

# Updates in ANTICOAGULATION REVERSAL



## SUMMARY and RESOURCES

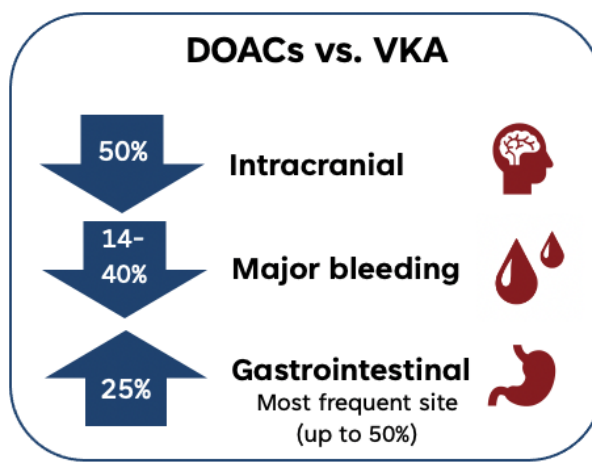
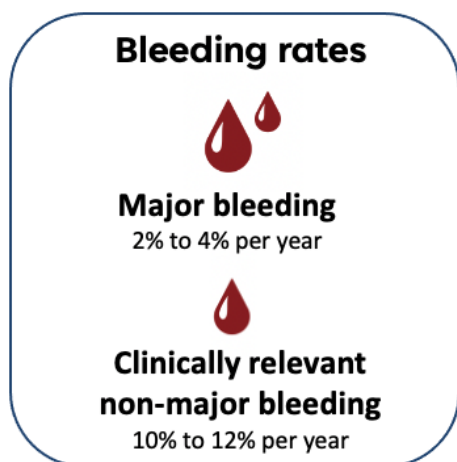
### PURPOSE

With the growing use of direct-acting oral anti-coagulants (DOACs) to manage patients with increased risk of ischemic stroke and thromboembolism, it is important for clinicians to be knowledgeable of the greater risk of bleeding associated with DOAC use as well as strategies to treat bleeding events in these patients.

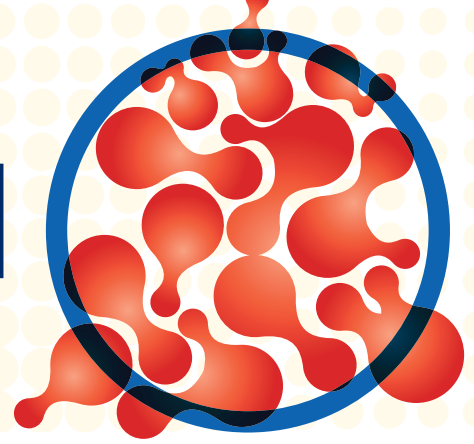
- Bleeding associated with DOAC use ranges from 2-4%
- Intracranial bleeds are of particular concern due to high morbidity and mortality
- Care teams treating spontaneous and traumatic bleeds in patients treated with DOACs must be aware of the targeted reversal agents and how to utilize these agents rapidly and judiciously, often in emergency situations

### BLEEDING COMPLICATIONS LIMIT DOAC USE<sup>1</sup>

- Bleeding is the most common adverse drug event leading to emergency department visits, hospital admissions, and death<sup>2,3</sup>
- Mortality after ICH (43%) is 4-5 times higher than with extracranial bleeds (9%)<sup>4</sup>



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### A MANAGEMENT FRAMEWORK FOR DOAC-ASSOCIATED BLEEDS<sup>5</sup>

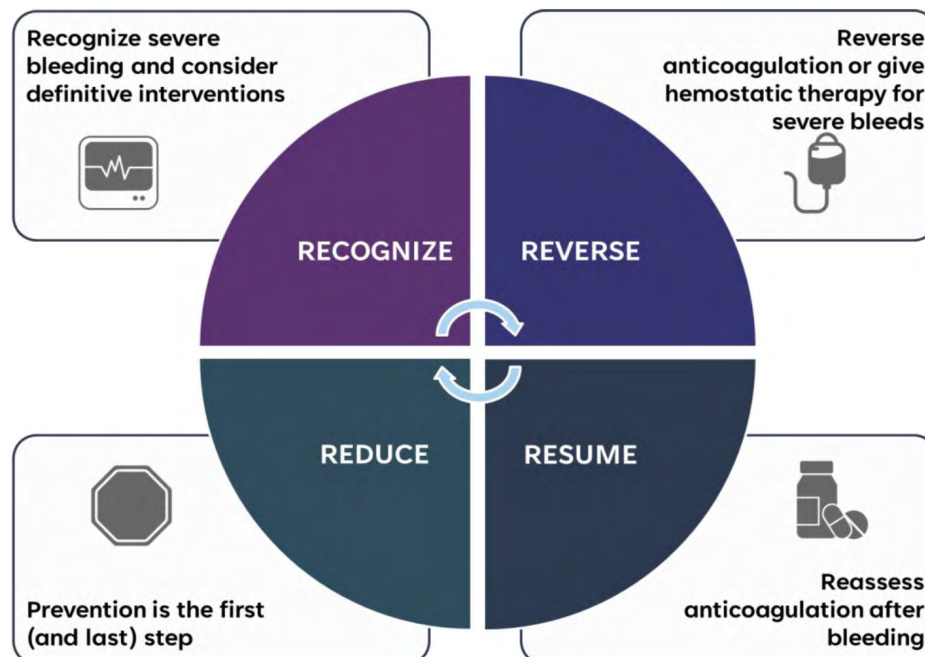
Supportive measures and interventions include:

#### Intestinal bleeds

- Isotonic intravenous fluids
- Pantoprazole infusion
- Red blood cell transfusion
- Procedures: endoscopy, embolization, etc.

#### ICH

- Airway/breathing
- Severity (NIHSS, mRS)
- Blood pressure control
- Neurosurgical referral

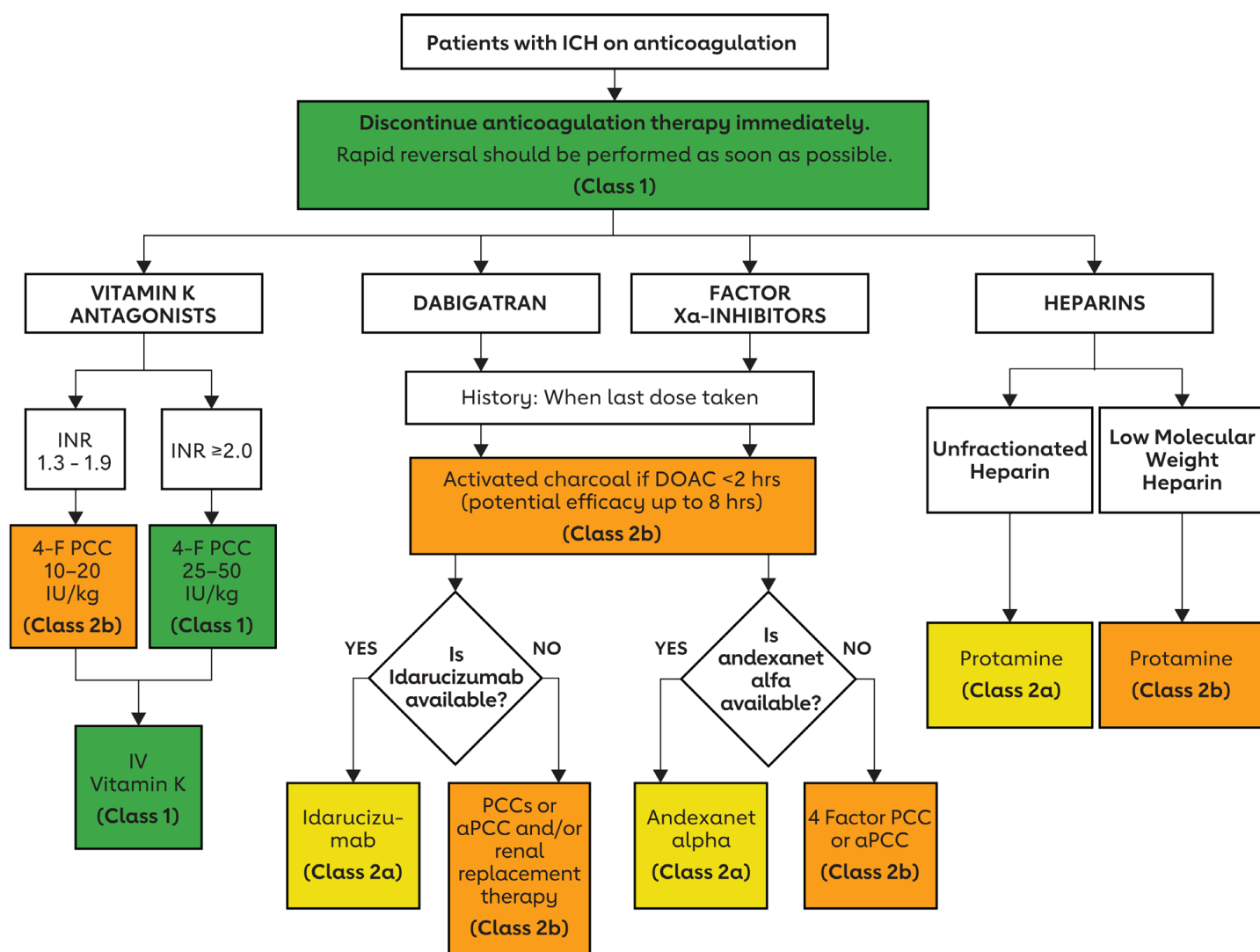


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## SUMMARY and RESOURCES

### ICH ANTICOAGULANT MANAGEMENT AND REVERSAL<sup>6</sup>



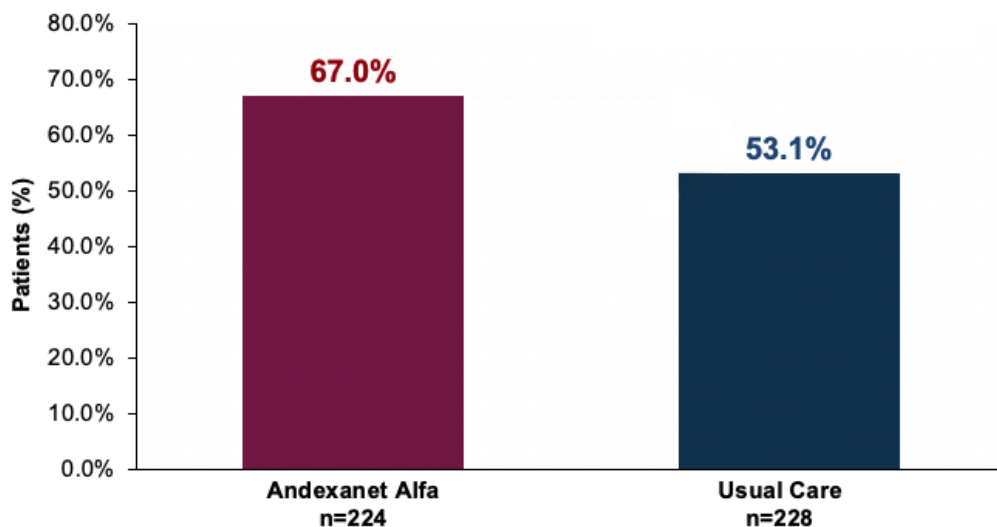
# Updates in ANTICOAGULATION REVERSAL



## SUMMARY and RESOURCES

### ANDEXANET DEMONSTRATED HIGHER EFFECTIVE HEMOSTASIS FOR ICH VS USUAL CARE<sup>7</sup>

#### EFFICACY

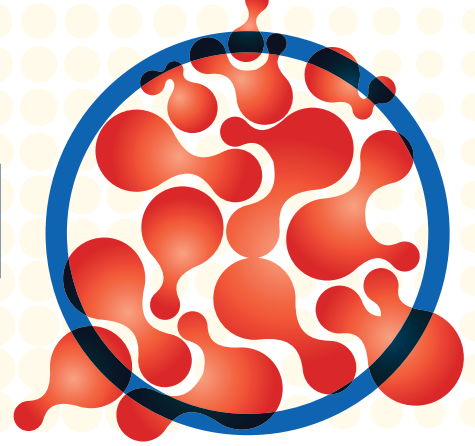


**13.4%**  
adjusted absolute increase  
in effective hemostasis  
with **andexanet alfa**  
vs usual care<sup>b</sup>  
95% CI, 4.6-22.2  
p=0.003

#### SAFETY

- More patients treated with andexanet experienced  $\geq 1$  thrombotic events compared to usual care (10.3% vs 5.7%,  $P = 0.049$ )
- Other differences in AEs between the two groups were not significant
- The trial was not sufficiently powered to detect a difference in mortality

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### RESOURCES

- Reversing DOACs: Providing Answers on When, Why, and How  
<https://www.francefoundation.com/content/9099-doac/isth-launcher.php>
- Greenberg SM, et al. 2022 Guideline for the Management of Patients With Spontaneous Intracerebral Hemorrhage: A Guideline From the American Heart Association/American Stroke Association.  
<https://pubmed.ncbi.nlm.nih.gov/35579034/>
- Cuker CS, et al. Anticoagulation for Stroke Prevention in Atrial Fibrillation and Treatment of Venous Thromboembolism and Portal Vein Thrombosis in Cirrhosis: Guidance from the SSC of the ISTH  
<https://pubmed.ncbi.nlm.nih.gov/38823454/>

### REFERENCES

1. Ruff CT, et al. *Lancet* 2014;383:955–962; Kirchhof P, et al. *Eur Heart J*. 2016;37:2893–2962.
2. Budnitz DS, et al. *N Engl J Med*. 2011;365:2002–2012.
3. Bayoumi I, et al. *Can Fam Physician*. 2014;60:e217–22.
4. Held C, et al. *Eur Heart J*. 2015;36:1264–1272.
5. Cormier S, Siegal DM. Thrombosis Update 2024. <https://doi.org/10.1016/j.tru.2024.100165>.
6. Greenberg SM, et al. *Stroke*. 2022;53:e282–e361.
7. Connolly, et al. *N Engl J Med*. 2024. 390(19):1745–1755.