

**CARDIOVASCULAR DRUGS:
ANTIPLATELETS AND ANTICOAGULANTS**

	INSTIs		NNRTIs		PIs	RTI	
	<ul style="list-style-type: none"> • BICTEGRAVIR (<i>Biktarvy</i>) • DOLUTEGRAVIR (<i>Tivicay, Triumeq, Dovato, Juluca</i>) • RALTEGRAVIR (<i>Isentress</i>) 	<ul style="list-style-type: none"> • ELVITEGRAVIR/COBICISTAT (<i>Stribild, Genvoya</i>) 	<ul style="list-style-type: none"> • DORAVIRINE (<i>Pifeltro, Delstrigo</i>) • RILPIVIRINE (<i>Edurant, Complera, Odefsey, Juluca</i>) 	<ul style="list-style-type: none"> • EFAVIRENZ (<i>Sustiva, Atripla</i>) • ETRAVIRINE (<i>Intelence</i>) • NEVIRAPINE (<i>Viramune</i>) 	<ul style="list-style-type: none"> • ATAZANAVIR (<i>Reyataz/Norvir, Evotaz</i>) • DARUNAVIR (<i>Prezista/Norvir, Prezcobix, Symtuza</i>) • LOPINAVIR (<i>Kaletra</i>) 	<ul style="list-style-type: none"> • TENOFOVIR DISOPROXIL, TDF (<i>Viread, Truvada, Atripla, Complera, Delstrigo, Stribild</i>) 	<ul style="list-style-type: none"> • TENOFOVIR ALAFENAMIDE, TAF (<i>Descovy, Biktarvy, Genvoya, Odefsey, Symtuza</i>) • ABACAVIR (<i>Kivexa, Ziagen, Triumeq</i>)

ANTICOAGULANTS

• Apixaban (<i>Eliquis</i>)		Potential for ↑ apixaban and toxicity		Potential for ↓ apixaban	Potential for ↑ apixaban and toxicity		
• Dabigatran (<i>Pradaxa</i>)		Potential for ↑ dabigatran and toxicity			PI/ritonavir: Potential for ↑ dabigatran		
					PI/cobicistat: Potential for ↑ dabigatran and toxicity		
• Edoxaban (<i>Lixiana</i>)		Potential for ↑ edoxaban and toxicity			Potential for ↑ edoxaban and toxicity		
• Rivaroxaban (<i>Xarelto</i>)		Potential for ↑ rivaroxaban and toxicity		Potential for ↓ rivaroxaban	Potential for ↑ rivaroxaban and toxicity		

	INSTIs		NNRTIs		PIs	RTI	
	<ul style="list-style-type: none"> • BICTEGRAVIR (<i>Biktarvy</i>) • DOLUTEGRAVIR (<i>Tivicay, Triumeq, Dovato, Juluca</i>) • RALTEGRAVIR (<i>Isentress</i>) 	<ul style="list-style-type: none"> • ELVITEGRAVIR/COBICISTAT (<i>Stribild, Genvoya</i>) 	<ul style="list-style-type: none"> • DORAVIRINE (<i>Pifeltro, Delstrigo</i>) • RILPIVIRINE (<i>Edurant, Complera, Odefsey, Juluca</i>) 	<ul style="list-style-type: none"> • EFAVIRENZ (<i>Sustiva, Atripla</i>) • ETRAVIRINE (<i>Intelligence</i>) • NEVIRAPINE (<i>Viramune</i>) 	<ul style="list-style-type: none"> • ATAZANAVIR (<i>Reyataz/Norvir, Evotaz</i>) • DARUNAVIR (<i>Prezista/Norvir, Prezcofix, Symtuza</i>) • LOPINAVIR (<i>Kaletra</i>) 	<ul style="list-style-type: none"> • TENOFOVIR DISOPROXIL, TDF (<i>Viread, Truvada, Atripla, Complera, Delstrigo, Stribild</i>) 	<ul style="list-style-type: none"> • TENOFOVIR ALAFENAMIDE, TAF (<i>Descovy, Biktarvy, Genvoya, Odefsey, Symtuza</i>) • ABACAVIR (<i>Kivexa, Ziagen, Triumeq</i>)
<ul style="list-style-type: none"> • Warfarin (<i>Coumadin</i>) 		Potential for ↓ warfarin		Potential for ↓ warfarin (nevirapine) or ↑ warfarin (efavirenz, etravirine)	Potential for ↓ warfarin (ritonavir) or ↑ warfarin (cobicistat)		

ANTIPLATELETS

<ul style="list-style-type: none"> • ASA 						Potential for renal toxicity with high dose or prolonged ASA use	
<ul style="list-style-type: none"> • Clopidogrel (<i>Plavix</i>) 		Potential for ↓ active metabolite of clopidogrel		Potential for ↓ active metabolite of clopidogrel (efavirenz, etravirine)	Potential for ↓ active metabolite of clopidogrel		
<ul style="list-style-type: none"> • Prasugrel (<i>Effient</i>) 							
<ul style="list-style-type: none"> • Ticagrelor (<i>Brilinta</i>) 		Potential for ↑ ticagrelor and toxicity		Potential for ↓ ticagrelor and toxicity	Potential for ↑ ticagrelor and toxicity		

Mechanism of Drug Interactions, Management and Monitoring

Class	Mechanism of Interaction	Main Interacting ARVs	Management	Monitoring
Antiplatelets	Inhibition of CYP3A4, P-gp (ticagrelor)	Ritonavir and cobicistat-boosted protease inhibitors and elvitegravir	Contraindicated. Prasugrel may be used.	Ticagrelor toxicity: dyspnea, headache, epistaxis, chest pain, bleeding events
	Induction of CYP3A4, P-gp (ticagrelor)	Efavirenz, etravirine, nevirapine	Avoid coadministration. Prasugrel may be used.	Ticagrelor efficacy
	Inhibition of 2C19 (clopidogrel)	Etravirine, efavirenz	Use with caution. May wish to consider alternatives to clopidogrel, such as prasugrel.	Antiplatelet activity
	Inhibition of 3A4 (activation of prodrug of clopidogrel)	Ritonavir and cobicistat-boosted protease inhibitors and elvitegravir.	Use with caution. May wish to consider alternatives to clopidogrel, such as prasugrel.	Antiplatelet activity
	Combining nephrotoxic agents (ASA)	Tenofovir disoproxil (TDF) containing regimens	Avoid high-dose or prolonged ASA use if possible. Consider alternate HIV agent, such as abacavir or tenofovir alafenamide TAF.	Monitor renal function. Assess OTC NSAID use.
Direct acting oral anticoagulants (DOACs)	Inhibition of CYP3A4, P-gp (rivaroxaban, apixaban)	Ritonavir and cobicistat-boosted protease inhibitors and elvitegravir.	Apixaban and rivaroxaban are contraindicated.	Anticoagulant toxicity.
	Induction of CYP3A4, P-gp (rivaroxaban, apixaban)	Enzyme-inducing NNRTIs (efavirenz, etravirine, nevirapine)	Avoid use. Consider alternative anticoagulant such as warfarin.	Anticoagulant efficacy.
	Inhibition of P-gp (dabigatran, edoxaban)	Ritonavir and cobicistat-boosted protease inhibitors and elvitegravir	Dabigatran and edoxaban monograph advises caution with P-gp inhibitors. Preliminary pharmacokinetic data suggest that a clinically significant interaction may occur more so with cobicistat due to intestinal PgP inhibition.	Anticoagulant toxicity
Warfarin	Induction of CYP2C9	Ritonavir boosted regimens, nevirapine, elvitegravir/cobicistat	Increase warfarin dose as needed to maintain therapeutic INR.	Anticoagulant efficacy
	Inhibition of CYP2C9	Efavirenz, etravirine	Decrease warfarin dose as needed to maintain therapeutic INR.	Warfarin toxicity: bleeding, dizziness, headache, shortness of breath, hypotension

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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