Table 16b. Interactions between NNRTIs*, MVC, RAL, and PIs* (Updated January 10, 2011)

*DLV, IDV, and NFV are not included in this table. Refer to the FDA package insert for information regarding DLV, IDV, and NFV drug interactions.

		EFV	ETR	NVP	MVC	RAL
ATV	**PK data**	With unboosted ATV ATV: AUC ↓ 74% EFV: no significant change With (ATV 300 mg + RTV 100 mg) once daily with food ATV concentrations similar to unboosted ATV without EFV	With unboosted ATV ETR: AUC ↑ 50%, C_{max} ↑ 47%, and C_{min} ↑ 58% ATV: AUC ↓ 17% and C_{min} ↓ 47% With (ATV 300 mg + RTV 100 mg) once daily ETR: AUC, C_{max}, and C_{min} ↑ approximately 30% ATV: AUC ↓ 14% and C_{min} ↓ 38%	With (ATV 300 mg + RTV 100 mg) once daily ATV: AUC ↓ 42% and C_{min} ↓ 72% NVP: AUC ↑ 25%	With unboosted ATV MVC: AUC ↑ 257% With (ATV 300 mg + RTV 100 mg) once daily MVC: AUC ↑ 388%	With unboosted ATV RAL: AUC ↑ 72% With (ATV 300 mg + RTV 100 mg) once daily RAL: AUC ↑ 41%
	Dose	**Do not coadminister with unboosted ATV.** In ART-naïve patients (ATV 400 mg + RTV 100 mg) once daily **Do not coadminister in ART-experienced patients.**	**Do not coadminister with ATV +/− RTV.**	**Do not coadminister with ATV +/− RTV.**	MVC 150 mg BID with ATV +/− RTV	Standard
DRV – always use with RTV	**PK data**	With (DRV 300 mg + RTV 100 mg) BID DRV: AUC ↓ 13%, C_{min} ↓ 31% EFV: AUC ↑ 21%	ETR 100 mg BID with (DRV 600 mg + RTV 100 mg) BID DRV: no significant change ETR: AUC ↓ 37%, C_{min} ↓ 49%	With (DRV 400 mg + RTV 100 mg BID) DRV: AUC ↑ 24%[†] NVP: AUC ↑ 27% and C_{min} ↑ 47%	With (DRV 600 mg + RTV 100 mg) BID MVC: AUC ↑ 305% With (DRV 600 mg + RTV 100 mg) BID + ETR MVC: AUC ↑ 210%	With (DRV 600 mg + RTV 100 mg) BID RAL: AUC ↓ 29% and C_{min} ↑ 38%
	Dose	Clinical significance unknown. Use standard doses and monitor closely. Consider monitoring levels.	Standard (ETR 200 mg BID) Despite decreased ETR, safety and efficacy established with this combination in a clinical trial	Standard	MVC 150 mg BID	Standard
EFV	**PK data**	•	↓ ETR possible	NVP: no significant change EFV: AUC ↓ 22%	MVC: AUC ↓ 45%	EFV: AUC ↓ 36%
	Dose		**Do not coadminister.**	**Do not coadminister.**	MVC: 600 mg BID	Standard
ETR	**PK data**	↓ ETR possible	•	↓ ETR possible	MVC: AUC ↓ 53%, C_{max} ↓ 60%	ETR: C_{min} ↓ 17% RAL: C_{min} ↓ 34%
	Dose	**Do not coadminister.**		**Do not coadminister**.	MVC 600 mg BID	Standard
FPV	**PK data**	With (FPV 1,400 mg + RTV 200 mg) once daily APV: C_{min} ↓ 36%	With (FPV 700 mg + RTV 100 mg) BID APV: AUC ↑ 69%, C_{min} ↑ 77%	With unboosted FPV 1,400 mg BID APV: AUC ↓ 33% NVP: AUC ↑ 29% With (FPV 1,400 mg + RTV 100 mg) BID NVP: C_{min} ↑ 19%	Unknown; ↑ MVC possible	No data
	Dose	(FPV 1,400 mg + RTV 300 mg) once daily; or (FPV 700 mg + RTV 100 mg) BID EFV standard	**Do not coadminister with FPV +/− RTV.**	(FPV 700 mg + RTV 100 mg) BID NVP standard	MVC 150 mg BID	Standard
LPV/r	**PK data**	With LPV/r tablets 500/125 mg BID[‡] + EFV 600 mg LPV levels similar to LPV/r 400/100 mg BID without EFV	With LPV/r tablets ETR: levels ↓ 30%–45% (comparable to the decrease with DRV/r) LPV: levels ↓ 13%–20%	With LPV/r capsules LPV: AUC ↓ 27% and C_{min} ↓51%	MVC: AUC ↑ 295% With LPV/r + EFV MVC: AUC ↑153%	↓ RAL ↔ LPV/r
	Dose	LPV/r tablets 500/125 mg[‡] BID; LPV/r oral solution 533/133 mg BID EFV standard	Standard	LPV/r tablets 500/125 mg[‡] BID; LPV/r oral solution 533/133 mg BID NVP standard	MVC 150 mg BID	Standard

		EFV	ETR	NVP	MVC	RAL
NVP	**PK data**	NVP: no significant change EFV: AUC ↓ 22%	↓ ETR possible	•	No significant change	No data
	Dose	**Do not coadminister.**	**Do not coadminister.**		Without PI MVC 300 mg BID With PI (except TPV/r) MVC 150 mg BID	Standard
RAL	**PK data**	RAL: AUC ↓ 36%	ETR: C_{min} ↑ 17% RAL: C_{min} ↓ 34%	No data	RAL: AUC ↓ 37% MVC: AUC ↓ 21%	•
	Dose	Standard	Standard	No data	Standard	
RTV	**PK data**	Refer to information for boosted PI	Refer to information for boosted PI	Refer to information for boosted PI	With RTV 100 mg BID MVC: AUC ↑ 161%	With RTV 100 mg BID RAL: AUC ↓ 16%
	Dose				MVC 150 mg BID	Standard
SQV - always use with RTV	**PK data**	With SQV 1,200 mg TID SQV: AUC ↓ 62% EFV: AUC ↓ 12%	With (SQV 1,000 mg + RTV 100 mg) BID SQV: AUC unchanged ETR: AUC ↓ 33%, C_{min} ↓ 29% Reduced ETR levels similar to reduction with DRV/r	With SQV 600 mg TID SQV: AUC ↓ 38% NVP: no significant change	With (SQV 1,000 mg + RTV 100 mg) BID MVC: AUC ↑ 877% With (SQV 1,000 mg + RTV 100 mg) BID + EFV MVC: AUC ↑ 400%	No data
	Dose	(SQV 1,000 mg + RTV 100 mg) BID	(SQV 1,000 mg + RTV 100 mg) BID	(SQV 1,000 mg + RTV 100mg) BID	MVC 150 mg BID	Standard
TPV – always use with RTV	**PK data**	With (TPV 500 mg + RTV 100 mg) BID TPV: AUC ↓ 31%, C_{min} ↓ 42% EFV: no significant change With (TPV 750 mg + RTV 200 mg) BID TPV: no significant change EFV: no significant change	With (TPV 500 mg + RTV 200 mg) BID ETR: AUC ↓ 76%, C_{min} ↓ 82% TPV: AUC ↑ 18%, C_{min} ↑ 24%	With (TPV 250 mg + RTV 200 mg) BID and with (TPV 750 mg + RTV 100 mg) BID NVP: no significant change TPV: no data	With (TPV 500 mg + RTV 200 mg) BID MVC: no significant change in AUC TPV: no data	With (TPV 500 mg + RTV 200 mg) BID RAL: AUC ↓ 24%
	Dose	Standard	**Do not coadminister.**	Standard	MVC 300 mg BID	Standard

† Based on between-study comparison.

‡Use a combination of two LPV/r 200 mg/50 mg tablets + one LPV/r 100 mg/25 mg tablet to make a total dose of LPV/r 500 mg/125* mg. *(* Error corrected January 18, 2011)*

Acronyms: AUC = area under the curve, ATV = atazanavir, BID = twice daily, C_{max} = maximum plasma concentration, C_{min} = minimum plasma concentration, DLV = delavirdine, DRV = darunavir, EFV = efavirenz, ETR = etravirine, FDA = Food and Drug Administration, FPV = fosamprenavir, IDV = indinavir, LPV/r = lopinavir/ritonavir, MVC = maraviroc, NFV = nelfinavir, NNRTI = non-nucleoside reverse transcriptase inhibitor, NVP = nevirapine, PI = protease inhibitor, PK = pharmacokinetic, RAL = raltegravir, RTV = ritonavir, SQV = saquinavir, TID = three times a day, TPV = tipranavir