ASH Clinical Practice Guidelines on Venous Thromboembolism

Treatment of VTE

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ASH CLINICAL PRACTICE GUIDELINES
VENOUS THROMBOEMBOLISM (VTE)

ASH Clinical Practice Guidelines on VTE

1. Prevention of VTE in Surgical Hospitalized Patients
2. Prevention of VTE in Medical Hospitalized Patients
3. Treatment of Acute VTE (DVT and PE)
4. Optimal Management of Anticoagulation Therapy
5. Prevention and Treatment of VTE in Patients with Cancer
6. Heparin-Induced Thrombocytopenia (HIT)
7. Thrombophilia
8. Pediatric VTE
9. VTE in the Context of Pregnancy
10. Diagnosis of VTE

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How were these ASH guidelines developed?

PANEL FORMATION
Each **guideline panel** was formed following these key criteria:
- Balance of expertise (including disciplines beyond hematology, and patients)
- Close attention to minimization and management of conflicts of interest

CLINICAL QUESTIONS
10 to 20 **clinically-relevant questions** generated in **PICO format** (population, intervention, comparison, outcome)

Example: PICO question
"Should anticoagulation versus no therapy be used in neonates with renal vein thrombosis?"

EVIDENCE SYNTHESIS
Evidence summary generated for each PICO question via systematic review of health effects plus:
- Resource use
- Feasibility
- Acceptability
- Equity
- Patient values and preferences

MAKING RECOMMENDATIONS
Recommendations made by guideline panel members based on evidence for all factors.

How patients and clinicians should use these recommendations

	STRONG Recommendation ("The panel recommends…")	CONDITIONAL Recommendation ("The panel suggests…")
For patients	Most individuals would want the intervention.	A majority would want the intervention, but many would not.
For clinicians	Most individuals should receive the intervention.	Different choices will be appropriate for different patients, depending on their values and preferences. Use **shared decision making**.

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Case vignette

- MG, 73 y.o. man
- Medical history: type 2 diabetes, arterial hypertension, acute coronary syndrome treated conservatively 10 years before.
- On treatment with ramipril, amlodipine, metformin, ASA 100 mg
- Oedema of the left lower limb started 3 days ago, moderate/severe pain from yesterday evening

Case vignette

- Access to the ER
- Wells score: DVT likely
- CUS: Thrombosis of the common femoral, superficial femoral, popliteal, and posterior tibial veins of the left lower limb

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Should patients with DVT/PE be treated with DOAC rather than LMWH/VKA?

Should patients with DVT/PE be treated with one type of DOAC compared to another type of DOAC?

Recommendation

- The ASH guideline panel suggests using DOAC over VKA in patients with deep venous thrombosis or pulmonary embolism Conditional recommendation based on moderate certainty in the evidence about effects

Remarks

- DOAC are not indicated in individuals with severe renal failure, clinically significant liver disease, childbearing potential without proper contraceptive measures, pregnancy or breast-feeding
- Some patients may choose VKA. A shared decision-making approach is suggested

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Evidence for a specific DOAC

- There is no evidence from head to head comparisons of different DOACs
- Subgroup analyses with the approved indications and dosage of DOACs do not consisently suggest a significant difference between dabigatran, rivaroxaban, apixaban, or edoxaban

Recommendation

- We do not suggest one DOAC over another (conditional recommendation based on moderate certainty in the evidence about effects)

Remarks

- Factors as LMWH lead requirement, once vs. twice daily dosing and out of pocket cost of the alternatives may drive the selection of the specific DOAC. Other factors as renal function, concomitant medications, and the presence of cancer may also impact on the final decision

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Should **prognostic score** vs no prognostic score be used in patients with unprovoked DVT/PE to decide treatment duration?

Should **D-dimer** vs no D-dimer be used in patients with unprovoked DVT/PE to decide treatment duration?

Should **ultrasound** vs no ultrasound be used in patients with unprovoked DVT/PE to decide treatment duration?

Recommendation

- We suggest against routine use of prognostic scores, D-dimer, ultrasound to guide the duration of anticoagulation (Conditional recommendation based on (very) low certainty in the evidence about effects)

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Should indefinite anticoagulation vs discontinuation of anticoagulation be used in patients with unprovoked DVT/PE who completed acute treatment?

Recommendation

- We suggest continuing indefinite anticoagulation over stopping anticoagulation (Conditional recommendation based on moderate certainty in the evidence about effects)

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Should lower dose of DOAC vs standard dose DOAC be used for patients with DVT/PE that completed an initial course of anticoagulation and are going to continue on indefinite anticoagulation?

Recommendation

- We suggest using either standard dose DOAC or lower dose DOAC (Conditional recommendation based on moderate certainty in the evidence about effects)

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Should continue aspirin vs suspend aspirin be used in patients with DVT/PE who initiate anticoagulation and are previously taking aspirin for prevention of cardiovascular disease?

Recommendation

- We suggest suspending aspirin over continuing it (Conditional recommendation based on very low certainty in the evidence about effects)

Remarks

- A critical review of the indication of aspirin is needed, considering the increased risk of bleeding versus the potential benefit in terms of cardiovascular prevention

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Other recommendations covered in this guideline

- Outpatient treatment of PE
- Thrombolysis for DVT and PE
- IVC filters for DVT and PE
- Treatment duration after provoked DVT/PE (transient and chronic risk factors)
- Aspirin for the secondary prevention of DVT/PE
- Lower target INR for the secondary prevention of DVT/PE
- Treatment of recurrent DVT/PE
- Compression stockings

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