Guidance Concerning Anticoagulant (AC) Choice For Venous Thromboembolism (VTE) Treatment

The aim of this guidance is to highlight roles and responsibilities for primary and secondary care when prescribing and monitoring DOACs for patients with VTE in SEL

1) Confirmed VTE Diagnosis- Pulmonary Embolism (PE) and Deep Vein Thrombosis (DVT): **URGENT REFERRAL to the thrombosis team** (*follow local pathways)*

SECONDARY CARE

2) Baseline Checks (within 24 hours of starting anticoagulation):
Renal function: serum creatinine and creatinine clearance (CrCl) calculation
Full blood count (FBC): Haemoglobin (Hb), platelet count**,** clotting profile (PT, APTT, INR) and **Liver function (LFTs)**: AST/ALT, Bilirubin
Body weight (kg): to allow for accurate CrCl
If <50kg or >150kg or specific patient groups (*see table below*), refer to AC clinic for specialist advice, warfarin and/or low molecular weight heparin (LMWH)
Communicate these results to primary care via discharge letter/outpatient clinic letter (*link: VTE patient pathway for DOACs*)
Consider contra-indications, co-morbidities and patient preference when choosing an anticoagulant (*see specific patient groups table below*)

Specific Patient Groups	Recommendations	Specific Patient Groups	Recommendations
Renal impairment CrCl 15 to 30ml/min	Consider reduced DOAC dosing in line with SPC recommendations (seek specialist advice for rivaroxaban and dabigatran)	**Active or underlying cancer**	Apixaban is first line in cancer associated thrombosis. Seek specialist advice, anticoagulate for 3 to 6 months*
Renal impairment CrCl <15ml/min	Specialist advice required: DOACs contra-indicated, use warfarin/low molecular weight heparin	**Lactose intolerance**	Edoxaban or dabigatran (following 5 days of LMWH) as rivaroxaban and apixaban contain lactose
Known triple positive antiphospholipid syndrome (APLS)	DOACs contra-indicated, use warfarin. See NG158 for more information	**Prosthetic heart valves**	Warfarin
Thrombocytopenia (plt <50)	Specialist advice required	**Severe liver impairment**	Specialist advice required
Pregnancy/breastfeeding	LMWH preferred and specialist advice required	**Interacting medications will be considered at initiation of DOAC**	Specialist advice as indicated. Check BNF and SPC for each medication.
Obesity >150kg	Specialist advice: consider warfarin. If not suitable for patient use rivaroxaban or apixaban	**Low body weight <50kg**	Specialist advice

3) If a direct oral anticoagulant (DOAC) is appropriate, the specialist may prescribe, for example, Rivaroxaban for at least 3 months (for a provoked DVT/PE) as below:
Initiation: 15mg twice daily after food for 3 weeks, then
Maintenance: 20mg daily after food (**reduced** to 15mg daily if CrCl <30ml/min and/or the risk of bleeding outweighs the risk of recurrent VTE)
Prevention of recurrent VTE (long term): 10mg or 20mg (in high risk patients) daily dose after food as recommended by haematology

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NOTE that all DOAC agents are available according to NICE.

South East London Integrated Medicines Optimisation Committee (SEL IMOC). A partnership between NHS organisations in South East London Integrated Care System: NHS South East London (covering the boroughs of Bexley, Bromley, Greenwich, Lambeth, Lewisham and Southwark) and GSTFT/KCH /SLAM/ Oxleas NHS Foundation Trusts and Lewisham & Greenwich NHS Trust

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4) For DOACs: Initiation and first three months supplied by secondary care *(for blister pack patients follow local policies/pathways)*

If treatment beyond 3 months is required (eg unprovoked VTE or provoking factor cannot be removed/corrected, recurrent DVT/PE, or significant on-going VTE risk) prescribing and monitoring is transferred to the patient's GP for a defined duration. Initiation and transfer of care forms are no longer required (from 2020) in line with amber 2 categorisation.

*For active cancer, patients should receive 3 to 6 months of anticoagulation, taking into consideration the tumour site, bleeding risk and drug interactions. The length of

PRIMARY CARE

5) Review (for patients on long term DOAC therapy) by primary care with secondary care support as indicated:

On receipt of correspondence from secondary care, the healthcare provider should make contact with the patient to agree the process for prescribing and monitoring.

Each year review: ongoing need for anticoagulation based on assessment of thrombotic risk and bleeding risk including any planned surgery, pregnancy or long-haul travel: always discuss stopping therapy with the thrombosis team.

Monitor patient for signs of bleeding and/or anaemia and, if severe bleeding occurs, stop therapy (may be a temporary halt to anticoagulation whilst investigated).

FBC: if platelets <100 ($x10^9$/L), if Hb <100g/L or change from baseline >20g/L, investigate for cause and consider referral to/review by specialist based on initial investigations

Monitor renal function according to the frequency dictated by baseline CrCl and adjust DOAC dose accordingly (*See DOAC guidance*: renal monitoring)

LFTs: If ALT/AST > 2xULN or total bilirubin >1.5xULN- review therapy with specialist support.

Medicines optimisation: Check adherence to therapy, adverse effects and review of concomitant medicines.

Review general health, bleeding risk and treatment preferences: refer to the thrombosis team if treatment requires a review. *NICE guidance (2020) recommends aspirin 75mg daily as an option: preventing VTE recurrence if AC is declined long term.*

References: *last accessed 20.06.23*

1) Venous thromboembolic diseases: diagnosis, management and thrombophilia testing; NICE guideline [NG158] Published date: 26 March 2020 https://www.nice.org.uk/guidance/NG158
2) Summary of Product Characteristics for rivaroxaban: https://www.medicines.org.uk/emc/product/2793/smpc
3) British National Formulary: https://bnf.nice.org.uk/drug/rivaroxaban.html
4) MHRA advice: Rivaroxaban should be taken with food (July 2019); https://www.gov.uk/drug-safety-update/rivaroxaban-xarelto-reminder-that-15-mg-and-20-mg-tablets-should-be-taken-with-food
5) MHRA: Direct-acting oral anticoagulants (DOACs): reminder of bleeding risk, including availability of reversal agents (June 2020) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/896274/June-2020-DSU-PDF.pdf
6) NICE guidance: Rivaroxaban for the treatment of deep-vein thrombosis and prevention of recurrent deep-vein thrombosis and pulmonary embolism (July 2012) https://www.nice.org.uk/guidance/ta261
7) NICE guidance: Rivaroxaban for treating pulmonary embolism and preventing recurrent venous thromboembolism (June 2013) https://www.nice.org.uk/guidance/ta287
8) Martin KA, Beyer-Westendorf J, Davidson BL, Huisman MV, Sandset PM, Moll S. Use of direct oral anticoagulants in patients with obesity for treatment and prevention of venous thromboembolism: Updated communication from the ISTH SSC Subcommittee on Control of Anticoagulation. Journal of Thrombosis and Haemostasis. 2021 Jul 14;19(8):1874–82.

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