Our Lady of the Lake Regional Medical Center

Pharmacy Anticoagulation Stewardship

Direct Oral Anticoagulant (DOAC) Dosing Guideline

Agent	Indications	Standard Dosing	Dose adjustments	Contraindications
Apixaban	Nonvalvular atrial fibrillation	5 mg PO BID	If patient has 2 of the following: age \geq 80 years, weight \leq 60 kg, SCr \geq 1.5 mg/dL, give: 2.5 mg PO BID	Concomitant therapy with strong dual CYP3A4 and P-glycoprotein (P-gp) inducers: rifampin, carbamazepine, phenytoin, St. John's Wort
	Venous thromboembolism	Loading dose:	CrCl 15-29 mL/min or dialysis: May consider dose reduction to 2.5 mg PO BID Patients with SCr ≥ 2.5 mg/dL or	Severe hepatic impairment (Child-Pugh class C) Severe hypersensitivity reaction (ie, anaphylaxis) to apixaban or any component of the formulation; active pathological bleeding.
	veneus un omboembens.	10 mg PO BID x 7 days, then 5 mg PO BID	CrCl < 25 mL/min and ESRD were excluded from clinical trials May consider 5 mg BID for 7 days; then 2.5 mg BID	
	Venous thromboembolism prophylaxis following total knee or hip arthroplasty	2.5 mg PO BID beginning 12- 24 hours post-operatively	Patients with CrCl < 30 mL/min were excluded from clinical trials. Use not recommended	
	HIT with or without thrombosis (Off-Label)	10 mg PO BID x 7 days or until platelet recovery: Then 5 mg PO BID	If treated with parenteral non-heparin anticoagulant, Transition to 5 mg PO BID If parenteral non-heparin anticoagulant is administered for <7 days, transition to 10 mg BID x 7 days; then 5 mg PO BID	
Edoxaban	Nonvalvular atrial fibrillation	60 mg PO daily	CrCl 15-50 mL/min: 30 mg PO daily	CrCl > 95 mL/min due to reduced efficacy (nonvalvular atrial fibrillation)
	Venous thromboembolism	Begin after 5 days of parenteral anticoagulant therapy: >60 kg: 60 mg PO daily <60 kg: 30 mg PO daily	CrCl 15-50 mL/min: 30 mg PO daily Concomitant P-gp inhibitors: 30 mg PO daily	CrCl < 15 mL/min Concomitant P-gp inducers: Avoid concomitant use ESRD on dialysis (lack of data; not dialyzable) Moderate to severe hepatic impairment (Child-Pugh class B & C)

Rivaroxaban	Coronary artery disease or peripheral artery disease	2.5 mg PO BID	CrCl < 15 mL/min excluded from clinical trials	Active bleeding
	Nonvalvular atrial fibrillation	20 mg PO once daily with dinner	CrCl 15-50 mL/min: 15 mg PO daily with food	Concomitant dual P-gp and strong CYP3A inhibitors or inhibitors
			Patients with CrCl < 30 mL/min were excluded from clinical trials	Moderate to severe hepatic impairment (Child- Pugh class B & C)
			Discontinue if acute renal failure develops	Hepatic disease with associated coagulopathy
	Venous thromboembolism	15 mg PO BID with food x 21 days, then 20 mg PO once daily with dinner	CrCl < 30 mL/min: Avoid use	ESRD on dialysis: Lack of available clinical and safety data
	Venous thromboembolism prophylaxis following total knee or hip arthroplasty	10 mg PO once daily 6-10 hours after surgery	CrCl: 30-50 mL/min: Use with caution CrCl < 30 mL/min: Avoid use	Severe hypersensitivity to rivaroxaban or any component of the formulation
	HIT with or without thrombosis (Off-Label)	15 mg PO BID with food x 21 days days or until platelet recovery(whichever is longer) Then 20 mg PO once daily	If treated with parenteral non-heparin anticoagulant, Transition to 20 mg PO daily platelet count recovery. If parenteral non-heparin anticoagulant is administered for <21 days, transition to 15	
Dabigatran	Nonvalvular atrial fibrillation	with dinner 150 mg PO BID	mg BID x 21 days; then 20 mg PO daily CrCl 30 to 50 mL/min + Dronedarone or PO ketoconazole: 75 mg PO BID CrCl 15-30 mL/min: 75 mg PO BID CrCl < 15 mL/min: Not recommended	Active bleeding Patients with prosthetic mechanical heart valves Concomitant P-gp inducers Use with caution in those ≥ 75 years old
			Concomitant P-gp inhibitor + CrCl < 30 mL/min: Avoid use	
	Venous thromboembolism	Begin after 5 days of parenteral anticoagulant therapy: 150 mg PO BID	Concomitant P-gp inhibitor + CrCl <50 mL/minute: Avoid CrCl < 30 mL/min and those receiving hemodialysis were excluded from clinical trials	Serious hypersensitivity (eg, anaphylaxis or anaphylactic shock) to dabigatran or any component of the formulation
	Venous thromboembolism prophylaxis following total knee(TKA) or hip (THA) arthroplasty	110 mg PO once 1-4 hours following surgery, 220 mg PO once after hemostasis achieved, then 220 mg PO daily x 10-14 days(up to 35 days in TKA)	CrCl < 30 mL/min and those receiving hemodialysis were excluded from clinical trials	

This Guideline Review and Revision information

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References:

- 1. Mavrakanas, Thomas A., et al. "Apixaban Pharmacokinetics at Steady State in Hemodialysis Patients." Journal of the American Society of Nephrology, vol. 28, no. 7, 2017, pp. 2241–2248., doi:10.1681/asn.2016090980.
- 2. Siontis, Konstantinos C., et al. "Outcomes Associated With Apixaban Use in Patients With End-Stage Kidney Disease and Atrial Fibrillation in the United States." Circulation, vol. 138, no. 15, Sept. 2018, pp. 1519–1529., doi:10.1161/circulationaha.118.035418.
- 3. Cohen AT, et al. "Rivaroxaban for thromboprophylaxis in acutely ill medical patients". The New England Journal of Medicine. 2013. 368(6):513-523
- 4. Pokorney SD, et al. "Apixaban versus warfarin forstroke prevention in patients with end stage renal disease on hemodialysis and atrial fibrillation, Results of a randomized clinical trial assessing safety. Presented at the American Heart Association (AHA) 2019 Congress; November 16-18 in Philadelphia, PA, USA.
- 5. Schafer, Joseph H., et al. "Safety and Efficacy of Apixaban Versus Warfarin in Patients With Advanced Chronic Kidney Disease." Annals of Pharmacotherapy, vol. 52, no. 11, May 2018, pp. 1078–1084., doi:10.1177/1060028018781853.
- 6. Daniel, Hilleman, et al "Direct-Acting Oral Anticoagulant Use In Special Populations" P&T community, vol. 44, no 12, Jan, 2020, pp 738 747
- 7. Lexi-Comp Online™ , Lexi-Drugs Online™ , Hudson, Ohio: Lexi-Comp, Inc.; June 22, 2020