## Resource: ART Drug-Drug Interactions

## April 2023

Table 43: Immunosuppressants [a] (also see drug package inserts)		
Class or Drug	Mechanism of Action	Clinical Comments
<ul> <li>NRTIs</li> <li>Dolutegravir (DTG)</li> <li>Raltegravir (RAL)</li> <li>Rilpivirine (RPV)</li> <li>Doravirine (DOR)</li> </ul>	No significant interactions reported.	No dose adjustments are necessary.
Bictegravir (BIC)	<b>Cyclosporine</b> may increase BIC concentrations to modest degree via P-gP inhibition.	Cyclosporine: Monitor for BIC-related adverse effects.
Elvitegravir (EVG), boosted	<b>Everolimus, sirolimus, cyclosporine, tacrolimus:</b> Metabolism decreased by boosted EVG.	<ul> <li>Everolimus, sirolimus: Do not use with boosted EVG.</li> <li>Cyclosporine, tacrolimus: Dose based on TDM; monitor closely for adverse effects.</li> </ul>
Boosted PIs	<b>Everolimus, sirolimus, cyclosporine, tacrolimus:</b> Metabolism decreased by boosted PIs.	<ul> <li>Everolimus, sirolimus: Do not use with boosted PIs.</li> <li>Cyclosporine, tacrolimus: Dose based on TDM; monitor closely for adverse effects.</li> </ul>
<ul><li>Efavirenz (EFV)</li><li>Etravirine (ETR)</li></ul>	Cyclosporine, tacrolimus: EFV or ETR may lower concentrations.	<ul> <li>Cyclosporine, tacrolimus:</li> <li>Adjust dose of cyclosporine and tacrolimus based on efficacy and TDM.</li> <li>Conduct TDM more frequently for 2 weeks when starting or stopping NNRTI therapy.</li> </ul>

**Abbreviations:** NNRTI, non-nucleoside reverse transcriptase inhibitors; NRTI, nucleoside reverse transcriptase inhibitor; P-gP, P-glycoprotein; PI, protease inhibitor; TDF, tenofovir disoproxil fumarate; TDM, therapeutic drug monitoring.

## Note:

a. Cyclosporine can cause renal toxicity, which may be increased with coadministration of TDF. Clinicians are advised to monitor for signs of renal dysfunction in patients who are taking these 2 medications at the same time.