Which DOAC for Which DVT: Can We Stratify Yet?

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DTI FACTOR Xa INHIBITORS

- Dabigatran
- Rivaroxaban
- Apixaban
- Edoxaban

FDA approved indications
- Non-valve a fib
- VTE prophylaxis
- THR
- Tx/ extended Tx of DVT/PE
- Non-valve a fib
- VTE prophylaxis
- THR
- Tx/ extended Tx of DVT/PE
- Non-valve a fib
- VTE prophylaxis
- THR
- Tx/ extended Tx of DVT/PE

Peak effect (hrs) 1-3 2-4 1-3 1-3
Half-life (hrs) 7-17 5-9 (6-13 elderly) 8-15 9-11
Renal clearance
80% excreted in urine
33% 25% 50%
Dialyzable
Yes. 65% removed but concentrations rebound as drug re-equilibrates
No No No

Characteristics of DTIs and Factor Xa Inhibitors

Overall VTE risk reduction NOACs = VKA
NOACs similar
In cancer, VTE risk reduction LMWH better than VKA
LMWH probably better than NOACs
Overall risk for bleeding NOACs better than VKA
Apixaban better than other NOACs
GI bleeding VKA probably better than dabigatran, rivaroxaban, and edoxaban

Factors That Affect Choice of Anticoagulation

- Cancer vs no cancer
- Oral vs parenteral therapy
- Dose frequency
- Liver disease and coagulopathy
- Renal disease
- Coronary artery disease
- GI symptoms or prior GI bleeding
- Patient compliance
- Concomitant thrombolysis
- Need for reversal
- Pregnancy or risk of pregnancy

Antithrombotic Therapy for VTE Disease
CHEST Guideline and Expert Panel Report
Kearon, Chest 2016

November 18, 2016, Veith Symposium, New York, NY

Anticoagulation for Provoked and Unprovoked VTE

Long-Term Anticoagulation Therapy (Rest 3 months)

- Leg DVT or PE and no cancer, we suggest dabigatran, rivaroxaban, apixaban, or edoxaban over vitamin K antagonist (VKA) therapy.

- Leg DVT or PE and cancer, we suggest LMWH over VKA, dabigatran, rivaroxaban, apixaban, or edoxaban.

Grade

2B
2C

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Disclosures

Timothy K. Liem, MD discloses the following:

- Site PI for Boehringer-Ingelheim (dabigatran)

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### Antithrombotic Therapy for VTE Disease

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<tr>
<th>Factor</th>
<th>Initial Assessment</th>
<th>Qualifying Criteria</th>
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<tr>
<td>Cancer</td>
<td>Initial assessment</td>
<td>Patients with cancer (and other high-risk conditions) who are at high risk of VTE and are unable to take warfarin.</td>
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<tr>
<td>Renal disease and comorbidities</td>
<td>Initial assessment</td>
<td>Patients with moderate to severe renal impairment who are unable to take warfarin.</td>
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<tr>
<td>No contraindications to anticoagulation</td>
<td>Initial assessment</td>
<td>Patients with no contraindications to anticoagulation.</td>
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<tr>
<td>Warfarin therapy</td>
<td>Initial assessment</td>
<td>Patients taking warfarin who require additional anticoagulation.</td>
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**Recommendations:**
- For patients with cancer who are unable to take warfarin, consider using an alternative anticoagulant, such as Dabigatran or low-molecular-weight heparin. 
- For patients with moderate to severe renal impairment who are unable to take warfarin, consider using low-molecular-weight heparin or an alternative anticoagulant. 
- For patients with no contraindications to anticoagulation, consider using a direct oral anticoagulant. 
- For patients taking warfarin who require additional anticoagulation, consider using an alternative anticoagulant or adjusting the warfarin dose.
Anticoagulation for Recurrent VTE While on Therapy

Recurrent VTE on VKA therapy (therapeutic INR), dabigatran, rivaroxaban, apixaban, or edoxaban (and compliant), we suggest switching to LMWH — (usually >1 mos)

Summary

• Direct-thrombin inhibitors and Factor Xa inhibitors offer a variety of options for the treatment of VTE

• New target-specific anticoagulants vary regarding route, frequency, elimination, and risk for bleeding.

• Choice of anticoagulation should be tailored to these variables, patient comorbidities, and patient preference