

Executive summary of the consensus-based guidance from the Siset (Italian Society for the Study of Hemostasis and Thrombosis) for the management of inferior vena cava thrombosis

Luca Barcella,¹ Simona Pedrini,² Luca Sarti,³ Monia Marchetti,⁴ Claudio Sallemi,⁵ Antonella Tufano,⁶ Walter Ageno,⁷ Marco Marietta⁸

¹ERN EuroBloodNet; Hemostasis and Thrombosis Center, Department of Transfusion Medicine, Papa Giovanni XXIII Hospital, Bergamo; ²Clinical Pathology Unit, Fondazione Poliambulanza University Hospital, Brescia; ³Thrombosis Center, Emergency Internal Medicine Unit, Modena University Hospital; ⁴Hematology and Transplant Unit, University Hospital SS Antonio e Biagio e Cesare Arrigo, Alessandria; ⁵Interventional Radiology Unit, Fondazione Poliambulanza University Hospital, Brescia; ⁶Department of Clinical Medicine and Surgery, University of Naples Federico II, Naples; ⁷Department of Medicine, University of Padua; ⁸Department of Hematology, Modena University Hospital, Italy

Key words: venous thromboembolism, inferior vena cava thrombosis, DOAC, low-molecular weight heparins, catheter-directed thrombolysis.

We here report a summary of a consensus-based guidance from the Italian Society for the Study of Hemostasis and Thrombosis (Siset) on the management of patients with inferior vena cava thrombosis.¹

Why this guidance?

Inferior vena cava thrombosis (IVCT) is an uncommon but clinically severe manifestation of venous thromboembolism

(VTE), accounting for fewer than 2% of all deep vein thrombosis (DVT) events.^{2,3} Compared with conventional lower-extremity DVT, IVCT is associated with greater thrombotic burden, more frequent pulmonary embolism, higher risk of post-thrombotic syndrome, and increased mortality. Because randomized studies specifically addressing IVCT are lacking, management is largely extrapolated from proximal DVT evidence.

To address this gap, Siset developed the first comprehensive Guidance dedicated specifically to IVCT using a structured PICO methodology and a modified Delphi consensus process in accordance with the ISTH Guidance Development Process.^{4,5}

Diagnosis

Clinicians should suspect IVCT whenever the clinical presentation appears disproportionate to conventional lower-extremity DVT. Red flags include bilateral DVT, extensive ilio caval thrombosis, bilateral leg edema, unexplained abdominal, pelvic or lumbar pain, prominent abdominal collateral veins, and extensive thrombosis in young patients.^{6,7}

Compression ultrasonography is the initial imaging modality, but computed-assisted tomography (CT) venography is recommended for confirmation because of its superior visualization of the retroperitoneal venous system. Magnetic resonance venography is preferred when CT is contraindicated.⁸⁻¹⁰

Etiological assessment

Patients with IVCT require a broader diagnostic work-up than those with isolated lower-extremity DVT. Testing for antiphospholipid antibodies and lupus anticoagulant is recommended in first unprovoked IVCT, while inherited thrombophilia testing should be selective. Functional antithrombin testing should be considered in patients with congenital caval abnormalities.¹¹⁻¹³

Corresponding author: Marco Marietta, Dipartimento di Oncologia ed Ematologia, Azienda Ospedaliero-Universitaria - Ospedale Policlinico, via del Pozzo 71, 41124 Modena, Italy.
E-mail: marco.marietta@unimore.it

Conflict of interest: the authors declare that they have no competing interests.

Funding: none.

Contributions: all the authors read and approved the final version of the manuscript and agreed to be accountable for all aspects of the work.

Received: 23 July 2026.
Accepted: 3 September 2026.

Publisher's note: all claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article or claim that may be made by its manufacturer is not guaranteed or endorsed by the publisher.

©Copyright: the Author(s), 2026
Licensee PAGEPress, Italy
Bleeding, Thrombosis and Vascular Biology 2026; 5:582
doi:10.4081/btvb.2026.582

This work is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0).

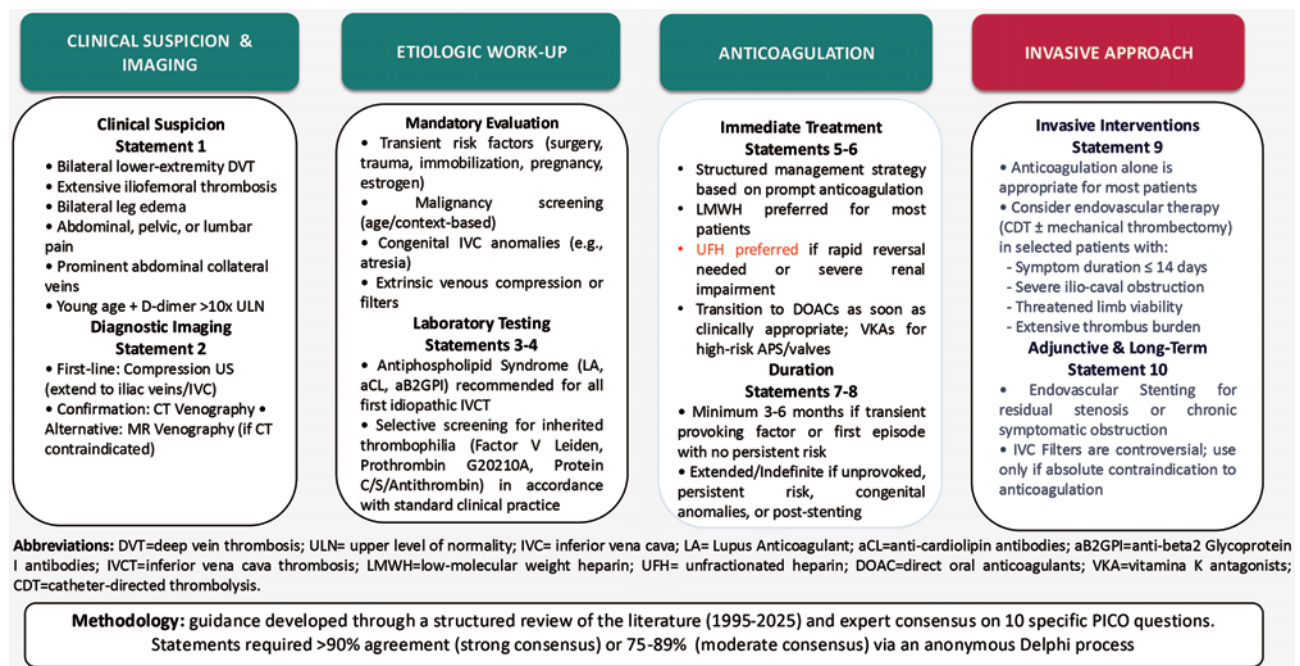


Figure 1. Executive summary of the consensus-based guidance from Siset for the management of inferior vena cava thrombosis.

Treatment

Therapeutic anticoagulation is the cornerstone of management. LMWH is preferred initially in most patients, whereas unfractionated heparin is favored when rapid reversal may be required.¹⁴⁻¹⁶ DOACs are appropriate for most patients after the acute phase, while vitamin K antagonists remain preferred in high-risk antiphospholipid syndrome or advanced kidney disease.¹⁷

Duration of anticoagulation

Patients with transient provoking factors should generally receive 3–6 months of treatment. Extended or indefinite anticoagulation should be considered in unprovoked IVCT, persistent risk factors, congenital caval abnormalities, antiphospholipid syndrome, major thrombophilia, or after caval stent implantation.^{14-16,18}

Invasive treatment

Most patients can be managed with anticoagulation alone. Catheter-directed thrombolysis and/or mechanical thrombectomy may benefit selected patients with recent extensive ilio-caval thrombosis. Surgical thrombectomy is reserved for exceptional cases.¹⁹⁻²³ Routine IVC filter placement is discouraged.

Clinical perspective

The Guidance proposes a standardized diagnostic and therapeutic pathway emphasizing early recognition, dedicated im-

aging, comprehensive etiological assessment, individualized anticoagulant duration, and referral of selected patients to experienced endovascular centers.

Conclusions

The Siset Guidance provides the first comprehensive consensus-based framework dedicated specifically to IVCT. Although evidence remains limited, these recommendations offer a practical approach to improve diagnosis, optimize treatment, reduce practice variability, and identify priorities for future research (Figure 1).

References

1. Barcella L, Pedrini S, Sarti L, et al. Management of inferior vena cava thrombosis: guidance from the Italian Society for the Study of Haemostasis and Thrombosis. *Thromb Haemost* 2026 Jun 30. doi: 10.1055/a-2897-0905. In press.
2. Alkhouli M, Morad M, Narins CR, et al. Inferior vena cava thrombosis. *JACC Cardiovasc Interv* 2016;9:629-43.
3. Shi W, Dowell JD. Etiology and treatment of acute inferior vena cava thrombosis. *Thromb Res* 2017;149:9-16.
4. International Society on Thrombosis and Haemostasis. Guidance proposal submission guide. Available from: Available online at: <https://www.isth.org/page/GuidanceProposalSub> Accessed June 1, 2026.
5. Aziz-Bose R, Margossian R, Ames BL, et al. Delphi panel consensus recommendations for screening and managing childhood cancer survivors at risk for cardiomyopathy. *JACC CardioOncol* 2022;4:354-67.

6. Kraft C, Hecking C, Schwonberg J, et al. Patients with inferior vena cava thrombosis frequently present with lower back pain and bilateral lower-extremity deep vein thrombosis. *Vasa* 2013;42:275-83.
7. Gong M, Kong J, Shi Y, et al. Risk factors and a predictive model for nonfilter-associated inferior vena cava thrombosis in patients with lower extremity deep vein thrombosis. *Front Cardiovasc Med* 2023;9:1083152.
8. Needleman L, Cronan JJ, Lilly MP, et al. Ultrasound for lower extremity deep venous thrombosis: multidisciplinary recommendations from the Society of Radiologists in Ultrasound consensus conference. *Circulation* 2018;137:1505-15.
9. Shah AA, Buckshee N, Yankelevitz DF, et al. Assessment of deep venous thrombosis using routine pelvic CT. *AJR Am J Roentgenol* 1999;173:659-63.
10. Evans AJ, Sostman HD, Witty LA, et al. Detection of deep venous thrombosis: prospective comparison of MR imaging and sonography. *J Magn Reson Imaging* 1996;6:44-51.
11. Linnemann B, Schmidt H, Schindewolf M, et al. Etiology and VTE risk factor distribution in patients with inferior vena cava thrombosis. *Thromb Res* 2008;123:72-8.
12. de la Morena-Barrio ME, Gindele R, Bravo-Pérez C, et al. High penetrance of inferior vena cava system atresia in severe thrombophilia caused by homozygous antithrombin Budapest 3 variant: description of a new syndrome. *Am J Hematol* 2021;96:1363-73.
13. Olds RJ, Lane DA, Boisclair M, et al. Antithrombin Budapest 3: an antithrombin variant with reduced heparin affinity resulting from the substitution L99F. *FEBS Lett* 1992;300:241-6.
14. Ortel TL, Neumann I, Ageno W, et al. American Society of Hematology 2020 guidelines for management of venous thromboembolism: treatment of deep vein thrombosis and pulmonary embolism. *Blood Adv* 2020;4:4693-738.
15. Stevens SM, Woller SC, Baumann Kreuziger L, et al. Antithrombotic therapy for VTE disease: compendium and review of CHEST guidelines 2012-2021. *Chest* 2024;166:388-404.
16. Cohen O, Ageno W, Farjat AE, et al. Management strategies and clinical outcomes in patients with inferior vena cava thrombosis: data from GARFIELD-VTE. *J Thromb Haemost* 2022;20:366-74.
17. Du J, Nie M, Yan Z, et al. Safety and efficacy of rivaroxaban for inferior vena cava thrombosis after successful catheter-directed thrombolysis. *Semin Thromb Hemost* 2022;48:459-64.
18. Kearon C, Ageno W, Cannegieter SC, et al. Categorization of patients as having provoked or unprovoked venous thromboembolism: guidance from the SSC of ISTH. *J Thromb Haemost* 2016;14:1480-3.
19. Enden T, Kløw NE, Sandvik L, et al. Catheter-directed thrombolysis vs. anticoagulant therapy alone in deep vein thrombosis: results of an open randomized, controlled trial reporting on short-term patency. *J Thromb Haemost* 2009;7:1268-75.
20. Alkhouli M, Zack CJ, Zhao H, et al. Comparative outcomes of catheter-directed thrombolysis plus anticoagulation versus anticoagulation alone in the treatment of inferior vena caval thrombosis. *Circ Cardiovasc Interv* 2015;8:e001882.
21. Golowa Y, Warhit M, Matsunaga F, et al. Catheter directed interventions for inferior vena cava thrombosis. *Cardiovasc Diagn Ther* 2016;6:612-22.
22. Sun X, Qin T, Zhang J, et al. The outcomes of interventional treatment for Budd-Chiari syndrome complicated by inferior vena cava thrombosis: systematic review and meta-analysis. *Gastroenterol Hepatol* 2021;44:405-17.
23. Morris RI, Jackson N, Smith A, et al. A systematic review of the safety and efficacy of inferior vena cava stenting. *Eur J Vasc Endovasc Surg* 2023;65:298-308.