedarone, carbamazepine, phenobarbital, phenytoin, colchicine (in renal/hepatic impaired), rifampin, irinotecan, lurasidone, pimozide, triazolam, oral midazolam, ergots, cisapride, elbasvir/grazoprevir, glecaprevir/pibrentasvir, St. John's wort, lomitapide, lovastatin, simvastatin, drospirenone/ethinyl estradiol, nevirapine, sildenafil (for PAH), indinavir.** • Separate dosing with concomitant H_2 receptor antagonists, PPIs (not recommended in treatment-experienced), antacids, enteric-coated didanosine. • Concomitant tenofovir DF with concomitant or recent nephrotoxic agents, other antiretrovirals that require CYP3A inhibition (eg, HIV protease inhibitors, elvitegravir), ritonavir or ritonavir-containing products, CYP2C8 substrates with narrow therapeutic indices (eg, paclitaxel, repaglinide), H_2 receptor antagonists (in treatment-experienced), efavirenz, etravirine, boceprevir, simeprevir, sofosbuvir/velpatasvir/voxilaprevir, apixaban, rivaroxaban, dabigatran etexilate, atorvastatin, avanafil, inhaled/nasal steroids, salmeterol, voriconazole: not recommended. • May need to adjust dose of insulin, antidiabetics, dasatinib, nilotinib, sildenafil, tadalafil, vardenafil, perphenazine, risperidone, thioridazine, buprenorphine, naloxone, methadone, tramadol, bosentan, rifabutin, sedatives/hypnotics, rosuvastatin (max 10mg/day); monitor. • Concomitant maraviroc: give maraviroc 150mg twice daily. • Potentiates quetiapine: consider alternative antiretrovirals; if coadministration necessary, reduce quetiapine to $^1/_6$ of current dose and monitor. • Monitor concomitant antiarrhythmics, digoxin, vincristine, vinblastine, warfarin, clonazepam, lamotrigine, SSRIs, TCAs, trazodone, fentanyl, immunosuppressants, other statins, β-blockers, CCBs. • Concomitant clarithromycin, erythromycin, telithromycin, CYP3A-inducing anticonvulsants (eg, eslicarbazepine, oxcarbazepine), systemic corticosteroids (eg, dexamethasone): consider alternatives. • Use alternative non-hormonal methods of contraception.
bictegravir/ emtricitabine/ tenofovir alafenamide	**Biktarvy**	• **Concomitant dofetilide, rifampin.** • Concomitant other antiretrovirals: not recommended. • May potentiate concomitant OCT2 and MATE1 substrates (eg, dofetilide). • May be affected by drugs that induce or inhibit CYP3A and UGT1A1. • Concomitant drugs that strongly affect P-gp and BCRP activity may lead to changes in TAF absorption. • May be potentiated by drugs that decrease renal function or compete for active tubular secretion (eg, acyclovir, cidofovir, ganciclovir, valacyclovir, valganciclovir, aminoglycosides, NSAIDs). • May be antagonized by anticonvulsants (eg, carbamazepine, oxcarbazepine, phenobarbital, phenytoin); consider alternatives. • Concomitant rifabutin, rifapentine, St. John's wort: not recommended. • Concomitant antacids (containing Al/Mg): give Biktarvy at least 2hrs before or 6hrs after. • Concomitant oral iron/calcium supplements or antacids: can take together with food. • Routine coadministration (under fasting conditions) with, or 2hrs after, oral iron/calcium supplements or antacids: not recommended. • May potentiate metformin (refer to metformin labeling).
darunavir/ cobicistat	**Prezcobix**	• **Concomitant alfuzosin, colchicine (in renal/hepatic impaired), dronedarone, ivabradine, ranolazine, carbamazepine, phenobarbital, phenytoin, rifampin, lurasidone, pimozide, ergots, cisapride, St. John's wort, elbasvir/grazoprevir, lomitapide, lovastatin, simvastatin, oral midazolam, triazolam, naloxegol, sildenafil (for PAH).** • Concomitant tenofovir DF with concomitant or recent nephrotoxic agents, darunavir- or cobicistat-containing products, ritonavir, or other antiretrovirals that require PK boosting (eg, another protease inhibitor, elvitegravir), efavirenz, etravirine, nevirapine, apixaban (see full labeling), rivaroxaban, voriconazole, rifapentine, glecaprevir/pibrentasvir, simeprevir, everolimus, irinotecan (unless no alternatives), salmeterol, avanafil, ticagrelor, clopidogrel: not recommended. • May need to adjust dose of dasatinib, nilotinib, colchicine, sildenafil, tadalafil, vardenafil, perphenazine, risperidone, thioridazine, buprenorphine, buprenorphine/naloxone, methadone, tramadol, bosentan, rifabutin, sedatives/hypnotics. • Concomitant maraviroc (give 150mg twice daily), fesoterodine (max 4mg/day), solifenacin (max 5mg/day). • Concomitant quetiapine: consider alternative antiretrovirals; if necessary, reduce quetiapine to $^1/_6$ of current dose and monitor. • Monitor with antiarrhythmics, digoxin, warfarin, clonazepam, SSRIs, TCAs, trazodone, antimalarials (eg, artemether, lumefantrine), itraconazole, ketoconazole, isavuconazole, posaconazole, fentanyl, oxycodone, immunosuppressants, β-blockers, calcium channel blockers. • Concomitant other statins (eg, atorvastatin (max 20mg/day), fluvastatin, pitavastatin, pravastatin, rosuvastatin (max 20mg/day): start at low dose, titrate and monitor. • Concomitant antibacterials (eg, clarithromycin, erythromycin, telithromycin), CYP3A-inducing anticonvulsants that are not contraindicated (eg, eslicarbazepine, oxcarbazepine), CYP3A-inducing corticosteroids (eg, systemic dexamethasone or others): consider alternatives. • Concomitant vincristine, vinblastine: consider temporarily withholding cobicistat-containing regimen if significant hematologic or GI adverse events develop. • Concomitant hormonal contraceptives (eg, drosperinone): monitor for hyperkalemia; estrogen-containing contraceptives: consider additional or alternative (non-hormonal) contraception. • Separate dosing of didanosine at least 1hr before or 2hrs after.

(continued)

Generic	Brand	Contraindications and Drug Interactions*
MULTICLASS FIXED-DOSE COMBINATION (continued)		
darunavir/ cobicistat/ emtricitabine/ tenofovir alafenamide	**Symtuza**	• **Concomitant alfuzosin, carbamazepine, phenobarbital, phenytoin, colchicine (in renal/hepatic impairment), rifampin, lurasidone, pimozide, dronedarone, ivabradine, ranolazine, ergots, cisapride, St. John's wort, elbasvir/grazoprevir, lomitapide, lovastatin, simvastatin, naloxegol, sildenafil (for PAH), oral midazolam, triazolam.** • Concomitant other antiretroviral agents, rivaroxaban, voriconazole, rifabutin, rifapentine, glecaprevir/pibrentasvir, everolimus, irinotecan (unless no alternatives), salmeterol, avanafil, ticagrelor: not recommended. • Concomitant drugs that reduce renal function or compete for active tubular secretion may potentiate emtricitabine, tenofovir (eg, acyclovir, cidofovir, ganciclovir, valacyclovir, valganciclovir, aminoglycosides, high-dose or multiple NSAIDs). • May potentiate antiarrhythmics, digoxin, dasatinib, nilotinib (see full labeling), apixaban, clonazepam, SSRIs, TCAs, trazodone, itraconazole, ketoconazole, colchicine (see full labeling), antipsychotics, quetiapine (consider alternative antiretrovirals; if necessary, reduce quetiapine to $^1/_6$ of current dose and monitor), β-blockers, calcium channel blockers, fentanyl, oxycodone, immunosuppressants, tramadol (reduce dose), PDE5 inhibitors (see full labeling), sedatives/hypnotics, IV midazolam, fesoterodine (max 4mg/day), solifenacin (max 5mg/day); monitor. • Concomitant other statins [eg, atorvastatin (max 20mg/day), fluvastatin, pitavastatin, pravastatin, rosuvastatin (max 20mg/day)]: start at low dose, titrate and monitor. • Concomitant antibacterials (eg, clarithromycin, erythromycin, telithromycin), CYP3A-inducing anticonvulsants that are not contraindicated (eg, eslicarbazepine, oxcarbazepine), CYP3A-inducing corticosteroids (eg, systemic dexamethasone or others): consider alternatives. • Concomitant vincristine, vinblastine: consider temporarily withholding cobicistat-containing regimen if significant hematologic or GI adverse events develop. • Concomitant hormonal contraceptives (eg, drosperinone): monitor for hyperkalemia; other estrogen based contraceptives: consider additional or alternative (non-hormonal) contraception. • Discontinue bosentan ≥36hrs prior to initiation of Symtuza; resume after ≥10 days following initiation. • Concomitant artemether/lumefantrine; monitor effects. • Concomitant buprenorphine, buprenorphine/naloxone, methadone; use lowest initial or maintenance dose and titrate. • Monitor INR with warfarin.
dolutegravir/ lamivudine	**Dovato**	• **Concomitant dofetilide.** • Concomitant other antiretrovirals: not recommended. • Dolutegravir may be affected by drugs that induce or inhibit UGT1A1, CYP3A, UGT1A3, UGT1A9, BCRP, and P-gp enzymes or transporters. • May potentiate drugs eliminated via OCT2 or MATE1 (eg, dofetilide, dalfampridine, metformin). • Avoid concomitant oxcarbazepine, phenytoin, phenobarbital, St. John's wort. • Antagonized by carbamazepine, rifampin: give additional dolutegravir 50mg separated by 12hrs from Dovato. • Avoid concomitant sorbitol-containing products. • Concomitant cation-containing antacids, laxatives, sucralfate, buffered drugs, or oral iron/calcium supplements (also can give together with a meal): give Dovato 2hrs before or 6hrs after.
dolutegravir/ rilpivirine	**Juluca**	• **Concomitant dofetilide, carbamazepine, oxcarbazepine, phenobarbital, phenytoin, rifampin, rifapentine, systemic dexamethasone (more than a single dose), St. John's wort, esomeprazole, lansoprazole, omeprazole, pantoprazole, rabeprazole.** • Concomitant other HIV-1 antiretroviral therapy: not recommended. • May be affected by drugs that induce or inhibit UGT1A1, UGT1A3, UGT1A9, BCRP, and P-gp enzymes or transporters. • May be antagonized by CYP3A inducers; potentiated by CYP3A inhibitors. • Concomitant drugs with a known risk of Torsade de pointes: consider alternatives. • Dolutegravir may potentiate drugs eliminated via OCT2 or MATE1 (eg, dofetilide, dalfampridine, metformin). • Drugs that increase gastric pH may result in decreased plasma concentration. • Concomitant antacids, cation-containing products, laxatives, sucralfate, buffered drugs, or oral iron/calcium supplements (also can give together with a meal): give Juluca 4hrs before or 6hrs after. • Separate H_2-receptor antagonists by at least 4hrs before or 12hrs after. • Limit concomitant metformin dose to 1000mg/day; adjust metformin dose when starting or stopping Juluca; monitor closely. • May be potentiated by clarithromycin, erythromycin, telithromycin; consider alternatives (eg, azithromycin). • Concomitant methadone; monitor.
doravirine/ lamivudine/ tenofovir disoproxil fumarate	**Delstrigo**	• **Concomitant strong CYP3A inducers (eg, carbamazepine, oxcarbazepine, phenobarbital, phenytoin, enzalutamide, rifampin, rifapentine, mitotane, St. John's wort): discontinue for ≥4wks prior to starting Delstrigo.** • May be antagonized by CYP3A inducers (see Contraindications). • May be potentiated by CYP3A inhibitors. • Avoid concomitant or recent use of nephrotoxic agents. • Tenofovir levels increased by ledipasvir/sofosbuvir, sofosbuvir/velpatasvir; monitor. • Lamivudine levels decreased by sorbitol; avoid if possible. • Concomitant drugs that reduce renal function or compete for active tubular secretion may potentiate lamivudine, tenofovir, (eg, acyclovir, cidofovir, ganciclovir, valacyclovir, valganciclovir, aminoglycosides, high-dose or multiple NSAIDs).
efavirenz (EVF)/ emtricitabine (FTC)/tenofovir disoproxil fumarate (TDF)	**Atripla**	• **Concomitant voriconazole, elbasvir/grazoprevir.** • Concomitant atazanavir ± ritonavir, posaconazole, boceprevir, simeprevir, sofosbuvir/velpatasvir, sofosbuvir/velpatasvir/voxilaprevir, glecaprevir/pibrentasvir, atovaquone/proguanil, other NNRTIs: not recommended. • Additive CNS effects with alcohol, psychoactive drugs. • Potentiates didanosine levels; monitor closely; discontinue or reduce didanosine dose if toxicity develops. • Concomitant ritonavir: monitor liver function and toxicity. • Tenofovir levels increased by lopinavir/ritonavir, darunavir + ritonavir, ledipasvir/sofosbuvir; monitor and discontinue if toxicity occurs. • May antagonize or be antagonized by phenobarbital, phenytoin, carbamazepine (consider alternative), rifabutin (increase dose), rifampin (give additional 200mg/day of efavirenz); monitor. • May antagonize indinavir (may be ineffective, even with increased dose), amprenavir, saquinavir, bupropion, CCBs (eg, diltiazem, felodipine, nicardipine, nifedipine, verapamil), itraconazole (consider alternative), ketoconazole, lopinavir (adjust dose), maraviroc, methadone (monitor), raltegravir, sertraline, statins, progestins (eg, norelgestromin, levonorgestrel), immunosuppressants (eg, cyclosporine, sirolimus, tacrolimus; monitor). • Avoid concomitant or recent use of nephrotoxic agents (eg, high-dose or multiple NSAIDs). • Monitor drugs that decrease renal function or compete for renal tubular secretion (eg, acyclovir, adefovir dipivoxil, cidofovir, ganciclovir, valacyclovir, valganciclovir, aminoglycosides, NSAIDs). • Concomitant drugs with a known risk for Torsade de Pointes (eg, clarithromycin, artemether/lumefantrine); consider alternatives. • Monitor warfarin. • Efavirenz may cause false (+) urine cannabinoid screening assay.

(continued)

ANTIRETROVIRAL CONTRAINDICATIONS AND DRUG INTERACTIONS (Part 9 of 9)

Generic	Brand	Contraindications and Drug Interactions*
MULTICLASS FIXED-DOSE COMBINATION (continued)		
emtricitabine (FTC)/rilpivirine/ tenofovir alafenamide (TAF)	**Odefsey**	• **Concomitant carbamazepine, oxcarbazepine, phenobarbital, phenytoin, rifampin, rifapentine, dexlansoprazole, esomeprazole, lansoprazole, omeprazole, pantoprazole, rabeprazole, systemic dexamethasone (more than a single dose), St. John's wort.** • Concomitant other antiretroviral agents, antimycobacterials (eg, rifabutin): not recommended. • May be potentiated by CYP3A, P-gp and BCRP inhibitors, antagonized by CYP3A or P-gp inducers. • Concomitant drugs that strongly affect P-gp and BCRP activity may lead to changes in TAF absorption. • Concomitant drugs with a known risk for Torsade de Pointes; consider alternatives. • May be potentiated by drugs that decrease renal function or compete for active tubular secretion (eg, acyclovir, cidofovir, ganciclovir, valacyclovir, valganciclovir, aminoglycosides, NSAIDs). • Separate antacids by ≥2hrs before or 4hrs after rilpivirine; or H2-receptor antagonists by ≥12hrs before or ≥4hrs after rilpivirine; drugs that increase gastric pH may decrease rilpivirine plasma levels. • Monitor for breakthrough fungal infections with concomitant azole antifungals. • Concomitant clarithromycin, erythromycin, telithromycin; consider alternative (eg, azithromycin). • Monitor methadone.
emtricitabine (FTC)/rilpivirine/ tenofovir disoproxil fumarate (TDF)	**Complera**	• **Concomitant carbamazepine, oxcarbazepine, phenobarbital, phenytoin, rifampin, rifapentine, esomeprazole, dexlansoprazole, lansoprazole, omeprazole, pantoprazole, rabeprazole, systemic dexamethasone (more than single dose), St. John's wort.** • Concomitant other antiretroviral agents: not recommended. • Rilpivirine: potentiated by CYP3A inhibitors; antagonized by CYP3A inducers, concomitant rifabutin (see Adults). • Emtricitabine/tenofovir: may be potentiated by drugs that decrease renal function or compete for active tubular secretion (eg, acyclovir, adefovir dipivoxil, cidofovir, ganciclovir, valacyclovir, valganciclovir, aminoglycosides, high-dose or multiple NSAIDs). • Tenofovir levels increased by concomitant ledipasvir/sofosbuvir, sofosbuvir/velpatasvir, sofosbuvir/velpatasvir/voxilaprevir; monitor for toxicity. • Concomitant drugs with a known risk for Torsade de Pointes; consider alternatives. • Separate antacids by ≥2hrs before or 4hrs after rilpivirine; or H2-receptor antagonists by ≥12hrs before or ≥4hrs after rilpivirine; drugs that increase gastric pH may decrease rilpivirine plasma levels. • Monitor for breakthrough fungal infections with concomitant azole antifungals. • Concomitant clarithromycin, erythromycin, telithromycin; consider alternative (eg, azithromycin). • Monitor methadone.
elvitegravir/ cobicistat/ emtricitabine (FTC)/tenofovir alafenamide (AF)	**Genvoya**	• **Concomitant alfuzosin, carbamazepine, phenobarbital, phenytoin, rifampin, lurasidone, pimozide, ergots, cisapride, St. John's wort, lomitapide, lovastatin, simvastatin, sildenafil (as Revatio for PAH), triazolam, oral midazolam.** • Avoid with concurrent or recent use of nephrotoxic agents. • Not recommended with other antiretroviral agents, rifabutin, rifapentine, rivaroxaban, ticagrelor, or clopidogrel. • Concomitant drugs that reduce renal function or compete for active tubular secretion may potentiate emtricitabine, tenofovir (eg, acyclovir, cidofovir, ganciclovir, valacyclovir, valganciclovir, aminoglycosides, high-dose or multiple NSAIDs). • Separate dosing of drugs, antacids, or oral supplements containing polyvalent cations by at least 2hrs. • May potentiate antiarrhythmics, digoxin, clarithromycin (reduce dose by 50% if CrCl 50–60mL/min), telithromycin, IV midazolam, diazepam, ethosuximide, SSRIs, TCAs, trazodone, ketoconazole (max 200mg/day), itraconazole (max 200mg/day), voriconazole, beta-blockers, CCBs, atorvastatin (max 20mg/day), immunosuppressants (monitor), PDE5 inhibitors (see full labeling for dose adjustments), other sedatives/hypnotics or antipsychotics, quetiapine (consider alternative antiretrovirals; if necessary, reduce quetiapine to 1/6 of current dose and monitor), direct oral anticoagulants (see full labeling), tramadol (reduce dose). • Antagonized by oxcarbazepine, corticosteroids (eg, oral dexamethasone, betamethasone, budesonide, fluticasone); consider alternatives. • Concomitant colchicine (see full labeling); not recommended in renal or hepatic impairment. • Concomitant buprenorphine/naloxone, fentanyl; monitor. • Discontinue bosentan ≥36 hours prior to initiation of Genvoya; resume bosentan after ≥10 days following initiation. • Concomitant salmeterol: not recommended; increased risk of cardiovascular events. • Consider additional or alternative non-hormonal methods of contraception (see full labeling). • Monitor INR with warfarin.
elvitegravir/ cobicistat/ emtricitabine (FTC)/ tenofovir disoproxil fumarate (TDF)	**Stribild**	• **Concomitant alfuzosin, carbamazepine, phenobarbital, phenytoin, rifampin, lurasidone, pimozide, ergots, cisapride, St. John's wort, lomitapide, lovastatin, simvastatin, sildenafil (as Revatio for PAH), triazolam, oral midazolam.** • Not recommended with other antiretroviral agents, rifabutin, rifapentine, ledipasvir/sofosbuvir, rivaroxaban, salmeterol. • Avoid with concurrent or recent use of nephrotoxic agents (eg, high-dose or multiple NSAIDs). • Concomitant drugs that reduce renal function or compete for active tubular secretion may potentiate emtricitabine, tenofovir (eg, acyclovir, cidofovir, ganciclovir, valacyclovir, valganciclovir, gentamicin). • Separate antacids by at least 2hrs. • May potentiate antiarrhythmics, digoxin, clarithromycin (reduce dose by 50% if CrCl 50–60mL/min), clonazepam, ethosuximide, SSRIs, TCAs, trazodone, ketoconazole (max 200mg/day), itraconazole (max 200mg/day), voriconazole, beta-blockers, CCBs, sofosbuvir/ velpatasvir/voxilaprevir (monitor), atorvastatin, immunosuppressants (monitor), PDE5 inhibitors (see full labeling for dose adjustments), other sedatives/hypnotics or antipsychotics, quetiapine (reduce dose by 1/6 or consider alternative antiretrovirals), direct oral anticoagulants (see full labeling), tramadol (reduce dose). • Concomitant buprenorphine/naloxone, fentanyl; monitor. • Antagonized by oxcarbazepine, corticosteroids (eg, oral dexamethasone, betamethasone, budesonide, fluticasone); consider alternatives. • Concomitant colchicine (see full labeling); not recommended in renal or hepatic impairment. • Discontinue use of bosentan at least 36hrs prior to initiation of Stribild; after at least 10 days following initiation, resume bosentan. • Concomitant salmeterol: not recommended; increased risk of cardiovascular events. • Use alternative non-hormonal methods of contraception. • Monitor INR with warfarin.

NOTES

Key: *Those listed in **bold type** are contraindications.

Not an inclusive list of medications and/or contraindications and drug interactions. Please see drug monograph at www.eMPR.com and/or contact company for full drug labeling. (Rev. 3/2021)