Discontinuation of Direct Oral Anticoagulants (DOACs) prior to Diagnostic/Interventional procedures

The DOACs are dabigatran, rivaroxaban, apixaban, and edoxaban. Deciding when to stop these drugs prior to any diagnostic/interventional procedure is based on the type of intervention planned, associated risk of bleeding, and the patient’s clinical status. Consideration of renal function is required for dabigatran as clearance of these drugs is significantly affected by renal impairment.

**Dabigatran**

**Procedure bleed risk & time required peri-operatively to discontinue**

<table>
<thead>
<tr>
<th>Renal function (CrCL in mL/min)</th>
<th>Estimated half-life (hours)</th>
<th>Stop dabigatran before elective surgery</th>
</tr>
</thead>
<tbody>
<tr>
<td>CrCl ≥ 80</td>
<td>~ 13</td>
<td>2 days before High risk of bleeding or major surgery</td>
</tr>
<tr>
<td>CrCl ≥ 50-80</td>
<td>~ 15</td>
<td>2-3 days before Standard risk</td>
</tr>
<tr>
<td>CrCl ≥ 30-50</td>
<td>~ 18</td>
<td>4-5 days before</td>
</tr>
<tr>
<td>(CrCl &lt; 30mL/min patients should not be receiving dabigatran)</td>
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**Rivaroxaban / Apixaban / Edoxaban**

Stop 24 hours before a procedure deemed to have a standard risk of bleeding.

Stop 48 hours before a procedure deemed to have a high risk of bleeding.

**Risk**

Surgery associated with a **standard risk of bleeding**: hernia repair, cholecystectomy, dental extraction.

Surgery associated with a **high risk of bleeding**: cardiothoracic, neurosurgery and vascular surgery.

**Dental procedures in patients taking DOACs**

In patients taking DOACs and requiring dental fillings or dental hygiene treatment the advice is to continue the DOAC as the bleeding risk of the procedure is low.

In patients taking a DOAC and requiring an extraction or root canal treatment involving a deep nerve block, unless the patient is high risk for recurrent thrombosis, suggest stopping the DOAC for approximately 24 hours (assuming normal hepatorenal function). Assuming there were no issues with post-procedure bleeding the DOAC could be restarted the following day. High-risk patients would be patients identified by haematologists as suffering recurrent thrombotic events with further recurrences when treatment stopped for procedures/surgery.

Patients requiring single dose antibiotic prophylaxis prior to invasive dental procedures do not require dose reduction or discontinuation of oral anticoagulants.

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**March 2017**

**Recommended by**: Cardiology Working Group  
**Nov 2017**

**Approved by**: Dorset Medicines Advisory Group  
**July 2018**

**Review due**: **Nov 2019**, or earlier in the light of new evidence