#### **Disclaimer:**

Our recommendations are based on current national guidelines and relevant evidence-base. This guideline helps inform clinicians clinical judgement. However, clinicians will consider the trade-off between the benefits and harms of an intervention before making a clinical decision.

# Guideline for the management of direct oral anticoagulant (DOAC) associated bleeding

#### **1.0 Procedure Statement (Purpose / Objectives of the Procedure)**

To dictate the management of haemorrhage, from minor to life-threatening, which may be associated with, or worsened by, the use of rivaroxaban, apixaban, dabigatran or edoxaban.

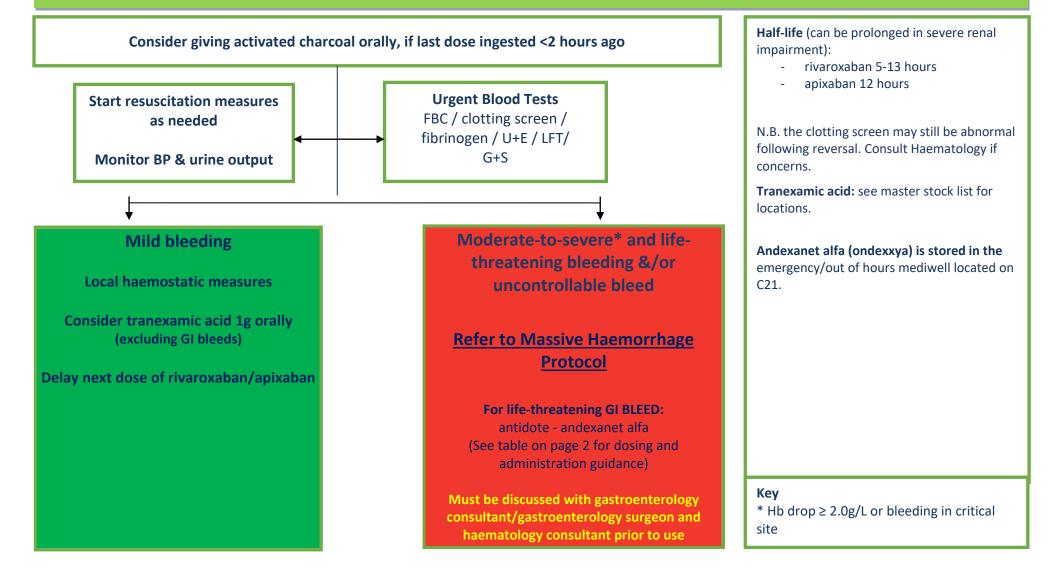
#### 2.0 Accountabilities

The Trust VTE Group will be responsible for the policy content, review, and monitoring of compliance. They will ensure the policy complies with national and international guidelines and reflects best evidence-based practice.

All consultants, clinicians, prescribers, pharmacists and nurses should use this guideline and seek advice from a consultant haematologist if there is any uncertainty regarding how to manage a patient.

All nurses must follow these guidelines and seek advice from a pharmacist should there be any uncertainty regarding how to administer and examet alfa.

### Management of Rivaroxaban/Apixaban Associated Bleeding





The recommended dosage of and exanet alfa (Ondexxya) is based on:

- The specific FXa inhibitor,
- The dose of the DOAC the pt is taking at the time of anticoagulation reversal,
- Time since the patient's last dose of FXa inhibitor,
- Creatinine clearance which will influence the half-lives of the FXa inhibitor

#### Each vial contains 200mg of and exanet alfa

**Reconstitution**: Each vial must be reconstituted with 20ml water for injection. Use the same number of 20ml syringes (equipped with 20-gauge needle or larger) as vials of andexanet alfa required.

Administration: To administer bolus and continuous infusion via syringe pump, prepare the bolus and continuous infusion in separate large volume syringes (50ml or larger).

For high dose bolus and continuous infusion, the doses will need to be separated into additional syringes (2 syringes each for bolus and continuous infusion).

A 0.2 or 0.22micron in-line polyethersulfone (PES) filter or equivalent low protein binding filter must be used.

Fxa inhibitor	Dose	Time since last dose		
		<8hours	≥8hours	Unknown
Apixaban	≤5mg	LOW	LOW	LOW
	>5mg	HIGH	LOW	HIGH
	Unknown	HIGH	LOW	HIGH
Rivaroxaban	≤10mg	LOW	LOW	LOW
	>10mg	HIGH	LOW	HIGH
	Unknown	HIGH	LOW	HIGH

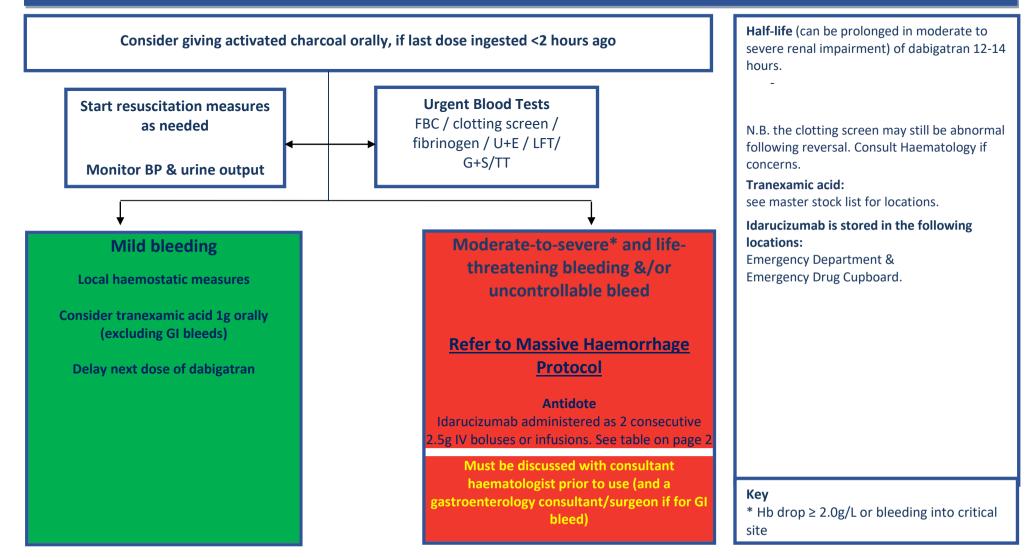
Table 2:

	Initial IV bolus	Continuous IV infusion	Total number of 200mg vials needed
LOW DOSE	400mg over approx. 15minutes at a rate of 30mg/min	4mg/min for 120 minutes (480mg)	5
HIGH DOSE	800mg over approx. 30 minutes at a rate of 30mg/min	8mg/min for 120 minutes (960mg)	9

Table 1:



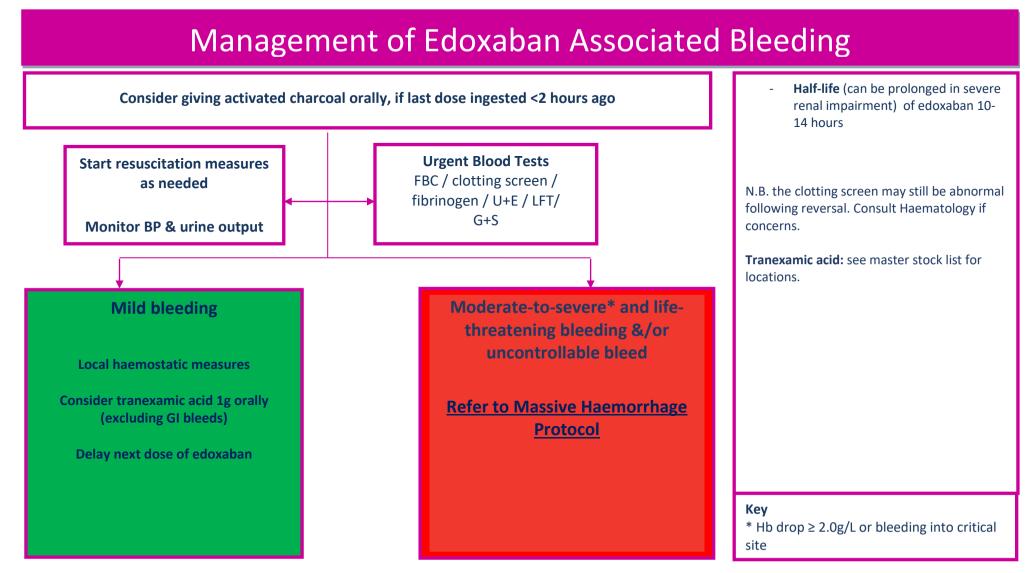
### Management of Dabigatran Associated Bleeding



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Idarucizumab (Praxbind)				
Formulation 2.5g/50mL ready to use solution for injection/infusion				
Dose	5g			
	IV as two consecutive 2.5g infusions over 5-10mins			
Administration	Or			
	IV as two consecutive 2.5g IV bolus injections			
<ul> <li>Administration of a second 5g dose may be considered in the following situations after consultation with oncall haematologist:</li> <li>Recurrence of clinically relevant bleeding together with prolonged clotting times</li> <li>If potential re-bleeding would be life-threatening and prolonged clotting times are observed</li> </ul>				
Restarting anticoagulation after idarucizumab administrationDabigatran can be re-initiated after 24 hrs if patient is clinically stable and adequate haemostasis achievedOther antithrombotic therapy (e.g., LMWH) can be started at any time if the patient is clinically stable and adequat haemostasis achieved				







#### 4.0 Equipment Required

None required

#### 5.0 Training

This guideline will be available on the Trust intranet

#### 6.0 Financial Risk Assessment

1	Does the implementation of this document require any additional Capital resources	No
2	Does the implementation of this document require additional revenue resources	No
3	Does the implementation of this document require additional manpower	No
4	Does the implementation of this document release any manpower costs through a change in practice	No
5	Are there additional staff training costs associated with implementing this document which cannot be delivered through current training programs or allocated training times for staff.	No
	Other comments	

#### 7.0 Equality Impact Assessment

Not applicable

#### 8.0 Maintenance

The clinical lead for cardiac services and the haematology representative on the VTE Group will ensure the document is reviewed at least every 3 years.

#### 9.0 Communication and Training

This information will be disseminated to all relevant departments

#### 10.0 Audit Process

Criterion	Lead	Monitoring method	Frequency	Evaluation
Monitor anticoagulation related adverse events	VTE Nurse	Datix incident reports	Monthly	VTE Group
Monitor Andexanet alfa usage	VTE Group pharmacist	Via Ascribe log view system	Quarterly	VTE Group

#### 11.0 References –

- 1. Medicines.org.uk. 2021. Ondexxya 200 mg powder for solution for infusion -Summary of Product Characteristics (SmPC) - (emc)
- 2. Nice.org.uk. 2021. Overview | Andexanet alfa for reversing anticoagulation from apixaban or rivaroxaban | Guidance | NICE. [online]
- 3. Hunt B, Allard S, Keeling D, Norfolk D, Stanworth S, Pendry K. A practical guideline for the haematological management of major haemorrhage. British Journal of Haematology. 2015;170(6):788-803.
- 4. Medicines.org.uk. 2020. Praxbind 2.5g/50 mL solution for injection/infusion -Summary of Product Characteristics (SmPC) - (emc)
- 5. Nice.org.uk. 2016. Evidence summary | Reversal of the anticoagulant effect of dabigatran: idarucizumab NICE. [online]
- 6. Medicines.org.uk. 2020 Lixiana 60mg Film-Coated Tablets Summary of Product Characteristics (SmPC) (emc)

#### Part A - Document Control

Procedure/ Guidelines number and version 1.0	Title of Procedure/Guidelines Management of direct oral anticoagulant (DOAC) associated bleeding	Status: Final	Author	Author: Cardiac Services Pharmacist For Trust-wide Procedures and Guidelines Chief Officer Sponsor: Chief Medical Officer
Version / Amendment	version	Date	Author	Reason
History	1.0	November 2022	Cardiac Services Pharmacist	Introduction of Guideline
Intended Recipients: All medical, nursing, and p Consultation Group / Role Titles and Date: VTR				ion team. Consultant
clinical haematolog	ist blood products lead, Divis linical director, Acute medici	sion 1 clinical o	director, Surgical	I nurse practitioners,
Name and date of	of group where reviewed		omboembolism Group – Nove	
Name and date of final approval committee (if trust-wide document)/ Directorate or other locally approved committee (if local document)		Medicines Management Group 6/9/2022 Trust Management Committee – November 2022		
Date of Procedure/Guidelines issue		December 2022		
<b>Review Date and Frequency</b> (standard review frequency is 3 yearly unless otherwise indicated – see section 3.8.1 of Attachment 1)		November 2	2025	

**Training and Dissemination:** No training required. Details of new guideline to disseminated via Trust Brief, e-mail information of guideline to key stake holders i.e. clinical directors, matrons, stakeholders contacted during

## Publishing Requirements: Can this document be published on the Trust's public page:

Yes

**To be read in conjunction with:** Guideline for the Management of Massive Blood Loss in Adults

Initial Equality Impact Assessment:	N/A
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Contact for Review	Cardiac Services Lead Pharmacist	
Monitoring arrangements	Annual andexanet alfa and idarucizumab usage. VTE Group to receive data	

**Document summary/key issues covered.** This document provides guidance for the management of minor, moderate-to-severe, and life-threatening bleeds in patients receiving rivaroxaban or apixaban; and directs staff towards the location of the reversal agent, providing clear instructions on how to reconstitute and administer it.

Key words for intranet searching	Rivaroxaban
purposes	Apixaban
	Edoxaban
	Dabigatran
	Direct Oral Anticoagulant
	Reversal
	Haemorrhage
	Bleed
	Andexanet alfa
	Ondexxya
	Idarucizumab

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(Part	B) Ratification Assurance Statement
Name	e of document: Management of Edoxaban associated bleeding
Name	e of author: Liam Cullen Job Title: Cardiac services pharmacist
I,	the above named author confirm that:
• best p	The Strategy/Policy/Procedure/Guidelines (please delete) presented for ratification meet all legislative, practice and other guidance issued and known to me at the time of development of the said document.
•	I am not aware of any omissions to the said document, and I will bring to the attention of the Executive Director any information which may affect the validity of the document presented as soon as this becomes known.
• wide i	The document meets the requirements as outlined in the document entitled Governance of Trust- Strategy/Policy/Procedure/Guidelines and Local Procedure and Guidelines(OP01).
• minin	The document meets the requirements of the NHSLA Risk Management Standards to achieve as a num level 2 compliance, where applicable.
• names back t	I have undertaken appropriate and thorough consultation on this document and I have detailed the s of those individuals who responded as part of the consultation within the document. I have also fed to responders to the consultation on the changes made to the document following consultation.
•	I will send the document and signed ratification checklist to the Policy Management Officer for publication at my earliest opportunity following ratification.
•	I will keep this document under review and ensure that it is reviewed prior to the review date.
Signat	ture of Author:
	19/8/2022
	of Porson Patifying this document (Chief Officer or Nominee):

Name of Person Ratifying this document (Chief Officer or Job Title: CMO Signature: K so me

Dr. B. C. McKaig Consultant

GMC: 3275948 I, the named Chief Officer (or their nominee) am responsible for the overall good governance and . management of this document including its timely review and updates and confirming a new author should the current post-holder/author change.

To the person approving this document:

Please ensure this page has been completed correctly, then print, sign and email this page only to: The Policy **Management Officer** 

Written by Liam Cullen Approved by VTE committee: 19/07/2022 Review date: 19/07/2024

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### **IMPLEMENTATION PLAN**

Procedure/Guidelines number and version Version 1.0	<b>Title of Procedure/Guidelines</b> Management of direct oral anticoagulant (DOAC) associated bleeding		
Reviewing Group	VTE Group		Date reviewed: 19.7.22
Implementation lead: Mr Hart			
Implementation Issue to be co additional issues where neces	•	Action Summary	Action lead / s (Timescale for completion)
<ul> <li>Strategy; Consider (if appropriate)</li> <li>1. Development of a pocket guide of strategy aims for staff</li> <li>2. Include responsibilities of staff in relation to strategy in pocket guide.</li> </ul>		N/A	
Training; Consider 1. Mandatory training approval process 2. Completion of mandatory training form		N/A	
<ul> <li>Development of Forms, leaflets etc.; Consider</li> <li>1. Any forms developed for use and retention within the clinical record <b>MUST</b> be approved by Health Records Group prior to roll out.</li> <li>2. Type, quantity required, where they will be kept / accessed/stored when completed</li> </ul>		N/A	
Procedure/Guidelines communication; Consider 1. Key communication messages from the policy / procedure, who to and how?		N/A	
Financial cost implementation Consider Business case development		Nil	
Other specific issues / actions as required e.g. Risks of failure to implement, gaps or barriers to implementation		Nil	