

ANTICOAGULANTS

Drug	MoA	Clearance	Monitoring	Reversal	Notes
Indirect Coagulation Factor Inhibitors					
UH	Binds to ATIII → Inactivation of Factor IIa (thrombin) > Xa	Hepatic	aPTT or ACT	Protamine Sulfate	• Administration: IV or SQ • Preferred in Obesity & Renal failure
LMWH Enoxaparin (Lovenox)	Binds to ATIII → Inactivation of Factor Xa > IIa	Renal	Xa level	-	• Administration: IV or SQ • Preferred in Pregnancy & Malignancy
Fondaparinux (Arixtra)	Binds to ATIII → Inactivation of Factor Xa				• Administration: IV or SQ
Warfarin (Coumadin)	Inhibits vitamin K → ↓ Synthesis of Factor X, IX, VII, II, Protein C & S	Hepatic	PT/INR	FFP or PCC (fast) Vitamin K (slow)	• Administration: PO • Metabolized by CYP-2C9 • Teratogenic
Direct Coagulation Factor Inhibitors					
Dabigatran (Pradaxa)	Direct inhibition of Factor II (thrombin)	• Does not require lab monitoring • Administration: Dabigatran = PO, Argatroban & Bivalirudin = IV • Dabigatran reversed with Idarucizumab (monoclonal antibody Fab fragments) • PCC can be used if Idarucizumab is not available • Dabigatran predominantly renal excretion (~80%)			
Argatroban (Acova)					
Bivalirudin (Angiomax)					
Apixaban (Eliquis)	Direct inhibition of Factor Xa	• Administration: PO • Metabolized by CYP-450 in the liver • Reverse with Adexanet Alfa (recombinant modified factor Xa - inactive decoy molecule)			
Rivaroxaban (Xarelto)					
Anti-Platelet					
Aspirin	COX inhibition → inhibition of thromboxane A2 synthesis	• Administration: PO			
Clopidogrel (Plavix)	ADP (P2Y ₁₂) receptor blockade → inhibition of GP IIb-IIIa expression				
Prasugrel (Effient)					
Ticlopidine (Ticlid)					
Ticagrelor (Brilinta)					
Cilostazol (Pletal)	PDE inhibitor (↑ cAMP → ↓ Ca)	• Administration: PO			
Eptifibatide (Integrilin)	GP IIb-IIIa inhibition → prevention of fibrinogen-platelet link	• Administration: IV			
Tirofiban (Aggrastat)					

UH = Unfractionated Heparin ATIII = Anti-thrombin III LMWH = Low Molecular Weight Heparin aPTT = partial thromboplastin time ACT = activated clotting time IV = intravenous SQ = subcutaneous PO = per os (by mouth)
PT/INR = prothrombin time FFP = fresh frozen plasma PCC = prothrombin complex concentrate MoA = mechanism of action

