Resource: ART Drug-Drug Interactions

August 2024

Table 24: Statins (also see drug package inserts)		
Class or Drug	**Mechanism of Action**	**Clinical Comments**
• NRTIs • Dolutegravir (DTG) • Bictegravir (BIC) • Cabotegravir (CAB) • Raltegravir (RAL) • Rilpivirine (RPV) • Doravirine (DOR)	No significant interactions are expected.	No dose adjustments are necessary.
Elvitegravir (EVG), boosted	• **Simvastatin, lovastatin:** Boosted EVG greatly increases concentrations. • **Atorvastatin, rosuvastatin:** Boosted EVG may moderately increase concentrations. • **Fluvastatin:** Interaction has not been studied, but potential for moderate increase is possible. • **Pitavastatin, pravastatin:** Although moderate increases are possible, low doses are considered safe when used with boosted EVG.	• **Simvastatin, lovastatin:** Concomitant use is contraindicated; may increase muscle aches and risk of rhabdomyolysis; choose alternative statin • **Atorvastatin:** – Avoid concomitant use of COBI and atorvastatin. – If atorvastatin use is necessary, do not exceed 20 mg per day. • **Rosuvastatin:** Use lowest effective dose and titrate carefully to achieve clinical effect; monitor closely for adverse effects. • **Fluvastatin:** Do not coadminister. If use is required, use lowest effective dose; monitor closely for safety and efficacy before increasing statin dose. • **Pitavastatin, pravastatin:** Use lowest effective doses of pitavastatin and pravastatin; monitor for signs of toxicity, including myopathy.
Atazanavir (ATV), boosted	• **Simvastatin, lovastatin:** Boosted ATV greatly increases concentrations. • **Atorvastatin, rosuvastatin:** Boosted ATV may moderately increase concentrations. • **Fluvastatin:** Interaction has not been studied, but potential for moderate increase is possible. • **Pitavastatin, pravastatin:** Although moderate increases are possible, low doses are considered safe when used with boosted PIs.	• **Simvastatin, lovastatin:** Concomitant use is contraindicated due to potential for myopathy, including rhabdomyolysis. Consider using low doses of alternative statins less likely to be affected by boosted ATV use. • **Atorvastatin:** – Use with lowest effective doses; monitor closely for safety and efficacy before increasing statin dose. – Do not coadminister with COBI-boosted ATV due to increased risk of rhabdomyolysis and myopathy. • **Rosuvastatin:** – Use with lowest effective doses; monitor closely for safety and efficacy before increasing statin dose. – If use is necessary, do not exceed 10 mg per day.

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		• **Fluvastatin:** Do not coadminister. If use is required, use lowest effective dose; monitor closely for safety and efficacy before increasing statin dose. • **Pitavastatin:** Use at lowest effective dose. • **Pravastatin:** If use is necessary, use lowest effective dose, and monitor for signs of toxicity.
Darunavir (DRV), boosted	• **Simvastatin, lovastatin:** Boosted DRV greatly increases concentrations. • **Atorvastatin, rosuvastatin:** Boosted DRV may moderately increase concentrations. • **Fluvastatin:** Interaction has not been studied, but potential for moderate increase is possible. • **Pravastatin:** Although moderate increases are possible, low doses are considered safe when used with boosted PIs. • **Pitavastatin:** – Boosted DRV is less likely to interact compared to other statins. – When administered with RTV-boosted DRV, pitavastatin AUC is decreased by 26%.	• **Simvastatin, lovastatin:** – Concomitant use is contraindicated due to potential for myopathy, including rhabdomyolysis. – Consider using low doses of alternative statins less likely to be affected by boosted DRV. • **Atorvastatin:** – When administered with RTV-boosted DRV, use lowest effective dose; do not exceed 20 mg daily. – If concomitant use is necessary, monitor closely for signs of myopathy and rhabdomyolysis. • **Rosuvastatin:** When possible, avoid concomitant use. If use is necessary, start with 10 mg per day; dose should not exceed 20 mg per day. • **Fluvastatin:** Do not coadminister. If use is required, use lowest effective dose; monitor closely for safety and efficacy before increasing statin dose. • **Pitavastatin:** No dose adjustments are necessary. • **Pravastatin:** If use is necessary, use lowest effective dose and monitor for signs of toxicity.
• Efavirenz (EFV) [a] • Etravirine (ETR)	• **Simvastatin, lovastatin:** EFV and ETR may decrease concentrations. • **Atorvastatin, pravastatin, fluvastatin:** EFV and ETR may modestly reduce concentrations. • **Pitavastatin, rosuvastatin:** No significant interactions are expected.	• **Simvastatin, lovastatin:** Monitor for efficacy. May warrant increases in statin dose. Do not increase dose above maximum recommended statin dose. • **Atorvastatin, pravastatin, fluvastatin:** Monitor for cholesterol-lowering effect of statins. May require increased dose. • **Pitavastatin, rosuvastatin:** No dose adjustments are necessary.
Fostemsavir (FTR)	**Atorvastatin, fluvastatin, pitavastatin, rosuvastatin, simvastatin:** Levels may increase with concurrent use of FTR.	Use lowest possible statin starting dose; monitor for statin-associated adverse effects.
Lenacapavir (LEN)	**Lovastatin, simvastatin, lomitapide:** Moderate inhibition of CYP3A4 and P-gP potentially increases levels.	• **Simvastatin, lovastatin:** Initiate at lowest dose and titrate to achieve clinical effect; monitor closely for statin toxicity. • **Lomitapide:** Concomitant use is contraindicated.

Abbreviations: AUC, area under the curve; COBI, cobicistat; CYP, cytochrome P450; NRTI, nucleoside reverse transcriptase inhibitor; P-gP, P-glycoprotein; PI, protease inhibitor; RTV, ritonavir.

Note:

a. RTV-boosted PIs and EFV are known to cause metabolic dysfunction, which may increase blood cholesterol levels.