Treatment of Acute DVT

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I have the following potential conflicts of interest to report:

- Receipt of grants/research support
- Receipt of honoraria and travel support
- Participation in a company-sponsored speaker bureau
- Employment in industry
- Shareholder in a healthcare company
- Owner of a healthcare company

I do not have any potential conflict of interest
DEEP VENOUS THROMBOSIS

- Affects 0.1% of the general population per year

- Complicated acutely by Pulmonary embolism
  - Third most common CV related mortality cause

- Long-term complication: Post-Thrombotic syndrome (PTS)
  - Pain, venous claudication, venous ulcer
  - Great morbidity
  - Great economic impact: NHS £1 billion per year to treat.

ACUTE DEEP VENOUS THROMBOSIS

- Treatment STRATEGIES and DURATIONS differ according to:

1. **Precipitating factors:**
   - Unprovoked
   - Provoked, persistent risk factor
   - Provoked, transient risk factor

2. **Anatomic involvement:**
   - Ilio-femoral
   - Proximal
   - Isolated distal DVT
ACUTE DEEP VENOUS THROMBOSIS

CLINICAL PRACTICE GUIDELINE DOCUMENT

Editor’s Choice – European Society for Vascular Surgery (ESVS) 2021 Clinical Practice Guidelines on the Management of Venous Thrombosis

Antithrombotic Therapy for VTE Disease
Second Update of the CHEST Guideline and Expert Panel Report
1. PRECIPITATING FACTORS  →  PROVOKED DVT

MAJOR TRANSIENT RISK FACTOR

- In patients with VTE diagnosed in the setting of a major transient risk factor, we **recommend against** offering *extended-phase* anticoagulation;

MINOR TRANSIENT RISK FACTOR

- In patients with VTE diagnosed in the setting of a minor transient risk factor, we **suggest against** offering *extended-phase* anticoagulation;
1. PRECIPITATING FACTORS ➡ PERSISTENT FACTOR OR UNPROVOKED DVT

<table>
<thead>
<tr>
<th>Recommendation 21</th>
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<tbody>
<tr>
<td>For patients with unprovoked proximal deep vein thrombosis who are at low or moderate bleeding risk, extended anticoagulation beyond three months, with periodic re-evaluation of bleeding risk, is recommended.</td>
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<tr>
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<tr>
<td>I</td>
<td>A</td>
<td>Kakkos et al. (2014), Agnelli et al. (2013), Weitz et al. (2017)</td>
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- In patients with acute VTE who do not have a contraindication we **RECOMMEND** a **3-month treatment** phase of anticoagulation;  
  
  ![Strong; Level B](image)

- In patients with VTE diagnosed in the absence of transient provocation, we **RECOMMEND** offering **extended-phase anticoagulation** with a DOAC;  
  
  ![Strong; Level B](image)
2. ANATOMIC INVOLVEMENT

IN ISOLATED DISTAL DVT

Severe symptoms OR Risk factors for extension

Serial Imaging for 2 weeks

No Extension

Thrombus Extension

ANTICOAGULATION

Weak; Level B

NO ANTICOAGULATION

Strong; Level B

ANTICOAGULATION

Weak; Level C

Strong; Level B

Confined to the distal veins

Proximal Veins
2. ANATOMIC INVOLVEMENT

**ISOLATED DISTAL DVT**

**Recommendation 38**
For patients with calf deep vein thrombosis, a decision to anticoagulate based on symptoms, risk factors for progression, and bleeding risk should be considered.

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<td>IIa</td>
<td>C</td>
<td>Consensus</td>
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**Recommendation 39**
For patients with symptomatic calf deep vein thrombosis requiring anticoagulant treatment, three months of therapy is recommended over shorter durations.

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<tr>
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<tr>
<td>I</td>
<td>A</td>
<td>Franco et al. (2017)\textsuperscript{243}</td>
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<td></td>
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<td>Kirkilesis et al. (2020)\textsuperscript{250}</td>
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**Recommendation 42**
For patients with symptomatic calf deep vein thrombosis not receiving anticoagulation, clinical re-assessment and repeat whole leg ultrasound after one week is recommended.

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<td>I</td>
<td>B</td>
<td>Garry et al. (2016)\textsuperscript{241}</td>
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2. ANATOMIC INVOLVEMENT → ISOLATED ILIO-FEMORAL DVT

**Recommendation 34**

In selected patients with symptomatic iliofemoral deep vein thrombosis, early thrombus removal strategies should be considered.

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<tr>
<td>IIA</td>
<td>A</td>
<td>Sharifi et al. (2010), Enden et al. (2012), Vedantham et al. (2017), Notten et al. (2020), Sharifi et al. (2012), Comerota et al. (2019), Kahn et al. (2020)</td>
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VS

16. In patients with acute proximal DVT of the leg, we suggest anticoagulant therapy alone over CDT. *Grade 2C*
“I'm puzzled.”

WHAT ARE THE ANTICOAGULANTS OF CHOICE?
For patients with provoked proximal deep vein thrombosis, treatment with a **direct oral anticoagulant** is recommended over a vitamin K antagonist for the principal treatment phase.

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In patients with VTE (DVT of the leg or PE) we **RECOMMEND** **APIXABAN, DABIGATRAN, EDOXABAN, OR RIVAROXABAN** over vitamin K antagonist (VKA) as treatment-phase (first 3 months) anticoagulant therapy.

**Strong; Level B**
For patients with deep vein thrombosis and triple positive antiphospholipid syndrome, treatment with a vitamin K antagonist titrated to maintain a target international normalised ratio between 2–3 should be considered.

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<td>IIa</td>
<td>B</td>
<td>Pengo et al. (2018)</td>
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In patients with confirmed antiphospholipid syndrome being treated with anticoagulant therapy, we suggest adjusted dose VKA (target INR 2.5) over direct oral anticoagulant (DOAC) therapy during the treatment phase.
## ANTICOAGULANTS OF CHOICE

### SPECIFIC POPULATIONS

#### ACUTE DEEP VENOUS THROMBOSIS

**Recommendation 63**

For patients with cancer associated deep vein thrombosis, a low molecular weight heparin is recommended for initial and principal phase anticoagulation.

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<td>A</td>
<td>Kirkilesis et al. (2019)⁶⁵⁵</td>
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**Recommendation 65**

In selected patients with cancer associated deep vein thrombosis, with the malignancy not located in the gastrointestinal or genitourinary systems, an approved direct oral anticoagulant for initial, principal, and extended treatment should be considered.

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<td>Posch et al. (2015),⁶⁶⁴ Kirkilesis et al. (2019),⁶⁶⁵ Kraajpoel et al. (2018),⁶⁶⁷ McBane et al. (2020),⁶⁶⁹ Agnelli et al. (2020)⁷⁷⁰</td>
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### CANCER-ASSOCIATED VTE

In patients with acute VTE in the setting of cancer (cancer-associated thrombosis) we **RECOMMEND** an oral Xa inhibitor (**APIXABAN**, **EDOXABAN**, **RIVAROXABAN**) over low molecular weight heparin (LMWH) for the initiation and treatment phases of therapy

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Strong; Level B
ACUTE DEEP VENOUS THROMBOSIS

ARE THERE OTHER TREATMENT STRATEGIES?

“I'm puzzled.”
ROLE OF ASPIRIN

In patients with an **unprovoked proximal DVT** or PE who are stopping anticoagulant therapy and do not have a contraindication to aspirin, we **SUGGEST ASPIRIN** over no aspirin to prevent recurrent VTE;
In patients with acute DVT of the leg, we suggest AGAINST using **COMPRESSION STOCKINGS** routinely to prevent post-thrombotic syndrome (PTS).
CONCLUSION

- Deep venous thrombosis is a **COMMON** condition;

- It is a potentially life-threatening and burdening disease, causing great morbidity to the patients, and elevated health-related economic costs to the country;

- Current **INTERNATIONAL GUIDELINES** have **SIMILAR RECOMMENDATIONS** regarding treatment indication and duration;

**NONETHELESS,**
CONCLUSION

• There is still no international consensus regarding some subjects, with poor evidence-based recommendations:

  - Balanced approach in distal DVT;
  - DOACs are the MAIN OPTION for DVT except when in the presence of antiphospholipid syndrome;
  - Aspirin MAY HAVE A ROLE in secondary prevention;
  - NO ROLE for compressions stockings;
  - Treat symptomatic distal DVT;
  - DOACs should only be used in SELECTED CASES of cancer-associated thrombosis;
  - Aspirin has NO ROLE in secondary prevention;
  - Compression stockings are RECOMMENDED to prevent PTS;
  - Patient-adjusted treatment strategies are therefore paramount for optimal long term results. Further studies are required to clarify current areas of conflict and unresolved issues.
Treatment of Acute DVT

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