



A VENOUS THROMBOEMBOLISM (VTE) TOWN HALL: Answering Your Top Questions on Treatment and Secondary Prevention

This handout is a supplemental resource to an educational video activity released on Medscape in August 2016.

Please access the activity on Medscape for complete information and content.

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Introductions

Why Discuss VTE?

Case Scenario: Meet Allison

Approach to Suspected DVT

Key references

Approach to Suspected DVT

High, moderate, and low pretest probability

Wells' Criteria for DVT

www.mdcalc.com/wells-criteria-for-dvt/

Clinical Feature	Points	Total Points	Risk
Active cancer	1	≥3	High
Leg paralysis	1	1-2	Moderate
Bedridden >3 days	1	0	Low
Local vein tenderness	1		
Entire leg swollen	1		
Unilateral swelling >3 cm	1		
Unilateral pitting edema	1		
Superficial veins	1		
Likely alternative	-2		

DVT=deep vein thrombosis.



Approach to Suspected PE

When is CT angio not needed?

Approach to Suspected PE

When is CT angio needed?

Approach to Suspected PE

Lab test considerations

Approach to Suspected PE

When to use thrombolysis

Approach to Suspected PE

When to use the PESI tool

The Pulmonary Embolism Severity Index (PESI) Score

www.mdcalc.com/pulmonary-embolism-severity-index-pesi/

Predictors	Points Assigned
Demographic characteristics	
Age, per year	Age (Years)
Male	+10
Comorbid conditions	
Cancer	+30
Heart failure	+10
Chronic lung disease	+10
Clinical findings	
Pulse >110/min	+20
Systolic blood pressure <100 mm Hg	+30
Respiratory rate >30/min	+20
Temperature <36° C	+20
Altered mental status	+60
Arterial oxygen saturation <90%	+20
Point total and risk classes: <65=Class I, 66-85=Class II, 86-105=Class III, 106-125=Class IV, >125=Class V.	

Class I: Low risk
Class V: Jump on this right now!



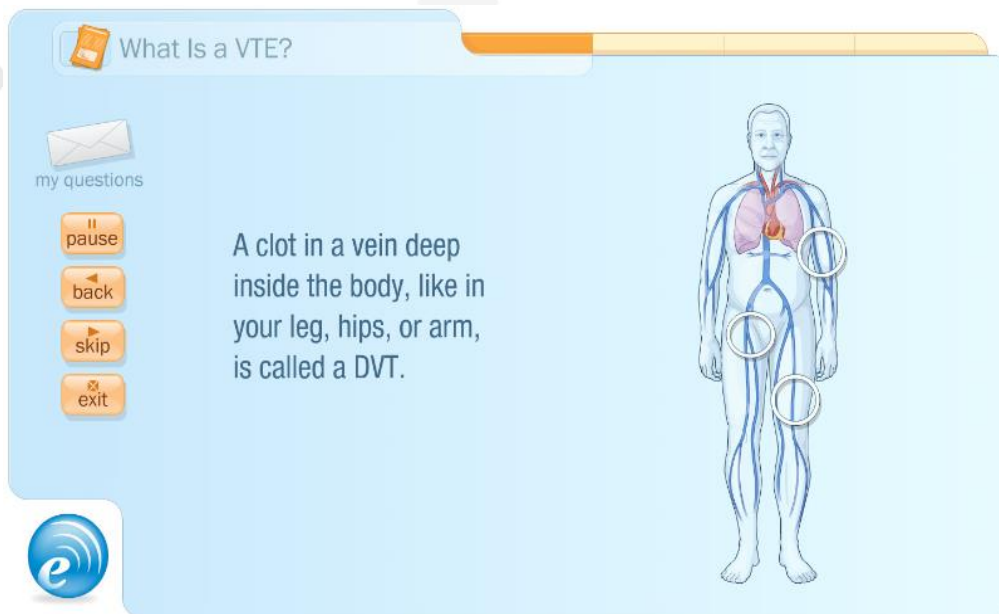
Agostini, D. et al. / Respir Crit Care Med. 2005;172:1040-1046.

References

- American Heart Association. Venous Thromboembolism (VTE). http://www.heart.org/HEARTORG/Conditions/More/Venous-Thromboembolism-VTE_UCM_479052_Article.jsp#.V4AtIPkrLIV. Accessed July 8, 2016.
- Aujesky D, Obrosky DS, Stone RA, et al. *Am J Respir Crit Care Med*. 2005;172(8):1041-1046. PMID: 16020800.
- Aujesky D, Roy PM, Verschuren F, et al. Outpatient versus inpatient treatment for patients with acute pulmonary embolism: an international, open-label, randomised, non-inferiority trial. *Lancet*. 2011;378(9785):41-48. PMID: 21703676.
- Bates SM, Jaeschke R, Stevens SM, et al. Diagnosis of DVT: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. *Chest*. 2012;141(2 Suppl):e351S-e418S. PMID: 22315267.
- Connolly SJ, Ezekowitz MD, Yusuf S, et al. Dabigatran versus warfarin in patients with atrial fibrillation. *N Engl J Med*. 2009;361(12):1139-1151. PMID: 19717844.
- Douketis JD, Spyropoulos AC, Spencer FA, et al. Perioperative management of antithrombotic therapy: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. *Chest*. 2012;141(2 Suppl):e326S-e350S. PMID: 22315266.
- Enden T, Haig Y, Kløw NE, et al. Long-term outcome after additional catheter-directed thrombolysis versus standard treatment for acute iliofemoral deep vein thrombosis (the CaVenT study): a randomised controlled trial. *Lancet*. 2012;379(9810):31-38. PMID: 22172244.
- Giugliano RP, Ruff CT, Braunwald E, et al. Edoxaban versus warfarin in patients with atrial fibrillation. *N Engl J Med*. 2013;369(22):2093-2104. PMID: 24251359.
- Granger CB, Alexander JH, McMurray JJ, et al. Apixaban versus warfarin in patients with atrial fibrillation. *N Engl J Med*. 2011;365(11):981-992. PMID: 21870978.
- Guyatt GH, Akl EA, Crowther M, et al. Executive summary: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. *Chest*. 2012;141(2 Suppl):7S-47S. PMID: 22315257.
- Kearon C, Akl EA, Comerota AJ, et al. Antithrombotic therapy for VTE disease: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. *Chest*. 2012;141(2 Suppl):e419S-e494S. PMID: 22315268.
- Kearon C, Akl EA, Ornelas J, et al. Antithrombotic therapy for VTE disease: CHEST Guideline and Expert Panel Report. *Chest*. 2016;149(2):315-352. PMID: 26867832.
- Konstantinides SV, Torbicki A, Agnelli G, et al. 2014 ESC guidelines on the diagnosis and management of acute pulmonary embolism. *Eur Heart J*. 2014;35(43):3033-3039. PMID: 25173341.
- MD+CALC. Creatinine Clearance (Cockcroft-Gault Equation). <http://www.mdcalc.com/creatinine-clearance-cockcroft-gault-equation/>. Accessed July 8, 2016.
- MD+CALC. Pulmonary Embolism Severity Index (PESI). <http://www.mdcalc.com/pulmonary-embolism-severity-index-pesi/>. Accessed July 8, 2016.
- MD+CALC. Wells' Criteria for Pulmonary Embolism. <http://www.mdcalc.com/wells-criteria-for-pulmonary-embolism-pe/>. Accessed July 8, 2016.
- MD+CALC. Wells' Criteria for DVT. <http://www.mdcalc.com/wells-criteria-for-dvt/>. Accessed July 8, 2016.
- National Institute for Health and Clinical Excellence. Venous Thromboembolic Diseases: The Management of Venous Thromboembolic Diseases and the Role of Thrombophilia Testing. NICE Guideline CG144. <https://www.nice.org.uk/guidance/cg144/evidence/full-guideline-186726349>. Published June 2012. Accessed July 8, 2016.
- Patel MR, Mahaffey KW, Garg J, et al. Rivaroxaban versus warfarin in nonvalvular atrial fibrillation. *N Engl J Med*. 2011;365(10):883-891. PMID: 21830957.
- Ranger NS, Ward MA. A comparison of the direct oral anticoagulants in treatment of acute deep vein thrombosis for primary care physicians. *J Family Med Community Health*. 2015;2(2):1032.
- Vedantham S, Goldhaber SZ, Kahn SR, et al. Rationale and design of the ATTRACT Study: a multicenter randomized trial to evaluate pharmacomechanical catheter-directed thrombolysis for the prevention of postthrombotic syndrome in patients with proximal deep vein thrombosis. *Am Heart J*. 2013;165(4):523-530. PMID: 23537968.
- Wysokinski WE, McBane RD 2nd. Periprocedural bridging management of anticoagulation. *Circulation*. 2012;126(4):486-490. PMID: 22825410.

UNDERSTANDING YOUR HEALTH JUST GOT EASIER

To help you understand more about VTEs (which are basically blood clots), and feel more comfortable about your health, we invite you to view this brief Emmi® program. Emmi programs support you in managing your care and will answer many of the questions you may have. You can watch it as many times as you like and share it with your family and friends.



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READY TO GET STARTED?

Go to: www.goemmi.com/VTE1

Program name: Understanding VTEs