COMPREHENSIVE ANTIRETROVIRAL TABLE:
ADULT DOSING, DOSAGE FORM MODIFICATIONS, ADVERSE REACTIONS and INTERACTION POTENTIAL

Generic Name Abbrev. (Brand Name)	Dosage Forms (generics, liquids, alternate forms)	Adult Dosing	Renal/ Hepatic Dose Adjustments	Adverse Reactions	Interaction Potential
NUCLOESIDE/TIDE REVERSE TRANSCRIPTASE INHIBITORS (N(t)RTIs)			***hepatotoxicity, mitochondrial toxicity, lactic acidosis***		
Abacavir **ABC** (Ziagen)	**Tablet**: 300mg Generic tablet: 300mg **Oral solution**: 20mg/mL	• 300mg BID • 600mg QD **No food restrictions**	*No renal adjustment required* Child-Pugh: Dose 5-6: 200mg BID > 6: Contraindicated	N, V, HSR: fever, malaise, GI s/sx, R; do not re-challenge Check HLA-B*5701 to avoid hypersensitivity reaction	Minimal
Didanosine **ddI** (Videx EC)	**EC Capsules**: 125mg, 200mg, 250mg, 400mg Generic Delayed-Release Capsules: 125mg, 200mg, 250mg, 400mg Tablets for oral suspension: 100mg, 150 mg, 200mg **Powder for suspension**: 10 mg/mL	• 400mg QD (≥60kg) • 250mg QD (<60 kg) **Empty stomach**	CrCl: ≥ 60 kg / < 60 kg 30-59: 200mg QD / 125mg QD 10-29: 125mg QD / 125mg QD < 10 or HD: 125mg / 75mg PO solution *No hepatic adjustment recommendation*	Pancreatitis, peripheral neuropathy	TDF increases ddI AUC: reduce ddI dose to 250 mg QD if given with TDF 300 mg QD
Emtricitabine **FTC** (Emtriva)	**Capsules**: 200mg **Oral solution**: 10mg/mL	• 200mg QD (capsule) • 240mg (24 mL) QD oral solution **No food restrictions**	CrCl: Capsule / Solution 30-49: 200mg Q48h / 120mg Q24h 15-29: 200mg Q72h / 80mg Q24h < 15 or HD: 200mg Q96h / 60mg Q24h *No hepatic adjustment recommendation*	HA, N, V	Minimal
Lamivudine **3TC** (Epivir)	**Tablets**: 100mg, 150mg, 300mg Generic tablets: 100mg, 150mg, 300mg **Oral solution**: 5mg/mL, 10mg/mL	• 150mg BID or 300mg QD **No food restrictions**	CrCl: Dose 30-49: 150mg QD 15-29: 150mg x1, 100mg QD 5-14: 150mg x1, 50mg QD < 5 or HD: 50mg x1, 25mg QD *No hepatic adjustment recommendation*	HA, N, V	Minimal
Stavudine **d4T** (Zerit)	**Capsules**: 15mg, 20mg, 30mg, 40mg Generic capsules: 15mg, 20mg, 30mg, 40mg **Powder for oral solution**: 1mg/mL (brand and generic)	• 40mg BID (≥60kg) • 30mg BID (30-60kg) **No food restrictions**	CrCl: ≥ 60 kg / < 60 kg 26-50: 20mg Q12h / 15mg Q12h 10-25 or HD: 20mg Q24h / 15mg Q24h *No hepatic adjustment recommendation*	Peripheral neuropathy	Minimal
Tenofovir disoproxil fumarate **TDF** (Viread)	**Tablets**: 150mg, 200mg, 250mg, 300mg **Oral powder**: 40mg/g	• 300mg QD **No food restrictions**	CrCl: Dose 30-49: 300mg Q48h 10-29: 300mg Twice weekly HD: 300mg Q7 days *No hepatic adjustment*	N, V, flatulence, renal toxicity, ↓ bone mineral density	Increases ddI AUC: reduce ddI dose to 250mg QD if given with TDF
Zidovudine **AZT, ZDV** (Retrovir)	**Capsule**: 100mg **Tablet**: 300mg **Oral syrup**: 10mg/mL Generic capsule, tablet, oral syrup **Injection solution**: 10mg/mL	• 300mg BID • 200mg TID **No food restrictions**	CrCl: Dose < 15 or HD: 100mg TID or 300mg QD *No hepatic adjustment recommendation*	Anemia, HA, N, V	Minimal; avoid use with other bone marrow (BM) toxic medications

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Updated by: Cristina Gruta, PharmD (11/2016)

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N(t)RTI Co-formulations			***hepatotoxicity, mitochondrial toxicity, lactic acidosis***		
Zidovudine / Lamivudine AZT/3TC (Combivir)	**Tablet**: 300mg AZT/ 150mg 3TC Generic tablets available	• One tablet (300/150) BID **No food restrictions**	CrCl < 50mL/min: not recommended ***No hepatic** adjustment recommendation*	See AZT & 3TC	See AZT & 3TC
Abacavir / Lamivudine ABC/3TC (Epzicom)	**Tablet**: 600mg ABC/ 300mg 3TC Generic tablets available	• One tablet (600/300) QD **No food restrictions**	CrCl < 50mL/min: not recommended **Contraindicated** in hepatic impairment	See ABC & 3TC	See ABC & 3TC
Zidovudine / Lamivudine / Abacavir AZT/3TC/ABC (Trizivir)	**Tablet**: 300mg AZT/ 150mg 3TC/ 300mg ABC Generic tablets available	• One tablet (300/150/300) BID **No food restrictions**	CrCl < 50mL/min: not recommended **Contraindicated** in hepatic impairment	See AZT, 3TC, & ABC	See AZT, 3TC, & ABC
Tenofovir DF / Emtricitabine TDF/FTC (Truvada)	**Tablet**: 300mg TDF/ 200mg FTC, 150mg TDF /100mg FTC, 200mg TDF /133mg FTC, 250mg TDF/167mg FTC	• One tablet (300/200) QD **No food restrictions**	CrCl / Dose 30-49 / 1 tab Q48h < 30 / Not recommended ***No hepatic** adjustment recommendation*	See TDF & FTC	See TDF & FTC
Tenofovir AF / Emtricitabine TAF/FTC (Descovy) (TAF= tenofovir alafenamide)	**Tablet:** 25mg TAF/200mg FTC	• One tablet (25/200) QD **No food restrictions**	Co-formulation can be given if CrCl ≥ 30 mL/min. Not recommended if CrCl < 30 mL/min or on hemodialysis. No dose adjustment Child-Pugh A or B, No dosing data for Child-Pugh C	N, ↑LDL/Total cholesterol	Avoid strong inducers
NON-NUCLOESIDE REVERSE TRANSCRIPTASE INHIBITORS (NNRTIs)			***rash, hepatotoxicity***		
Efavirenz EFV (Sustiva)	**Capsules**: 50mg, 200mg **Tablet**: 600mg	• 600mg QD **Initially at HS and preferably on empty stomach**	***No renal** dose adjustment required* ***No hepatic** adjustment; use with caution*	CNS effects: dizziness, insomnia, vivid dreams	Inducer, inhibitor, and substrate of liver enzymes
Etravirine ETR (Intelence)	**Tablets**: 25mg, 100mg, 200mg	• 200mg BID **With food**	***No renal** dose adjustment* Child-Pugh / Dose A or B / No adjustment necessary C / No data	N	ETR is a substrate and inducer of liver enzymes (3A4, 2C9, 2C19) Do not co-administer with TPV/r, FPV/r, ATV/r, non-RTV-boosted PIs, & other NNRTIs
Nevirapine NVP (Viramune)	**Tablet**: 200mg **Extended release tablet**:100mg, 400mg **Oral suspension**: 10mg/mL Generic 200mg tablets, 400mg ER tablet, 10mg/mL oral suspension	• 200mg QDx2wks; then 200mg BID **No food restrictions**	CrCl / Dose ≥ 20 / No adjustment necessary < 20 / No data **Contraindicated** in Child-Pugh Class B or C	R, hepatotoxicity	Both substrate and inducer of liver enzymes

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Rilpivirine RPV (Edurant)	**Tablet**: 25mg	• 25mg QD **Take with a normal to high calorie meal**	***No renal*** *dose adjustment required* ***No hepatic*** *dose adjustment required*	CNS: depressive disorders, HA, insomnia; rash, increased cholesterol, hepatotoxicity	Substrate of CYP3A4; contraindicated with strong CYP3A inducers Contraindicated with proton pump inhibitors. Give histamine receptor antagonists 12h before or 4h after RPV
NRTI Pair plus NNRTI Co-formulations					
Efavirenz/ Emtricitabine/ Tenofovir DF EFV/FTC/ TDF (Atripla)	**Tablet**: 600mg EFV/ 200mg FTC/ 300mg TDF	• One tablet QD **Preferably empty stomach**	Not recommended CrCl < 50mL/min Not recommended Child-Pugh Class B or C	N, HA, D, CNS effects	See TDF, FTC, and EFV
Rilpivirine/ Emtricitabine/ Tenofovir DF RPV/FTC/TDF (Complera)	**Tablet**: 25mg RPV/ 200mg FTC/ 300mg TDF	• One tablet QD **Take with a full meal**	Not recommended CrCl < 50mL/min No adjustment recommended in mild-moderate hepatic impairment; no data in severe impairment	See RPV, FTC, TDF	See RPV, FTC, TDF
Rilpivirine/ Emtricitabine/ Tenofovir AF RPV/FTC/TAF (Odefsey) **(TAF= tenofovir alafenamide)**	**Tablet:** 25mg RPV/ 200mg FTC/ 25mg TAF	• One tablet QD **Take with a full meal**	Do not give co-formulation if CrCL < 30mL/min No dose adjustment Child-Pugh A or B, No dosing data for Child-Pugh C	See RPV , FTC/TAF	See RPV , FTC/TAF
INTEGRASE STRAND TRANSFER INHIBITORS (INSTI)					
Raltegravir RAL (Isentress)	**Tablet**: 400mg ***Chewable tablets**: 25mg, 100mg ***Powder for oral suspension**: 100mg packets **(*These formulations are NOT bioequivalent to 400mg tablet)**	• 400mg BID **No food restrictions**	*No renal dose adjustment required* *No hepatic dose recommendation; no data in severe impairment*	N, HA, increased creatine kinase	Strong inducers of UGT 1A1 (e.g. rifampin) can decrease RAL concentrations
Dolutegravir DTG (Tivicay)	**Tablet:** 10mg, 25mg, 50mg	• 50mg QD (TN or TE but INSTI-naïve) • 50mg BID (INSTI-experienced or with certain UGT1A/CYP3A inducers) **No food restrictions**	*No renal dose adjustment required; caution for INSTI-experienced pts with severe renal impairment* *No dose adjustment for mild or moderate hepatic impairment; PK unknown for severe hepatic impairment*	HA, insomnia, increased LFTs	Strong inducers of UGT1A or CYP3A can decrease DTG levels; see package insert for dose adjustments or contraindicated combinations

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NRTI pair + INTEGRASE STRAND TRANSFER INHIBITORS (INSTI) Co-formulations					
Elvitegravir (EVG)/ cobicistat/ TDF/FTC (Stribild)	**Tablet**: 150mg EVG/ 150mg cobicistat/ 200mg FTC/ 300mg TDF	• One tablet QD **Take with food**	CrCl ≥ 70: No adjustment necessary CrCl < 70: **Initial** use not recommended CrCl < 50: **Continued** use not recommended HD: Not recommended --- Child-Pugh A or B: No adjustment necessary Child-Pugh C: Not recommended	N, HA, increased creatine kinase, renal toxicity	Strong 3A4 inducers can decrease EVG Cobi is a CYP3A inhibitor, which ⇑ EVG exposure; may ⇑ exposure to other CYP3A substrates Contraindicated with rifampin, lovastatin, simvastatin, sildenafil dosed as Revatio for PAH
Elvitegravir (EVG)/ cobicistat/ TAF/FTC (Genvoya) (TAF= tenofovir alafenamide)	**Tablet:** 150mg EVG/ 150mg cobicistat/ 200mg FTC/ 10mg TAF	• One tablet QD **Take with food**	Do not give co-formulation if CrCl < 30mL/min No dose adjustment for Child-Pugh A or B, Not recommended for Child-Pugh C	N, D, HA	Strong 3A4 inducers can decrease EVG Cobi is a CYP3A inhibitor, which ⇑ EVG exposure; may ⇑ exposure to other CYP3A substrates Contraindicated with rifampin, lovastatin, simvastatin, sildenafil dosed as Revatio for PAH
Dolutegravir (DTG)/ABC/3TC (Triumeq)	**Tablet**: 50mg DTG/600mg ABC/300mg 3TC	• One tablet QD **No food restrictions**	DTG/ABC/3TC is NOT recommended if CrCl < 50 mL/min because 3TC renal dosing is not possible with co-formulation DTG/ABC/3TC is NOT recommended if for Child-Pugh A or higher. ABC is dose reduced if Child-Pugh A.	See DTG, ABC. 3TC Must establish HLA -B*5701 status of pt (to screen for ABC hypersensitivity)	Strong inducers of UGT1A or CYP3A can decrease DTG levels; see package insert for dose adjustments or contraindicated combinations.
PROTEASE INHIBITORS (PIs)			***hepatotoxicity, lipodystrophy, dyslipidemias, insulin resistance/ hyperglycemia***		

Cobicistat is a pure pharmaco-enhancer with no HIV activity. It is available separately as 150 mg tablet (Tybost) approved in combination with either: atazanavir (ATV, Reyataz) 300mg QD in both TN and TE pts OR darunavir (DRV, Prezista) 800mg QD in TN pts or TE pts with no DRV-related mutations. Cobicistat is also co-formulated with atazanavir (as Evotaz) or with darunavir (as Prezcobix)—see below.

NOTE: Cobicistat is a potent CYP3A4 inhibitor potentially leading to significant drug-drug interactions. See package insert for contraindicated combinations.

If baseline CrCl < 70 mL/min, do not co-administer cobicistat with TDF (tenofovir DF).

No dosing adjustment needed for mild to moderate hepatic impairment (Child-Pugh A or B).

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CLINICIAN CONSULTATION CENTER
National rapid response for HIV management and bloodborne pathogen exposures.

(http://www.nccc.ucsf.edu)

HIV Warmline	800.933.3413
PEPline	888.448.4911
Perinatal HIV Hotline	888.448.8765
PrEPline	855.448.7737
Substance Use Warmline	855.300.3595

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Atazanavir **ATV** (Reyataz) **ATV/c (**Evotaz) (c=cobicistat)	**Capsules**: 150mg, 200mg, 300mg *Pediatric Powder: 50mg packets (*Capsules and pediatric powder are NOT interchangeable) **Tablet**: 300mg co-formulated with cobicistat 150mg	• TN: 400mg QD • TN or TE: 300mg QD + [RTV 100mg QD or cobi 150mg QD] or ATV/cobi one tab QD • TN with EFV: 400mg + RTV 100mg **With food**	CrCl / Dose No HD: No adjustment necessary HD (TN): ATV 300mg + RTV 100mg HD (TE): Not recommended Child-Pugh / Dose B: 300mg QD (no RTV) C: Not recommended	⇑ bilirubin, EKG changes (rare), kidney stones	Substrate and inhibitor of liver enzymes. Boost with RTV when given with TDF. Refer to package insert when given with H-2 blockers or PPIs.
Darunavir **DRV** (Prezista) **DRV/c** (Prezcobix) (c=cobicistat)	**Tablets**: 75mg, 150mg, 400mg, 600mg, 800mg Oral suspension: 100mg/mL **Tablet**: 800mg co-formulated with cobicistat 150mg	• TN or TE with no DRV mutations: 800mg + [RTV 100mg QD or cobi 150 mg QD] or DRV/cobi one tab QD • TE w/ ≥ 1 DRV mutations: 600mg + RTV 100mg BID **With food**	*No renal dose adjustment required; DRV/cobi + TDF should not be administered if* CrCl < 70 mL/min *No hepatic dose recommendation;* not recommended in severe impairment	R, N, D, HA	Inhibitor of CYP3A
Fosamprenavir **FPV** (Lexiva)	**Tablet**: 700mg Oral suspension: 50mg/mL	• TN: 1400mg BID or 1400mg QD + RTV 100-200mg QD • TN or TE: 700mg BID + RTV 100mg BID **With food if RTV-boosted** **No food restrictions if unboosted dose**	*No renal dose adjustment required* Child-Pugh / Dose 5-6: TN: 700mg BID TN/TE: 700mg BID + RTV 100mg QD 7-9: TN: 700mg BID TN/TE: 450mg BID + RTV 100mg QD 10-15: TN: 350mg BID TN/TE: 300mg BID + RTV 100mg QD	R, D, N, V	Substrate and inhibitor of CYP3A.
Indinavir **IDV** (Crixivan)	**Capsules**: 100mg, 200mg, 400mg	• 800mg Q8h **Empty stomach; ≥48oz fluid/d** • 800mg BID + RTV 100-200mg BID **No food restrictions**	*No renal dose adjustment required* Mild-moderate impairment due to cirrhosis: 600mg Q8h	N, ⇑ bilirubin, kidney stones	Substrate and inhibitor of CYP3A.
Lopinavir/ ritonavir **LPV/r** (Kaletra)	**Tablets**: 100mg/25mg, 200mg/50mg LPV/r Oral solution: 80mg LPV-20mg RTV / mL	• Two tablets (200/50 per tablet) BID • Four tablets QD (not recommended if ≥3 LPV mutations) **No food restrictions**	*No renal dose adjustment required* *No hepatic dose recommendation; use with caution*	D, N, ⇑ GGT	Substrate & inhibitor of liver enzymes; contains RTV (potent enzyme inhibitor) Refer to package insert for concomitant dosing with EFV, NVP, FPV, NFV
Nelfinavir **NFV** (Viracept)	**Tablets**: 250mg, 625mg	• 1250mg BID • 750mg TID **With food**	*No renal dose adjustment required* *No dose adjustment in mild hepatic impairment;* not recommended in moderate-severe impairment	D, N, V	Substrate and inhibitor of CYP3A. Substrate of CYP2C19.

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Ritonavir **RTV** (Norvir)	**Capsule**: 100mg (soft gelatin) **Tablet**: 100mg **Oral solution**: 80mg/mL	• Given 100-200mg QD-BID to boost PIs **With food**	*No renal dose adjustment required* *Follow recommendations for primary PI for hepatic dose adjustment*	D, N, V	Significant drug interactions. Inhibitor of CYP3A and 2D6. Inducer p-glycoprotein.
Saquinavir **SQV** (Invirase)	**Capsule**: 200mg **Tablet**: 500mg	• 1000mg BID + RTV 100mg BID **With meals**	*No renal dose adjustment required* Use with caution in mild-moderate impairment; contraindicated in severe impairment	D, N, abdominal pain	Substrate and inhibitor of CYP3A
Tipranavir **TPV** (Aptivus)	**Capsule**: 250mg (soft gelatin) **Oral solution**: 100mg/mL (with 116IU vitamin E/mL)	• 500mg BID + RTV 200mg BID **With food**	*No renal dose adjustment required* Child-Pugh: Dose A: Use with caution B or C: Contraindicated	D, N, V, HA	Net inhibitor of liver enzymes (CYP3A) and inducer of p-glycoprotein.
ENTRY INHIBITORS (Fusion Inhibitors and CCR5 Co-receptor Antagonists)					
Enfuvirtide **ENF, T-20** (Fuzeon)	**Injection**: powder reconstituted to 90mg/mL; single use vial	• 90mg SQ BID	*No renal dose adjustment required* *No hepatic dose recommendation*	Injection site reactions; myalgia	Minimal
Maraviroc **MVC** (Selzentry)	**Tablets**: 150mg, 300mg	• MVC+strong CYP3A inhibitor (except TPV): 150mg BID • MVC+CYP3A inducer only: 600mg BID • MVC+NRTIs, TPV, NVP: 300mg BID **No food restrictions**	*When co-administered with potent inducers or inhibitors, MVC NOT recommended when CrCl < 30mL/min or in pts on HD. See package insert for specifics.* *No hepatic dose recommendation*	R, cough, fever, musculoskeletal symptoms, hepatotoxicity	MVC is a substrate of liver enzymes. CYP3A inhibitors (w/ or w/o inducers), PIs (except TPV/r) and DLV can increase MVC CYP3A inducers (w/o inhibitors) can decrease MVC

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