

DOSAGE FORM MODIFICATIONS AND RENAL/HEPATIC DOSING OF ANTIRETROVIRALS

| Generic Name (Brand Name) | Dosage Forms & Color | Adult Dose in Renal Insufficiency** | | | Adult Dose in Hepatic Impairment** | | | Open Capsule | | | Crush Tablet | | | Liquid Form | | |
|---|--|---|------------------------|-----------------|---|-----------------|--|----------------|----|-----|--------------|----------------|-----|----------------|----------------|---|
| | | | | | | | | Yes | No | ND* | Yes | No | ND* | Yes | No | |
| NUCLOESIDE/TIDE REVERSE TRANSCRIPTASE INHIBITORS (NRTIs) | | | | | | | | Yes | No | ND* | Yes | No | ND* | Yes | No | |
| Abacavir (Ziagen) | 300mg (yellow tablet) 300mg scored tablets for pediatric dosing 20mg/ml oral solution (yellow) | No dosage adjustment required | | | Child-Pugh | Dose | | | | | | | | | | |
| | | | | | 5-6 | 200mg BID | | | | | √ | √ | | | | |
| | | | | | >6 | Contraindicated | | | | | | | | | | |
| Didanosine (Videx EC) | All Videx EC are white opaque capsules: 125mg (tan imprint), 200mg (green imprint), 250mg (blue imprint), 400mg (red imprint) Generic capsules: 200mg (green/white), 250mg (red/white), 400mg (blue/white) 2, 4 gram bottles (pediatric powder) | CrCl | >60 Kg | <60 Kg | No dosage recommendation | | | √ | | | | | | √ ² | | |
| | | 30-59 | 200mg QD | 125mg QD | | | | | | | | | | | | |
| | | 10-29 | 125mg QD | 125mg QD | | | | | | | | | | | | |
| | | <10 or HD | 125mg | Not recommended | | | | | | | | | | | | |
| Emtricitabine (Emtriva) | 200mg (blue/white capsule) 10mg/mL oral solution (orange) | CrCl | Capsule | Solution | No dosage recommendation | | | √ ¹ | | | | | | √ | | |
| | | 30-49 | 200mg q48h | 120mg q24h | | | | | | | | | | | | |
| | | 15-29 | 200mg q72h | 80mg q24h | | | | | | | | | | | | |
| | | <15 or HD | 200mg q96h | 60mg q24h | | | | | | | | | | | | |
| Lamivudine (Epivir) | Tablets: 100mg (butterscotch-colored, capsule-shaped), 150mg (white, diamond), 300mg (gray, diamond) 10mg/ml oral solution (pale yellow) | CrCl | Dose | | No dosage recommendation | | | | | | | | | √ | √ | |
| | | 30-49 | 150mg QD | | | | | | | | | | | | | |
| | | 15-29 | 150mgx1, then 100mg QD | | | | | | | | | | | | | |
| | | 5-14 | 150mgx1, then 50mg QD | | | | | | | | | | | | | |
| | | <5 or HD | 50mgx1, then 25mg QD | | | | | | | | | | | | | |
| Stavudine (Zerit) | Capsules: 15mg (yellow/dark red), 20mg (light brown), 30mg (light & dark orange), 40mg (dark orange) 1mg/ml (powder for oral solution) Generic capsules: 30mg, 40mg | CrCl | >60 Kg | <60 Kg | No dosage recommendation | | | √ | | | | | | √ ² | | |
| | | 26-50 | 20mg q12h | 15mg q12h | | | | | | | | | | | | |
| | | 10-25 or HD | 20mg q24h | 15mg q24h | | | | | | | | | | | | |
| Tenofovir (Viread) | 300 mg (light blue, almond shaped tablet) | CrCl ³ | Dose | | No dosage recommendation | | | | | | | | | √ ¹ | | √ |
| | | 30-49 | 300mg q48h | | | | | | | | | | | | | |
| | | 10-29 | 300mg twice weekly | | | | | | | | | | | | | |
| | | ESRD or HD | 300mg q7d | | | | | | | | | | | | | |
| Zidovudine (Retrovir) | 100mg (white/blue capsule) 300mg (white round tablet) 10mg/ml syrup (pale yellow) generic formulations: 100mg capsule, 300mg tablets, 50mg/5 mL syrup | For severe renal impairment or HD: 100mg TID or 300mg QD | | | No dosage recommendation | | | √ | | | | | √ | √ | | |
| zidovudine / lamivudine (Combivir) | 300mg ZDV / 150mg 3TC (white capsule-shaped tablet) | Not recommended when CrCl< 50 mL/min | | | No dosage recommendation | | | | | | | | √ | | | √ |
| lamivudine / abacavir (Epzicom) | 600mg ABC / 300mg 3TC (orange capsule-shaped tablet) | Not recommended when CrCl< 50 mL/min | | | No dosage recommendation | | | | | | | | √ | | | √ |
| zidovudine / lamivudine / abacavir (Trizivir) | 300mg ZDV / 150mg 3TC/300mg ABC (blue-green capsule-shaped tablet) | Not recommended when CrCl< 50 mL/min | | | No dosage recommendation | | | | | | | | √ | | | √ |
| tenofovir / emtricitabine (Truvada) | 300mg TDF / 200mg FTC (blue, capsule-shaped tablet) | 1 tablet q48h when CrCl=30-49 mL/min Not recommended when CrCl< 30 mL/min ³ | | | No dosage recommendation | | | | | | | | √ | | | √ |
| NON-NUCLOESIDE REVERSE TRANSCRIPTASE INHIBITORS (NNRTIs) | | | | | | | | Yes | No | ND* | Yes | No | ND* | Yes | No | |
| Delavirdine (Rescriptor) | Tablets: 100mg (white, capsule-shaped), 200mg (white, capsule-shaped) | No dosage adjustment required | | | No dosage recommendation, use with caution | | | | | | | | √ | | | √ |
| Efavirenz (Sustiva) | Capsules: 50mg (gold/white), 100mg (white), 200mg (gold) 600mg (yellow, capsule-shaped tablet) | No dosage adjustment required | | | No dosage recommendation; use with caution | | | √ ⁴ | | | | | | | √ ⁵ | |
| Etravirine (Intelence) | 100mg (white to off-white oval tablet) | No dosage adjustment required | | | No dosage adjustment; use with caution | | | | | | | √ ⁶ | | | | √ |
| Nevirapine (Viramune) | 200mg (white, oval tablets) 50mg/ 5 ml suspension (white) | No dosage adjustment required | | | No dosage recommendation; avoid in moderate-severe hepatic impairment | | | | | | | | √ | | √ | |



DOSAGE FORM MODIFICATIONS AND RENAL/HEPATIC DOSING OF ANTIRETROVIRALS

| Generic Name (Brand Name) | Dosage Forms & Color | Adult Dose in Renal Insufficiency** | Adult Dose in Hepatic Impairment** | Open Capsule | | | Crush Tablet | | | Liquid Form | | |
|--|--|---|--|---|----|----------------|----------------|----|----------------|----------------|----|--|
| | | | | Yes | No | ND* | Yes | No | ND* | Yes | No | |
| Dual NRTI plus NNRTI Combination | | | | Yes | No | ND* | Yes | No | ND* | Yes | No | |
| Efavirenz / emtricitabine / tenofovir (Atripla) | 600mg EFV / 200mg FTC / 300mg TDF (pink, capsule-shaped tablet) | Not recommended when CrCl < 50 mL/min ³ | No dosage recommendation; avoid in moderate-severe hepatic impairment | | | | | | √ | | √ | |
| ENTRY INHIBITORS (Fusion Inhibitors and CCR5 Co-receptor Antagonists) | | | | Yes | No | ND* | Yes | No | ND* | Yes | No | |
| Enfuvirtide (Fuzeon) | Single-use vials for injection reconstituted to 90mg/ml | No dosage adjustment required | No dosage recommendation | | | | | | | | | |
| Maraviroc (Selzentry) | Tablets: 150mg (blue, oval), 300 mg (blue, oval) | No dosage recommendation; use with caution | No dosage recommendation; use with caution | | | | | | √ | | √ | |
| INTEGRASE INHIBITORS | | | | Yes | No | ND* | Yes | No | ND* | Yes | No | |
| Raltegravir (Isentress) | 400mg (pink, oval tablet) | No dosage adjustment required | No dosage adjustment required; use with caution in severe hepatic impairment | | | | | | √ | | √ | |
| PROTEASE INHIBITORS (PIs) | | | | Yes | No | ND* | Yes | No | ND* | Yes | No | |
| Atazanavir (Reyataz) | Capsules: 100mg (blue/white), 150mg (blue/powder blue), 200mg (blue/blue), 300mg (red/blue) | Generally no dosage adjustment required Tx-naïve on HD: ATV 300mg + RTV 100mg Tx-exp on HD: ATV not recommended | Child-Pugh | Dose | | | | | | | | |
| | | | 7-9 | 300mg QD (no RTV) | | √ | | | | | √ | |
| | | | >9 | Not recommended | | | | | | | | |
| Darunavir (Prezista) | Tablets: 75 mg (white, caplet-shaped, film-coated, "75" imprint), 400 mg (orange, "400" imprint), 600 mg (orange, "600" imprint) | No dosage adjustment required | No dosage recommendation; use with caution | | | | | | √ ¹ | | √ | |
| Fosamprenavir (Lexiva) | 700mg (pink capsule-shaped tablet) 50mg/ml oral suspension (white) | No dosage adjustment required | Child-Pugh | Dose | | | | | | | | |
| | | | 5-6 | tx-naïve: 700mg BID tx-exp: 700mg BID + RTV 100mg QD | | | | | √ | | √ | |
| | | | 7-9 | tx-naïve: 700mg BID tx-exp: 450mg BID + RTV 100mg QD | | | | | | | | |
| | | | 10-12 | 350mg BID | | | | | | | | |
| Indinavir (Crixivan) | All are semi-translucent white capsules: 100mg (green imprint), 200mg (blue imprint), 333mg (red imprint), 400mg (green imprint) | No dosage adjustment required | Mild-moderate hepatic insufficiency due to cirrhosis: 600mg q8h | | | √ ⁷ | | | | | √ | |
| Lopinavir / ritonavir (Kaletra) | 200mg LPV + 50mg RTV (yellow tablet) 100mg LPV + 25mg RTV (pale yellow tablet) 80mg LPV + 20mg RTV/mL solution (yellow-orange) | No dosage adjustment required | No dosage recommendation; use with caution | | | | | √ | | √ ⁸ | | |
| Nelfinavir (Viracept) | Tablets: 250mg (blue capsule-shaped), 625mg (white oval-shaped) 50mg/g (powder for oral solution) | No dosage adjustment required | No dosage recommendation; use with caution | | | | √ ⁹ | | | √ ² | | |
| Ritonavir (Norvir) | 100mg (white soft gelatin capsule) 80mg/ml oral solution (orange) | No dosage adjustment required | Mild hepatic impairment: no dosage adjustment Moderate-severe impairment: use with caution | | √ | | | | | √ ⁸ | | |
| Saquinavir (Invirase) | 200mg (brown/green capsule) 500mg (orange/gray oval tablets) | No dosage adjustment required | No dosage recommendation; use with caution | | | √ | | | | | √ | |
| Tipranavir (Aptivus) | 250mg (pink oblong capsule) | No dosage adjustment required | No dosage recommendation; use with caution. Contraindicated in moderate-severe hepatic impairment | | | √ | | | | | √ | |

* ND: no data available

**Renal and hepatic dosing of antiretrovirals is mostly based on product package insert (except QD dosing of ZDV). The DHHS guidelines on antiretroviral agents in HIV-infected adults may indicate other dosing strategies.

- No data available; however, powder is water-soluble and not enteric-coated or extended-release.
- Oral powder for solution.
- TDF has been associated with renal insufficiency and failure; therefore, in case of decreasing CrCl, the risk and benefit of the continued use of TDF should be evaluated.
- No data available. Can mix contents of three 200-mg capsules with at least 5 ml of MCT Oil (Captex® 300) or 15 ml of Orasweet®, just prior to administration. Grind powder in mortar to provide fine powder in suspension. A burning after taste has been described when EFV was mixed with applesauce; therefore grape jelly has been used to disguise the peppery taste.
- Pediatric Oral Liquid Expanded Access Program for HIV-infected children and adolescents ages 3-16 years (call 1-877-372-7097).
- May disperse in a glass of water. Once dispersed, stir well, drink immediately, and rinse with water several times and swallow each rinse.
- No data available; preliminary studies have shown that it is stable for hours after mixing with fruit purees (banana, pear, and apple).
- Lopinavir solution contains 42.4% ethanol and RTV solution contains 43% ethanol.
- Can be dissolved in small amount of water. Need to rinse and swallow remaining liquid.

Prepared by: Parya Saberi, Pharm.D. and Cristina Gruta, Pharm.D.; 3/09

National HIV/AIDS Clinicians' Consultation Center

Warmline 800.933.3413

PELine 888-448-4911

Perinatal HIV Hotline 888-448-8765

