Flowchart for Prescribing New Oral Anticoagulants (NOAC) Apixaban, Rivaroxaban and Dabigatran

Calculate and record creatinine clearance (CrCl)
(use Cockroft - Gault equation)
Record full blood count and liver function

Laboratory considerations

Renal function
- rivaroxaban is contraindicated if: CrCl < 30 mL/min
- apixaban is contraindicated if: CrCl < 25 mL/min
- dabigatran is contraindicated in SA Health, for initiation of therapy if: CrCl < 50 mL/min (see dabigatran below)

Liver disease
Contraindicated if alanine transaminase (ALT) > 2 x upper limit of normal, or for apixaban Child-Pugh C (if B use with caution) or rivaroxaban and dabigatran Child-Pugh B and C.

Full Blood Count
Anaemia Hb ≤ 100 g/L

Assess bleeding risk (seek specialist advice if ‘yes’ to any of the following):
- history of significant bleeding
- surgery ≤ 1 month ago
- gastro-intestinal (GI) bleed ≤ 12 months ago
- GI ulcer ≤ 30 days ago
- fibrinolytic treatment ≤ 24 hours ago
- on any anticoagulation agent
- on dual antiplatelet therapy
- platelet count < 100 x 10^9/L

Assess bleeding risk
Check all laboratory considerations and exclusion criteria

Consider concomitant medicines

If the patient is on warfarin and if all other patient factors warrant the changeover to a NOAC then stop warfarin and see guideline instructions for converting patient from warfarin to NOAC

Rivaroxaban (Xarelto®)
SAMF restricted to:
Total hip or knee replacement (VTE prophylaxis)
2.5 mg twice a day
hip: up to 35 days / knee: up to 15 days
Non-valvular AF
5 mg twice a day
or
If any 2 of the following are present:
age ≥ 80 years, weight ≤ 60 kg or serum creatinine ≥ 133 micromol/L
2.5 mg twice daily

Initial and continuing treatment of deep vein thrombosis (DVT)
and pulmonary embolism (PE)
(if CrCl > 30 mL/min)
15 mg twice daily for 3 weeks, then reduce to 20 mg daily

Dabigatran (Pradaxa®)
Streamlined Individual Patient Use Authority for:
Non-valvular AF
150 mg twice daily only in selected patients
(if CrCl ≥ 50 mL/min)
also refer to SA Medicines Formulary

Concomitant medicines

Contraindicated:
- Potent P-glycoprotein (P-gp) competitors and CYP3A4 inhibitors:
  - ketoconazole, itraconazole, posaconazole, voriconazole
  - HIV protease inhibitors e.g. ritonavir, saquinavir
  - dronedarone
- Enzyme inducers: contraindicated with apixaban and dabigatran e.g. rifampicin, St John’s Wort, carbamazepine, phenytoin, and phenobarbitone. Preferably avoid with rivaroxaban.

Preferably avoided: known or expected increases in NOAC blood levels may occur with the following medicines and a NOAC dose reduction may be appropriate; consider on an individual basis:
- Cardiac medicines – consider cardiologist advice
  - quinidine
  - amiodarone
  - fluconazole
  - cyclosporin, tacrolimus
  - erythromycin, clarithromycin
- If antiplatelet, anticoagulant or antithrombotic agents are required seek haematologist advice

This is not an exhaustive list – refer to guideline. The European Heart Rhythm Association provides a useful decision making chart.

Exclusion criteria
- < 18 years
- known hypersensitivity to NOAC
- pregnant or breastfeeding
- active significant bleeding or disorder of haemostasis (von Willebrand’s or coagulation deficiency)
- prosthetic heart valve or severe valvular disease
- recent stroke – relative contraindication (seek specialist advice)
- thrombus and recent stent (seek cardiologist advice)
- active cancer – relative risk (seek specialist advice)

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