

Please refer to the **Drug Interactions** section of the Adult Guidelines for more detailed discussions.

Table 15c. Drug Interactions Between NRTIs and Other Drugs (including antiretroviral agents)

Concomitant Drug Class/Name	NRTI	Effect on NRTI or Concomitant Drug Concentrations	Clinical Comment
Antivirals			
Ganciclovir (GCV) Valganciclovir	ddI	↑ ddI AUC ↑ 50%–111% ↓ GCV AUC ↓ 21% when ddI administered 2 hours prior to oral GCV. No change in IV GCV concentrations.	Appropriate doses for combination of ddI and GCV have not been established. Monitor for ddI associated toxicities.
	TDF	No data	Serum concentrations of these drugs and/or TDF may be increased. Monitor for dose-related toxicities.
	ZDV	No significant pharmacokinetic effects	Potential increase in hematologic toxicities.
Ribavirin	ddI	↑ intracellular ddI	Coadministration not recommended. May cause ddI-related serious toxicities.
	ZDV	Ribavirin inhibits phosphorylation of ZDV.	Avoid coadministration if possible, or closely monitor virologic response and hematologic toxicities.
Methadone			
Methadone	ABC	↓ methadone	Monitor for opiate withdrawal and titrate methadone as clinically indicated. May require ↑ methadone dose.
	d4T	↓ d4T	No dosage adjustment necessary.
	ZDV	↑ ZDV AUC 43%	Monitor for ZDV-related adverse effects.
NRTIs			
Didanosine	d4T	No significant effect	Avoid coadministration if possible. Peripheral neuropathy, lactic acidosis, and pancreatitis seen with this combination.
	TDF	↑ ddI-EC AUC and Cmax 48%–60%	Dose if CrCl >60mL/min: ddI-EC 250mg/day if patient weighs >60kg and ddI-EC 200mg if patient weighs <60kg. Monitor for ddI-associated toxicity.
PIs			
Atazanavir (ATV)	ddI	Simultaneous ddI-EC + ATV (with food) ↓ ddI AUC 34%. ATV no change.	ATV with food should be administered 2 hours before or 1 hour after didanosine.
	TDF	↓ ATV AUC 25% and Cmin 23%–40% (higher Cmin with RTV than without) ↑ TDF AUC 24%–30%	Dose: ATV/r 300/100mg daily coadministered with TDF 300mg daily. Avoid concomitant use without ritonavir. Monitor for TDF-associated toxicity.
	ZDV	↓ ZDV Cmin 30%, no change in AUC	Clinical significance unknown.
Darunavir (DRV)	TDF	↑ TDF AUC 22%, Cmax 24%, Cmin 37%	Clinical significance unknown. Monitor for TDF toxicity.
Indinavir (IDV)	TDF	↑ IDV	No dosage adjustment necessary.
Lopinavir/ritonavir (LPV/r)	TDF	↓ LPV/r AUC 15% ↑ TDF AUC 34%	Clinical significance unknown. Monitor for TDF toxicity.
Tipranavir/ritonavir (TPV/r)	ABC	↓ ABC 35%–44% with TPV/r 1,250/100mg BID	Appropriate doses for this combination have not been established.
	ddI	↓ ddI-EC 10% and ↓ TPV Cmin 34% with TPV/r 1,250/100mg BID	Separate doses by at least 2 hours.
	TDF	↓ TPV AUC 9%–18% and Cmin 12%–21% with TPV/r 1,250/100mg BID	Clinical significance is unknown.
	ZDV	↓ ZDV AUC 31%–43% and Cmax 46%–51% with TPV/r 1,250/100mg BID	Appropriate doses for this combination have not been established.

Abbreviations: ABC = abacavir, ddI = didanosine, d4T = stavudine, TDF = tenofovir, ZDV = zidovudine.