

# Choosing the most suitable oral anticoagulant (OAC) for your patient with AF.

## Patients already on warfarin = lowest priority group (see below)

Priority groups for consideration of the new oral anticoagulants include:

- Patients with newly diagnosed non-valvular AF
- Patients fitting the NICE criteria with a CHADS2-VASc score of 1 or more who are not currently taking any OAC.
- Patients fitting the NICE criteria with a CHADS2-VASc score of 1 or more who are only taking aspirin.
- Patients with unstable INR (see definition below) on warfarin or phenindione.

**Rivaroxaban, apixaban, edoxaban are powerful anticoagulants which cannot be easily reversed (vitamin K is NOT an option). Dabigatran does now have an antidote (idarucizumab).**

**STEP 1** - Information you need before deciding which anticoagulant (warfarin, dabigatran, apixaban, rivaroxaban, edoxaban) is most suitable for your patient (see **prescribing criteria** documents for dabigatran, apixaban, edoxaban & rivaroxaban for further information on the following:)

1. Does the patient fit the NICE and license criteria if considering dabigatran, apixaban, edoxaban or rivaroxaban?
2. What is the patient's CHADS2-VASc score?
  - Offer anticoagulation to people with a CHADS2-VASc score of 2 or above, taking bleeding risk into account<sup>1</sup>.
  - Do not offer stroke prevention therapy to people aged under 65 years with atrial fibrillation and no risk factors other than their sex (that is, very low risk of stroke equating to a CHADS2-VASc score of 0 for men or 1 for women)<sup>1</sup>.
  - Consider anticoagulation for men with a CHADS2-VASc score of 1. Take the bleeding risk into account<sup>1</sup>.
  - Consider left atrial appendage occlusion (LAAO) if anticoagulation is contraindicated or not tolerated and discuss the benefits and risks of LAAO with the person<sup>1</sup>.
3. What is the patient's bleeding risk using the HAS-BLED score? To calculate score see: <http://www.mdcalc.com/has-bleed-score-for-major-bleeding-risk/> and for further information.
4. What are the patients renal and liver function test results like?

**STEP 2** Use the **decision aid** document to discuss with the patient the risks and benefits of dabigatran v apixaban v rivaroxaban v edoxaban v warfarin to help choose which drug most suits your patient.

**For the following groups of patients there is more limitation upon which drug is most suitable for them (see Summary of Product Characteristics for full information, this list is not exhaustive):**

Patient group	Optimum OAC drug choice
Patients with abnormal liver function	Increased bleeding risk for this group of pts. Monitor INR closely. See individual SPCs and seek specialist advice.
Patients using a dosette or monitored dosing system.	Apixaban, rivaroxaban or edoxaban.
Patients with swallowing difficulties or enteral tubes	Contact Medicines Management
Also on ketoconazole, itraconazole, dronedarone or Protease Inhibitors	Effect of these drugs on warfarin can at least be monitored. INR may increase, consider concomitant use with caution and see individual SPC for full detail.
Patients on St Johns Wort	Use an alternative to st johns wort or apixaban or edoxaban can be used with caution.
Also taking rifampicin, ciclosporin, carbamazepine (CBZ) or phenytoin.	Warfarin or rivaroxaban (with caution). Apixaban can be used with rifampicin, CBZ or phenytoin with caution but no data available with ciclosporin.

**NOTE** : Drug Safety Update Oct 2013 - Revised contraindications for all NOACs  
<http://www.mhra.gov.uk/home/groups/dsu/documents/publication/con322740.pdf>

## Patients already on warfarin = lowest priority group.

The benefits of dabigatran & rivaroxaban over warfarin diminish with improving warfarin control. A recent study<sup>2</sup> has evaluated treatment effects of apixaban in relation to two predictions of time in therapeutic range and found that its effects on stroke or systemic embolism risk, bleeding & mortality appear similar across the range of center and patient predicted quality of INR control.

**Poor INR control with warfarin** has been suggested to be equivalent to having INR within treatment therapeutic range (TTR) < 65% – defined as:

*Having received treatment for six months, with INR results greater than 5 on more than three occasions (excluding the first 3 months of treatment) despite good compliance with treatment. INR less than 2 on more than three occasions (excluding the first 3 months of treatment) may be considered, but only if non-compliance with*

warfarin treatment is excluded or having received treatment for the last six months, with INR still requiring monitoring every two weeks or less - if in doubt about patients TTR status contact your medicines management team for advice.

**Safe switching of patients from Warfarin to Dabigatran, apixaban, rivaroxaban or edoxaban:**

**Dabigatran:** Stop warfarin, dabigatran can be started once the INR is <2.

**Rivaroxaban:** Stop warfarin, rivaroxaban can be started once the INR ≤ 3.

**Apixaban:** Stop warfarin, apixaban can be started once the INR is <2.

**Edoxaban:** Stop warfarin, edoxaban can be started once the INR is ≤ 2.5.

**CHADSVASc Scoring** <http://www.gpnotebook.co.uk/simplepage.cfm?ID=x20110126111352933383>

	Risk Factor	Score
<b>C</b>	Congestive heart failure/Left ventricular dysfunction	1
<b>H</b>	Hypertension — high blood pressure	1
<b>A<sub>2</sub></b>	Age ≥ 75	2
<b>D</b>	Diabetes mellitus	1
<b>S<sub>2</sub></b>	Stroke/TIA/TE (thromboembolism)	2
<b>V</b>	Vascular disease — coronary artery disease (CAD), myocardial infarction (heart attack), peripheral artery disease (PAD), or aortic plaque	1
<b>A</b>	Age 65-74	1
<b>S<sub>c</sub></b>	Female gender	1

**HASBLED Scoring** <http://www.mdcalc.com/has-bleed-score-for-major-bleeding-risk/>

Letter	Clinical characteristic	Points	NOTES:
<b>H</b>	Hypertension	1	Hypertension is defined as systolic blood pressure >160 mmHg.
<b>A</b>	Abnormal renal & liver function (1 point each)	1 or 2	'Abnormal kidney function' is defined as the presence of chronic dialysis or renal transplantation or serum creatinine ≥200 mmol/L. 'Abnormal liver function' is defined as chronic hepatic disease (e.g. cirrhosis) or biochemical evidence of significant hepatic derangement (e.g. bilirubin >2 x upper limit of normal, in association with aspartate aminotransferase/alanine aminotransferase/alkaline phosphatase >3 x upper limit normal, etc.).
<b>S</b>	Stroke	1	
<b>B</b>	Bleeding	1	'Bleeding' refers to previous bleeding history and/or predisposition to bleeding, e.g. bleeding diathesis, anaemia, etc.
<b>L</b>	Labile INRs	1	'Labile INRs' refers to unstable/high INRs or poor time in therapeutic range (e.g. <60%). INR =international normalized ratio.
<b>E</b>	Elderly (age >65 yrs)	1	
<b>D</b>	Drugs or alcohol (1 point each)	1 or 2	Drugs/alcohol use refers to concomitant use of drugs, such as antiplatelet agents, NSAIDs, or alcohol abuse, etc.
<b>A score of 3 or more indicates increased one year bleed risk on anticoagulation sufficient to justify caution or more regular review</b>			

**Additional Information:**

Prescribing criteria for dabigatran, apixaban, edoxaban and rivaroxaban in stroke prevention in non valvular AF  
 Dabigatran, apixaban and rivaroxaban decision aid

Prescriber information: Frequently asked questions about the Direct Oral Anticoagulants (DOACs) apixaban, dabigatran, edoxaban and rivaroxaban.

**References:**

- 1.) NICE: AF Management CG180 August 2014.  
<https://www.nice.org.uk/guidance/cg180?UNLID=81235962120166782425#>
- 2.) Wallentin L et al. Efficacy & safety of apixaban compared with warfarin at different levels of predicted INR control for stroke prevention in AF. CIRCULATIONAHA.112.142158 May 2, 2013, doi: 10.1161/  
<http://circ.ahajournals.org/content/early/2013/05/02/CIRCULATIONAHA.112.142158.abstract>

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