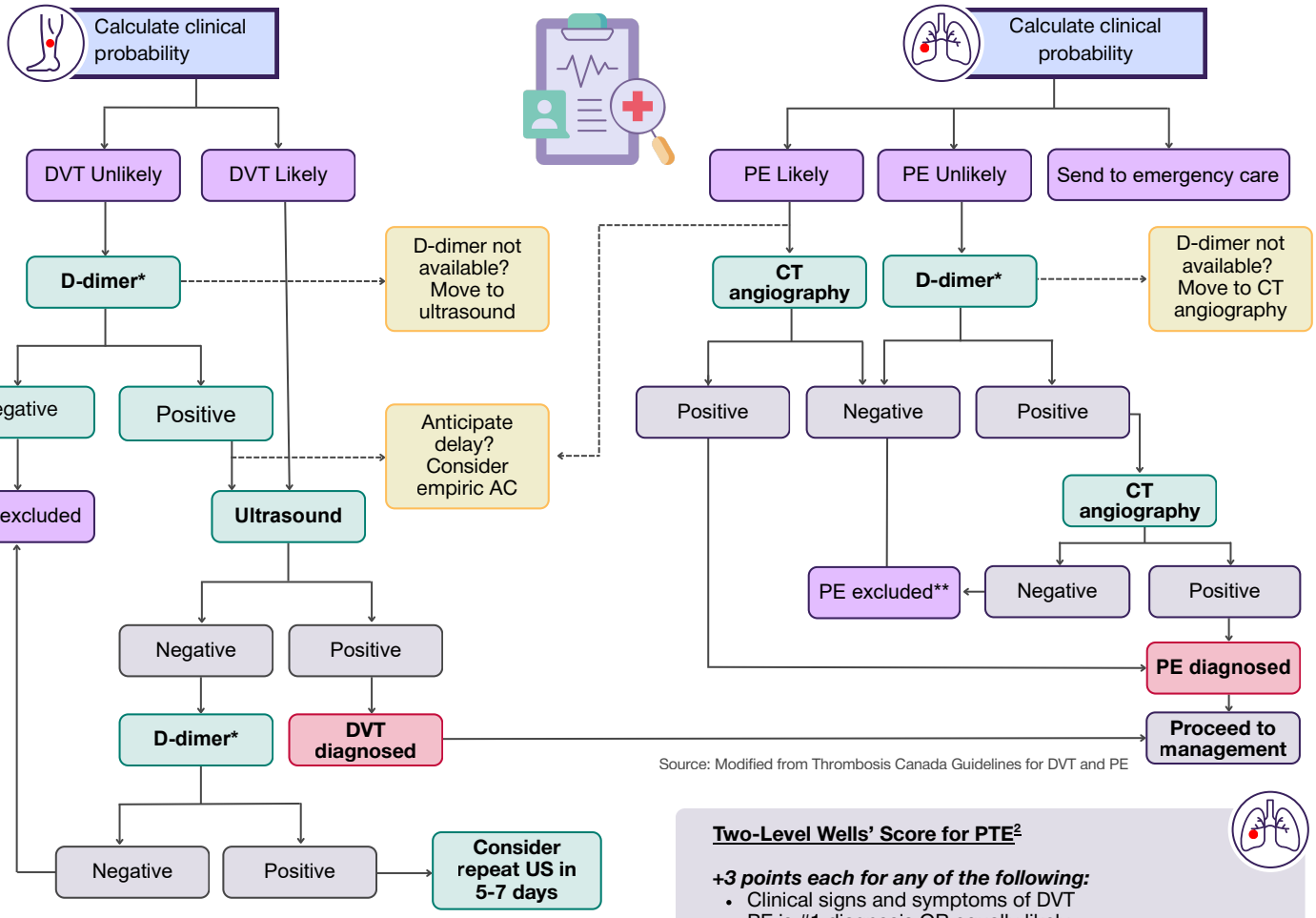
Rapid Resource

Anticoagulation FORUM | ANTICOAGULATION Centers of Excellence

Venous Thromboembolism (VTE): Diagnosis and Management for the Primary Care Provider

Background: Approximately 900,000 people in the U.S. develop VTE each year. To avoid significant morbidity and mortality, prompt diagnosis and treatment is necessary. Primary care providers are often the first to identify presenting symptoms and are tasked with making anticoagulation management decisions. This tool is designed to guide primary care providers through each step of the diagnosis and management process using evidence-based and clinically practice tools and tips.

DIAGNOSIS



Source: Modified from Thrombosis Canada Guidelines for DVT and PE

Two-Level Wells' Score for DVT[1]

+1 point each for any of the following:
- Paralysis, paresis or recent orthopedic casting of lower extremity
- Bedridden > 3 days or recently or major surgery within past 12 weeks
- Localized tenderness of the deep veins
- Swelling of entire leg
- Calf swelling 3 cm greater than other leg (measured 10 cm below the tibial tuberosity)
- Pitting edema greater in the symptomatic leg
- Non-varicose collateral superficial veins
- Active cancer or cancer treated within 6m
- Previously documented DVT

–2 points if:
Alternative diagnosis at least as likely as DVT (Baker's cyst, cellulitis, muscle damage, superficial vein thrombosis, post-thrombotic syndrome, inguinal lymphadenopathy, extrinsic venous compression)

Score:
<2 = Unlikely (probability of DVT 6%)
≥2 = Likely (probability of DVT 28%)

Two-Level Wells' Score for PTE[2]

+3 points each for any of the following:
- Clinical signs and symptoms of DVT
- PE is #1 diagnosis OR equally likely

+1.5 points each for any of the following:
- Heart Rate >100 bpm
- Immobilization at least 3 days OR surgery in the previous 4 weeks
- Previous, objectively diagnosed PE or DVT

+1 point each for any of the following:
- Hemoptysis
- Malignancy with treatment within 6 months or palliative

Score:
0–4 = Unlikely (probability of PE 12.1%)
≥4 = Likely (probability of PE 37.1%)

*What is a positive **D-dimer**? Use age-adjusted threshold:
Age <50 y: >500 mcg/L
Age ≥50 y: Age × 10

**If high clinical suspicion and D-dimer or CT angiography negative, V/Q scan and/or lower extremity ultrasound can be considered.

Outpatient vs Inpatient

DVT: Almost all can be managed outpatient.
Admit if evidence of phlegmasia, severe symptoms
PE: Calculate sPESI – score <1 can be managed outpatient

CRITERIA FOR sPESI[3]
(Simplified Pulmonary Embolism Severity Index

Age > 80 years - +1
Cancer (active or history) - +1
Heart failure or chronic lung disease - +1
Heart Rate > 110 bpm - +1
Systolic BP < 100 mmHg - +1
O_2 saturation < 90% - +1

Initial Management: Use Shared Decision Making and Consider Patient Specific Factors[4-6]

Medication	Dose	Clinical Pearls	General Considerations
Apixaban	10mg BID x 7 days then 5mg BID	DO NOT adjust dose based on AFib criteria (age, weight, etc..)	Using Apixaban or Rivaroxaban starter packs are preferred, but many pharmacies don't carry them! • Assure availability or consider writing for the number of pills for the first month **Insurance coverage issues:** • 30-day free trial cards may be an option in the U.S., but make sure you have a plan after 30 days • $10 copay cards are available for patients with commercial insurance **Additional Resources:** • NeedyMeds, GoodRx, and CostPlusDrugs.com to find discounts, prescription assistance programs and manufacturer coupons
Rivaroxaban	15mg BID x 21 days then 20mg daily	DO NOT adjust dose based on renal function	
Dabigatran	150 mg BID start **AFTER** 5-10 days of parenteral anticoagulation*	Do not overlap parenteral agent and DOAC	
Edoxaban	60mg daily start **AFTER** 5-10 days of parenteral anticoagulation*		
Warfarin	INR Goal 2.0-3.0 WITH parenteral bridge	Schedule a repeat INR in 2-3 days	

Acute VTE
DOAC (apixaban) preferred
COBRRA VTE RCT: apixaban had significantly lower bleeding risk vs rivaroxaban[7]

Aspirin & NSAIDs
Can you de-prescribe?
In many cases aspirin can be safely stopped once anticoagulation is initiated (Ex. Primary prevention, Stable CAD, PCI > 1 year)

Mechanical Heart Valves
Warfarin preferred
DOACs are contraindicated
Low dose ASA only indicated in select patients with high thrombotic risk

Antiphospholipid Syndrome
Warfarin preferred
DOACs not recommended for triple positive patients
Use caution with DOACs in single/double positivity

Menstruation
Apixaban or dabigatran preferred
These DOACs have lower rates of heavy menstrual bleeding

Abnormal Gut Anatomy
Optimal agent varies
Check out the AC Forum Rapid Resource to determine the preferred anticoagulant

Extreme Obesity
Limited data for DOACs
May consider warfarin in patients with BMI > 50 or weight > 150 kg

CKD & Dialysis
Apixaban or warfarin preferred
Use label dosing for Acute VTE
No dose adjustment needed

Advanced Age
Apixaban preferred
Avoid dabigatran and rivaroxaban as they may increase risk of bleeding (BEERS Criteria)

Pregnancy
LMWH preferred
Warfarin contraindicated in 1st trimester
DOACs are contraindicated all trimesters

Duration of Anticoagulation[4]

Risk Factor		Examples	AC Strategy	General Considerations
Transient	Major	• Surgery ≥ 30min w/ general anesthesia • Trauma w/ fracture • Cesarean section	Full dose AC 3-6 months then consider discontinuation if risk factor is resolved. *Note: When stopping AC, reassess need to add ASA if previously deprescribed.*	Validated risk scores can assist with determining risk for recurrence and bleeding *Indefinite anticoagulation • Can be with either Full Intensity DOAC or Low Intensity apixaban/rivaroxaban depending on the clinical scenario and patient specific risk factors • Engage in shared decision making about risk of recurrence vs. bleeding risk annually For more: Guidance on Anticoagulation Treatment of Various VTE
	Minor	• Surgery < 30 min w/ general anesthesia • Travel >8hrs • Pregnancy		
Persistent	Major	• Cancer • Antiphospholipid syndrome • ≥ 2 idiopathic thrombotic events	Full dose AC 3-6 months then consider indefinite anticoagulation* if disease is active and bleed risk is acceptable.	
	Minor	• Inflammatory Bowel Disease • Permanent Immobility • Active Autoimmune Disease		

BOTTOM LINE

DO	• Ensure close follow-up for all patients starting anticoagulation • Confirm DOAC affordability at initiation; if a 30-day coupon is used for first fill, arrange long-term assistance as needed • Delay nonurgent procedures for 3 months after VTE • Educate patient on importance of adherence • Discuss long-term effects of VTE with patients (Ex. Vasculearn VTE Communication Guide)
CONSIDER	• Give a single empiric dose of anticoagulation when VTE suspicion is high and confirmatory testing will be delayed • Refer to an anticoagulation clinic with dedicated expertise, if available • Reassess aspirin use. Aspirin is often unnecessary once anticoagulation is started and significantly increases bleeding without added benefit. If aspirin is held and anticoagulation is later discontinued (after 3-6 months), restart aspirin if still indicated.
CAUTION	• DOAC costs can vary with insurance and deductible changes. Regularly confirm that patients can afford their anticoagulation and ask them to notify you if they cannot. • Assess bleeding risk at anticoagulation initiation and reduce modifiable risks (e.g., deprescribe aspirin, avoid NSAIDs) • For patients on chronic anticoagulation undergoing procedures: DOACs do not require bridging; bridging is indicated only for select patients on warfarin

Abbreviations: ACS: Acute Coronary Syndrome; AFib: Atrial Fibrillation; ASA: Aspirin (acetylsalicylic acid); BID: Twice Daily; BMI: Body Mass Index; CAD: Coronary Artery Disease; CKD: Chronic Kidney Disease; CT: Computed Tomography; DOAC: Direct Oral Anticoagulant; DVT: Deep Vein Thrombosis; ESRD: End-Stage Renal Disease; HR: Heart Rate; INR: International Normalized Ratio; LMWH: Low-Molecular-Weight Heparin; NSAIDs: Nonsteroidal Anti-Inflammatory Drugs; PCI: Percutaneous Coronary Intervention; PE: Pulmonary Embolism; RCT: Randomized Controlled Trial; SBP: Systolic Blood Pressure; sPESI: Simplified Pulmonary Embolism Severity Index; V/Q: Ventilation-Perfusion; VTE: Venous Thromboembolism

References: 1. N Engl J Med. 2003;349(13):1227-1235. **2.** Thromb Haemost. 2000;83(3):416-420. **3.** Arch Intern Med. 2010;170(15):1383-1389. **4.** Blood Adv. 2020;4(19):4693-4738. **5.** Chest. 2021;160(6):e545-e608. **6.** Circulation. 2004;110(9 Suppl 1):I3-I9. **7.** Res Pract Thromb Haemost. 2025;9:e00255

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