

NEW (NOVEL/DIRECT-ACTING) ORAL ANTICOAGULANT COMPARISON

Drug	dabigatran ¹	rivaroxaban ²	apixaban ³
Indication/Dose⁴ <u>Orthopedic Prophylaxis</u>	220 mg daily or 150 mg daily ⁵ TKR: x 10 days THR: x 28-35 days	10 mg daily TKR: x 14 days THR: x 35 days	2.5 mg BID TKR: x 10-14 d THR: x 32-38 d
<u>Stroke Prevention In Atrial Fibrillation</u>	150 mg BID or 110 mg BID ⁶	20 mg daily or 15 mg daily ^{7,8}	5 mg BID ⁹
<u>Acute VTE Treatment</u>	150 mg BID after 5 - 10 d parenteral AC	15 mg BID x 3 wks, then 20 mg daily ⁸	10 mg BID x 7d, then 5 mg BID
Target Inhibition	Factor IIa (thrombin)	Factor Xa	Factor Xa
Time to Peak	2 hours	2-4 hours	3-4 hours
Half-Life	14-17 hours	9-13 hours	8-15 hours
Elimination	80% renal 20% biliary	66% renal (36% unchanged) 33% biliary	25% renal 75% biliary
Adjust dose for Renal Failure	YES (Avoid if CrCl < 30 mL/min)	YES (Avoid if CrCl < 15 mL/min)	YES (Avoid CrCl < 15 mL/min)
CYP Metabolism	No	30% CYP3A4	15% CYP3A4
P-glycoprotein Substrate	Yes	Yes	Yes
When to Hold Prior to Surgery (Surgical Bleed Risk: Low/Std Risk: Low/Std (Standard) vs. High) (CJC 2014)	CrCl > 50 mL/min Low/Std risk: 1 d High Risk: 2 d CrCl 30-50 mL/min Low/Std Risk: 2 d High Risk: 4 d	Low/Std Risk: 1 d High Risk: 2 d	Low/Std Risk: 1 d High Risk: 2 d

¹ dabigatran is formulary restricted to patients on this medication prior to admission

² rivaroxaban is formulary restricted to orthopedic prophylaxis and stroke prevention

³ apixaban is formulary restricted to stroke prevention in atrial fibrillation

⁴ approved indications in Canada

⁵ CrCl 30-50 mL/min, dabigatran dose for orthopedic prophylaxis = 150 mg daily

⁶ CrCl 30-50 mL/min and pt ≥ 75 years + risk factors for bleeding, consider dabigatran

110 mg BID for stroke prevention

⁷ CrCl 30-50 mL/min, rivaroxaban dose for stroke prevention = 15 mg daily

⁸ rivaroxaban doses greater than 10 mg/day should be taken with food

⁹ if pt has 2 of following: age ≥ 80 years, weight ≤ 60 kg, serum Cr ≥ 133 mmol/L, consider apixaban 2.5 mg BID

Abbreviations (New Oral Anticoagulants)

TKR = Total Knee Replacement

THR = Total Hip Replacement

AC = Anticoagulation

CrCl = Creatinine Clearance

CYP = Cytochrome p-450 enzymes