

# short & snappy

-A CLINICAL OVERVIEW

## The DOs and DON'Ts of DOACs for Thromboprophylaxis in Cancer Patients

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**In patients with active cancer without venous thromboembolism (VTE), how can we determine whether direct oral anticoagulants (DOACs) are a safe and effective option to prevent VTE occurrence?**


**Step 1:** VTE risk assessment. The AVERT and CASSINI trials included patients with a Khorana risk of  $\geq 2$  and showed a statistically significant reduction in overall VTE with thromboprophylaxis using DOACs. [1,2]

Patient characteristic	Risk score
<b>Site of cancer</b>	
Very high risk (stomach, pancreas)	2
High risk (lung, lymphoma, gynecologic, bladder, testicular)	1
Prechemotherapy platelet count $350 \times 10^9/L$ or more	1
Hemoglobin level less than $100g/L$ or use of red cell growth factors	1
Prechemotherapy leukocyte count more than $11 \times 10^9/L$	1
BMI $35kg/m^2$ or more	1

**Step 2:** Assess bleed risk and whether patient would fit inclusion criteria of the RCTs. [1,2]

Inclusion criteria	Exclusion criteria
Ambulatory outpatients 18+ years old	Weight $>120kg$ or BMI $>40kg/m^2$
Solid tumor or lymphoma	Renal insufficiency (CrCl $<30ml/min$ )
Plan to start new systemic treatment within 1 week of starting VTE prophylaxis	Primary brain tumor or brain metastases
Expected survival $> 6$ months	Hepatic disease associated with coagulopathy

**Step 3:** Assess safety of initiating a DOAC with a focus on drug interactions. [3]

rivaroxaban or apixaban  potent inhibitors or inducers of P-gp or CYP450 3A4

**Bottom line:** Rivaroxaban 10mg po daily and apixaban 2.5mg po bid showed a statistically significant reduction in overall VTE incidence with no statistically significant difference in all-cause mortality. Studies showed an increase in major bleeding events, clinically related non-major bleeding events, and total bleeding events, but the difference was not statistically significant. [1-4]

**References**

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