Clinical considerations: Anticoagulation use in older adults

DID YOU KNOW?

Current evidence indicates that **20% to 50%** of direct oral anticoagulant (DOAC) doses are inappropriate in older adults.[1–3] While overdosing remains a concern, several studies have validated that underdosing is more common and can lead to an increased risk of stroke, systemic embolism, and cardiovascular hospitalizations, without reducing bleed risk.[4–6] Stopping anticoagulation in patients with atrial fibrillation (AFib) can increase the risk of having an ischemic stroke by 2 to 3 times.[7,8]

Fall risk and anticoagulant dosing

- Fall history is not an independent risk factor for bleeding.[7,9]
- Patients with AFib would need to fall **at least 35 times per year** for the risks of anticoagulation to outweigh the benefits.[7,10]

Bottom line: Do **not** dose reduce or discontinue anticoagulation based on age or frailty alone. Instead, refer patients to fall prevention programs and address modifiable bleeding risk factors.[7,9–11]

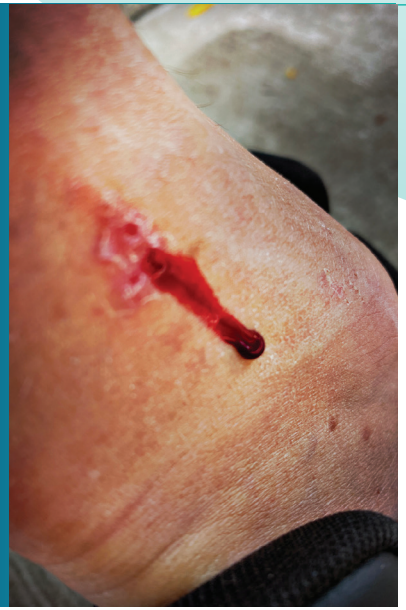
DID YOU KNOW?

One study showed that **1 in 3** patients taking a DOAC for AFib or venous thromboembolism received aspirin without an indication.[12] Taking aspirin with a DOAC for AFib or atrial flutter increases bleeding risk by **30%** and **doubles** the risk of cardiac events compared with taking a DOAC alone.[13]

Modifiable bleeding risk factors

- Uncontrolled hypertension.
- Labile international normalized ratios.
- Anemia.
- Alcohol use.
- Concurrent antiplatelet/NSAID use.[11,14]

Bottom line: Work with patients and clinicians to control modifiable risk factors. Deprescribe inappropriate antiplatelet medications, aspirin, and NSAIDs when possible.



Choosing an anticoagulant in older adults

- In frail older patients with AFib, switching from warfarin to a DOAC may be associated with similar major bleeding, stroke, and mortality outcomes. However, it may also be associated with an increased risk of clinically relevant nonmajor bleeding, driven by an increase in gastrointestinal, skin, and urogenital bleeding.[15–17]
- Remember to consider time in therapeutic range and medication administration frequency along with patient-specific factors when choosing an anticoagulant.[16,17]
- Choosing a regimen that optimizes patient adherence is critical.[16,17]
- Overall, it is important to weigh the risk of increased bleeding with the benefit of a simpler regimen in older adults when selecting an anticoagulant.[15–17]

Bottom line: Use an individualized and shared decision-making approach when determining which anticoagulant is best for each patient to ensure optimal efficacy and safety.[15–17]

Table 1. Anticoagulant dosage and administration guidelines

	Apixaban (Eliquis)[18]	Dabigatran (Pradaxa)[19]	Edoxaban (Savaysa)[20]	Rivaroxaban (Xarelto)[21]	Warfarin (Coumadin, Jantoven)[22]
Nonvalvular AFib dosing*	5 mg twice daily Reduce dose to 2.5 mg twice daily if at least two of the following are true: • Age ≥80 years • Body weight ≤60 kg • SCr ≥1.5 mg/dL	150 mg twice daily Reduce dose to 75 mg twice daily if CrCl = 15–30 mL/min Avoid if CrCl <15 mL/min or on dialysis	60 mg once daily Reduce dose to 30 mg once daily if CrCl = 15–50 mL/min Avoid if CrCl >95 mL/min	20 mg once daily Reduce dose to 15 mg once daily if CrCl ≤50 mL/min Use in CrCl <30 mL/min not studied; use supported by limited PK data*	Customized dosing to targeted INR range, typically 2.0–3.0 if mechanical valve not present
Venous thromboembolism treatment dosing*	10 mg twice daily for 7 days then 5 mg twice daily	150 mg twice daily after 5–10 days of parenteral anticoagulation Avoid if CrCl <30 mL/min or on dialysis	60 mg once daily after 5–10 days of parenteral anticoagulation Reduce dose to 30 mg once daily if CrCl = 15–50 mL/min or body weight ≤60 kg	15 mg twice daily for 21 days, then 20 mg once daily Avoid if CrCl <15 mL/min	Customized dosing to targeted INR range, typically 2.0–3.0 if mechanical valve not present
Administration	Take without regard to food	Take without regard to food Do not break, chew, or open the capsule	Take without regard to food	Doses >10 mg must be taken with the largest meal of the day	Take without regard to food
Clinical pearls†	Guideline-recommended agent in dialysis treatment[23]	Must be kept in original packaging			Multiple drug and food interactions Requires frequent lab monitoring Guideline-recommended agent in dialysis treatment[23] TTR target ≥65% to 70%[24,25]
AGS Beers list recommendations[26]		Use with caution over other DOACs‡		Avoid long-term treatment due to increased incidence of major and GI bleeding compared with other DOACs‡	Avoid as initial therapy‡

AGS = American Geriatrics Society; CrCl = creatinine clearance; DOAC = direct oral anticoagulant; GI = gastrointestinal; INR = international normalized ratio; PK = pharmacokinetic; SCr = serum creatinine; TTR = time in therapeutic range.

*May require additional dose adjustments based on drug interactions and/or hepatic impairment.

†Some procedures require periprocedural anticoagulation interruption. Use an evidence-based approach, including validated bleeding and thromboembolic risk assessment tools, along with patient-specific factors to perform a comprehensive risk-benefit analysis and apply shared decision making.[27,28]

‡The updated Beers list recommendation is based on observational data and meta-analyses; no head-to-head trials are available. The Anticoagulation Forum proposes that long-term use of rivaroxaban is not an absolute contraindication and may be carefully considered for use once a comprehensive shared decision-making discussion has occurred.[29,30]

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