

**CARDIOVASCULAR DRUGS:**  
**ANTIHYPERTENSIVES AND DIGOXIN**

	INSTIs		NNRTIs		PIs
	<ul style="list-style-type: none"> <li>• BICTEGRAVIR (<i>Biktarvy</i>)</li> <li>• DOLUTEGRAVIR (<i>Tivicay, Triumeq, Juluca</i>)</li> <li>• RALTEGRAVIR (<i>Isentress</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• ELVITEGRAVIR/ COBICISTAT (<i>Stribild, Genvoya</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• DORAVIRINE (<i>Pifeltro, Delstrigo</i>)</li> <li>• RILPIVIRINE (<i>Edurant, Complera, Odefsey, Juluca</i>)</li> </ul>	<ul style="list-style-type: none"> <li>• EFAVIRENZ (<i>Sustiva, Atripla</i>)</li> <li>• ETRAVIRINE (<i>Intelence</i>)</li> <li>• NEVIRAPINE (<i>Viramune</i>)</li> </ul>	Boosted with ritonavir (Norvir) or cobicistat <ul style="list-style-type: none"> <li>• ATAZANAVIR (<i>Reyataz, Evotaz</i>)</li> <li>• DARUNAVIR (<i>Prezista, Prezcobix, Symtuza</i>)</li> <li>• LOPINAVIR (<i>Kaletra</i>)</li> </ul>

**ACEI**

<ul style="list-style-type: none"> <li>• Benazepril, enalapril, lisinopril, perindopril, ramipril, etc.</li> </ul>					
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**ARBs**

<ul style="list-style-type: none"> <li>• Eprosartan, olmesartan, telmisartan, valsartan</li> </ul>					
<ul style="list-style-type: none"> <li>• Losartan, candesartan, irbesartan</li> </ul>		Potential for ↑/↓ ARB		Potential for ↑/↓ ARB	Potential for ↑/↓ ARB

**BETA-BLOCKERS**

<ul style="list-style-type: none"> <li>• Atenolol, nadolol</li> </ul>					
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CARDIOVASCULAR

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<ul style="list-style-type: none"> <li>• Acebutolol, bisoprolol, carvedilol, metoprolol, propranolol</li> </ul>		Potential for ↑ beta-blocker		Potential for ↓ beta-blocker	Potential for ↑ beta-blocker

**CALCIUM CHANNEL BLOCKERS**





<ul style="list-style-type: none"> <li>• Amlodipine, diltiazem, felodipine, nifedipine, verapamil</li> </ul>		Potential for ↑ CCB. Consider 50% dose ↓ or start with lowest dose possible		Potential for ↓ CCB	Potential for ↑ CCB. Consider 50% dose ↓ or start with lowest dose possible
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**DIURETICS**

<ul style="list-style-type: none"> <li>• Amiloride, hydrochlorothiazide, furosemide, spironolactone, triamterene</li> </ul>					
<ul style="list-style-type: none"> <li>• Indapamide</li> </ul>		Potential for ↑ indapamide		Potential for ↓ indapamide	Potential for ↑ indapamide
<b>DIGOXIN</b>		Potential for ↑ digoxin		Potential for ↑ digoxin (etravirine)	Potential for ↑ digoxin

**Mechanism of Drug Interactions, Management and Monitoring**

Class	Mechanism of Interaction	Main Interacting ARVs	Management	Monitoring
<b>ACEI</b>	Renally cleared.	No significant interactions predicted.	Use standard drug doses.	
<b>ARBs</b>	Conversion via 2C9 to active metabolite (losartan), Substrate of 2C9 (candesartan, irbesartan)	Elvitegravir (induction), efavirenz, etravirine (inhibition)	Adjust losartan, candesartan, irbesartan dose according to response/toxicity. Other ARBs may be used without dose adjustment.	ARB efficacy and toxicity
<b>Beta-blockers</b>	Mixed CYP substrates (propranolol, acebutolol, bisoprolol, labetalol, metoprolol, pindolol)	Ritonavir and cobicistat-boosted protease inhibitors and elvitegravir (inhibition); efavirenz, etravirine, nevirapine (induction).	Adjust beta-blocker dose according to response/toxicity. Other beta-blockers (atenolol, nadolol) may be used without dose adjustment.	Beta-blocker toxicity: heart rate, blood pressure, shortness of breath
<b>Calcium channel blockers</b>	Inhibition of CYP3A4	Ritonavir and cobicistat-boosted protease inhibitors and elvitegravir	Consider 50% dose reduction in CCB	CCB toxicity: heart rate, blood pressure, shortness of breath, dizziness.
	Induction of CYP3A4	Efavirenz, etravirine, nevirapine	Adjust CCB dose according to efficacy/toxicity.	CCB efficacy.
<b>Diuretics</b>	Mixed CYP substrates (indapamide)	Ritonavir and cobicistat-boosted protease inhibitors, elvitegravir, efavirenz, etravirine and nevirapine.	Adjust indapamide dose according to response/toxicity. Other diuretics may be used without dose adjustment.	Indapamide toxicity: dizziness, headache, hyperglycemia, hypokalemia
<b>Digoxin</b>	Inhibition of P-glycoprotein	Ritonavir and cobicistat-boosted protease inhibitors and elvitegravir, etravirine	Adjust digoxin dose according to response/toxicity	Digoxin concentrations, toxicity (arrhythmias, ventricular tachycardia, bradycardia, AV block, anorexia, nausea, blurred/yellow vision, headache)

Legend:		No dose adjustment required.
		Use combination with caution. Adjustment in drug dose or frequency or additional/more frequent monitoring may be required.
		May wish to consult with a pharmacist knowledgeable in HIV drug interactions.
		Contraindicated/avoid combination.

A MANAGEMENT TOOL FOR **HIV** DRUG-DRUG INTERACTIONS

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