Non-Vitamin K Antagonist Oral Anticoagulants (NOACs) *This is a general guide not intended to replace clinical judgment* **Kirk 2022**

Oral Options	**Dabigatran (Pradaxa®)**	**Rivaroxaban (Xarelto®)**	**Apixaban (Eliquis®)**	**Edoxaban (Savaysa®)**
Mechanism	Direct Thrombin Inhibitor	Xa Inhibitor	Xa Inhibitor	Xa Inhibitor
Onset/Tmax	1 to 3 hours	2 to 4 hours	3 to 4 hours	1 to 2 hours
Kinetics	80% Renal clearance, t½= 12-17 hrs. 48.8% dialyzable	67% (36% active metabolite and 31% inactive) Renal clearance, t½ = 5-12 hrs. (8-19 hrs. in elderly, hepatic, or renal impairment)	27% Renal clearance t½ = 6.8-15.2 hrs. (2.5-5mg) Can be longer based on weight	50% Renal clearance, t½= 10-14 hrs. Not dialyzable
Dosing ***Contraindicated** in patients with active bleeding, mechanical prosthetic heart valve, or hypersensitivity reaction For treatment, avoid in patient with a history of bronchiectasis, pulmonary cavitation, pulmonary hemorrhage, active gastroduodenal ulcer in 3 months prior to tx, receiving DAPT **Monitoring -** Watch for bleeding and clinical response. Baseline/ Annual CBC, BMP, LFT	**Non-valvular AFib:** CrCl >30 ml/min, 150 mg BID CrCl 15-30 ml/min, 75 mg BID **DVT/PE:** CrCl >30 ml/min, 150 mg BID after 5-10 days of parenteral anticoagulation **DVT/PE recurrence:** CrCl >30 ml/min, 150 mg BID	**Non-valvular AFib:** CrCl >50 ml/min, 20 mg daily with evening meal CrCl ≤50 ml/min, 15 mg daily with evening meal **DVT/PE**: CrCl >15 ml/min,15 mg BID x 21 days, then 20 mg daily with food **DVT/PE Recurrence:** If patient received 20 mg daily within 6 months, CrCl >15 ml/min, 10 mg daily **Post Hip Surgery**: CrCl >15 ml/min, 10 mg daily x 35 days **Post Knee Surgery**: CrCl >15 ml/min, 10 mg daily x 12 days 6-10 hours after surgery once hemostasis has been established **PAD/CAD**: 2.5 mg twice daily in combination with 81 mg aspirin once daily **VTE Prophylaxis**: 10 mg daily for up to 31 to 39 days for acutely ill patients *Off Label Use* - Heparin Induced Thrombocytopenia (HIT) 15 mg BID for 21 days or until platelet count recovers followed by 20 mg daily	**Non-valvular AFib:** 5 mg BID 2.5 mg BID if 2 of the following: ≥80 yrs., ≤60 kg, or SCr ≥1.5 mg/dl **DVT/PE** 10 mg BID x 7 days, then 5 mg BID **DVT/PE recurrence:** 2.5 mg BID after 6 months of treatment **Post Hip Surgery:** 2.5 mg BID x 35 days **Post Knee Surgery:** 2.5 mg BID x 12 days *Off Label Use* - Heparin Induced Thrombocytopenia (HIT) 10 mg BID for 7 days or until platelet count recovers followed by 5 mg BID	**Non-valvular AFib:** CrCl >50-95 ml/min, 60 mg daily CrCl 15-50 ml/min, 30 mg daily **DVT/PE:** 60 mg daily following 5-10 days of parenteral anticoagulant 30 mg daily if ≤ 60kg or CrCl 15-50 ml/min *Not recommended for CrCl >95 ml/min due to decreased efficacy
Formulations	75, 150 mg tablet	2.5, 10, 15, 20 mg tablet	2.5, 5 mg tablet	15, 30, 60 mg tablet

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Surgery Interventions Restart after hemostasis established	CrCl ≥ 50 ml/min D/C 1-2 days prior CrCl <50 ml/min D/C 3-5 days prior	D/C 48 hours prior to moderate to high bleeding risk procedure D/C 24 hours prior to low risk bleeding procedure	D/C 48 hours prior to moderate to high bleeding risk procedure D/C 24 hours prior to low risk bleeding procedure	D/C 48 hours prior to moderate to high bleeding risk procedure D/C 24 hours prior to low risk bleeding procedure
Converting to Warfarin	CrCl > 50 ml/min, start 3 days/ CrCl 31-50,ml/min: start 2 days/ CrCl 15-30 ml/min, start 1 day before D/C dabigatran	Start warfarin and discontinue rivaroxaban after 2 days	Start warfarin and discontinue apixaban after 2 days	Reduce dose by 50% and initiate warfarin, d/c edoxaban once INR ≥ 2
Converting Warfarin to DOAC	Initiate when INR <2	Initiate when INR <3	Initiate when INR<2	Initiate when INR ≤2.5
Drug Interactions Caution with Antiplatelets, NSAIDs, SSRIs, and fenofibrate monitor bleeding potential	-P-glycoprotein (ketoconazole, clarithromycin, dronedarone, amiodarone, verapamil [< with diltiazem], can increase dabigatran action) -Rifampin strong hepatic enzyme inducer – AVOID	-Ketoconazole, itraconazole, ritonavir (and other protease inhibitors increase exposure, reduce efficacy so avoid -Abiraterone (steroid antiandrogen), diltiazem, dronedarone, erythromycin, verapamil, cimetidine -Avoid carbamazepine, phenytoin, St. John Wort, rifampin, hepatic inducer	-Doses > 2.5 mg, reduce dose 50% if co-administered with ritonavir, ketoconazole, intraconazole, or clarithromycin -Avoid with carbamazepine, phenytoin, or St. John's wort, rifampin (strong inducers)	-P-glycoprotein (dronedarone, quinidine, verapamil, diltiazem) can increase edoxaban level -Avoid macrolide (erythromycin, azithromycin and clarithromycin) and azole antifungals (ketoconazole and itraconazole)
Adverse Reactions Evaluate for GI bleed risk/need for protection, higher in age >75 years	-GI bleed risk 4.10 vs. warfarin 3.71 in non-afib, thrombosis, dyspepsia (NNH 18), less favorable post-MI -GI upset	-GI bleed risk 1.66 vs. warfarin 1.57 in non-afib -Abdominal pain (3%)	-GI bleed risk 1.2 vs warfarin 1.3 -Nausea (3%), anemia (3%)	-GI bleed risk 1.5 vs warfarin 1.2 -Higher risk of ischemic stroke with 30 mg dose
Comments	-Independent of food	-Dosage depends on necessity to take with or without food, 15 mg and 20 mg tablet should be taken with food -May use for VTE in cancer patients	-Independent of food	-Independent of food -May use for VTE in cancer patients