

# DOAC Dosing for Atrial Fibrillation (AFib)



AMERICAN COLLEGE of CARDIOLOGY

Advancing Heart Care Worldwide

## PROBLEM

- ✘ Inappropriate dosing of direct oral anticoagulants (DOACs) is not uncommon in treating AFib patients.
- ✘ Nearly 60% of reduced-dose DOAC regimens do not follow Food and Drug Administration (FDA) recommendations.
- ✘ Inappropriate dosing may be associated with increased risk for cardiovascular hospitalization and/or adverse events like bleeding and all-cause mortality.
- ✘ Underdosing of DOACs may increase stroke risk, while not reducing rates of major bleeding.

## SOLUTION

When prescribing DOACs for AFib patients, clinicians should adjust DOAC dose based on FDA prescribing guides summarized in Treatment Table.

### Treatment Table: DOAC Dosing Recommendations in AFib

	Apixaban	Dabigatran	Edoxaban	Rivaroxaban
<b>Usual Dose</b>	5mg BID	150mg BID*	60mg daily (CI if CrCl $\geq$ 95 mL/min)**	20mg daily with food
<b>Reduced Dose</b>	2.5mg BID	75mg BID	30mg daily	15mg daily with food
<b>Indications for Reduction</b>	1. If 2 of 3 factors present: Age $\geq$ 80 years SCr $\geq$ 1.5 mg/dL Weight $\leq$ 60 kg 2. Coadministered with combined P-gp and strong CYP3A4 inhibitors (e.g., ketoconazole, itraconazole, ritonavir)	CrCl 15-30 mL/min OR, CrCl 30-50 mL/min with concomitant dronedarone or systemic ketoconazole	CrCl 15-50 mL/min	CrCl $\leq$ 50 mL/min
<b>Comments</b>	Those with SCr $>$ 2.5 or CrCl $<$ 25 mL/min excluded from ARISTOTLE trial <sup>†</sup>	Those with CrCl $<$ 30 mL/min excluded from RE-LY trial <sup>†</sup>	Those with CrCl $<$ 30 mL/min excluded from ENGAGE AF-TIMI 48 trial <sup>†</sup>	Those with CrCl $<$ 30 mL/min excluded from ROCKET-AF trial <sup>†</sup>
Consult package inserts for specific use/dosing recommendations with concomitant CYP3A4 and/or P-gp inducers or inhibitors. There are additional drug interactions in which DOACs should be avoided.				

BID: twice daily; SCr: actual serum creatinine; P-gp: P-glycoprotein; CYP3A4: cytochrome P450 3A4; CrCl: creatinine clearance calculated with Cockcroft-Gault equation using actual body weight and actual SCr; CI: contraindicated.

\* 110 mg BID is the recommended dose outside the United States.

\*\* Contraindicated if CrCl  $>$  95 mL/min due to increased ischemic stroke risk compared to warfarin.

<sup>†</sup> Use in these situations based on kinetic and dynamic modeling rather than clinical outcomes data.

### Prevent Potential Errors



- ✓ Implement functional hard-stop drug alerts during order entry in electronic medical record.
- ✓ Establish an anticoagulant management service program.
- ✓ Adopt continuous education programs for all providers on proper DOAC dosing strategies.
- ✓ Create pocket cards for a quick reference on DOAC prescribing.

To download the infographic and see citations visit  
**[ACC.org/Infographics](https://www.acc.org/Infographics)**