

Superficial Vein Thrombosis (SVT) and Deep Vein Thrombosis (DVT)

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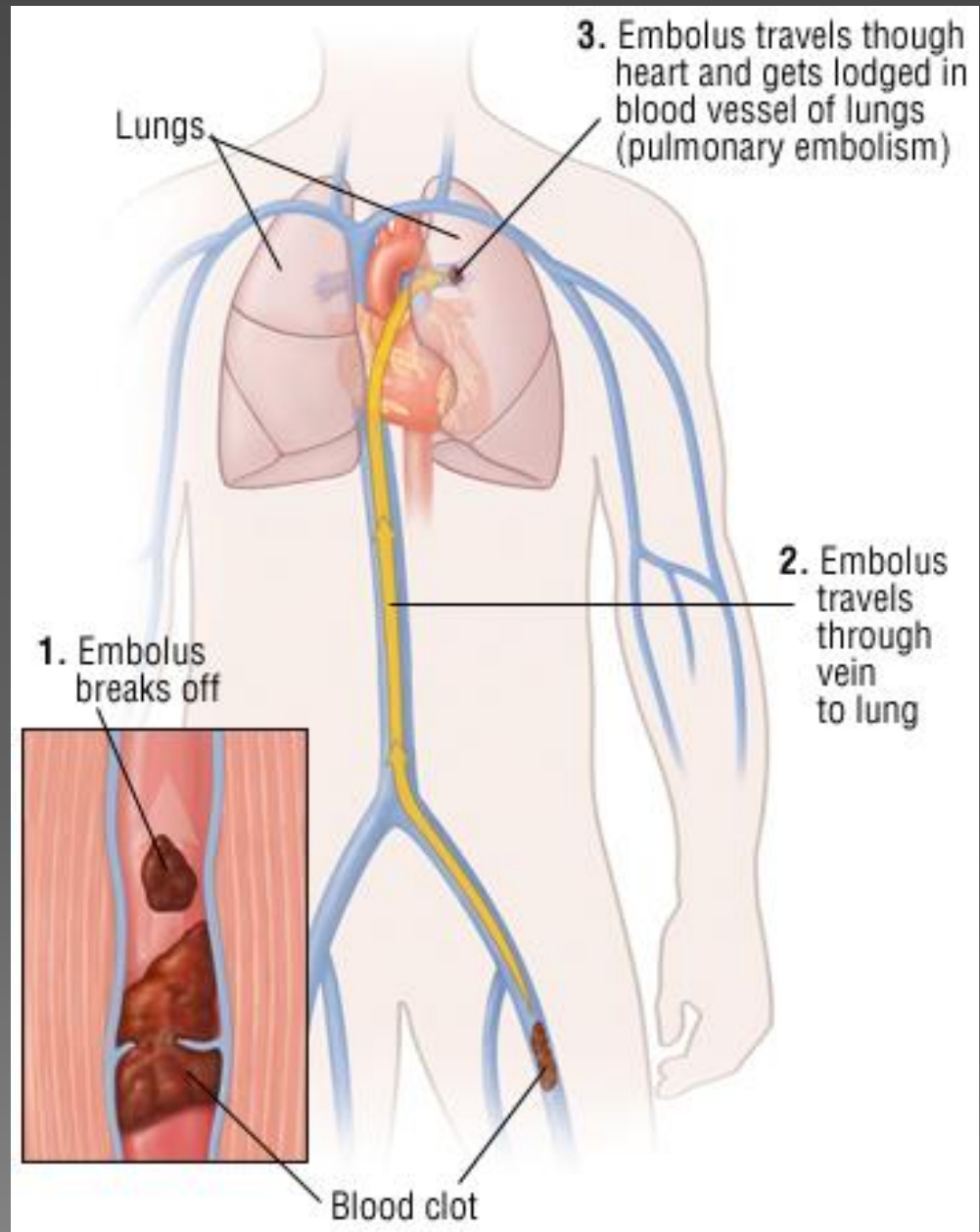
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Venous
thromboembolism
(VTE)

Deep vein
thrombosis (DVT)

Pulmonary
embolism (PE)

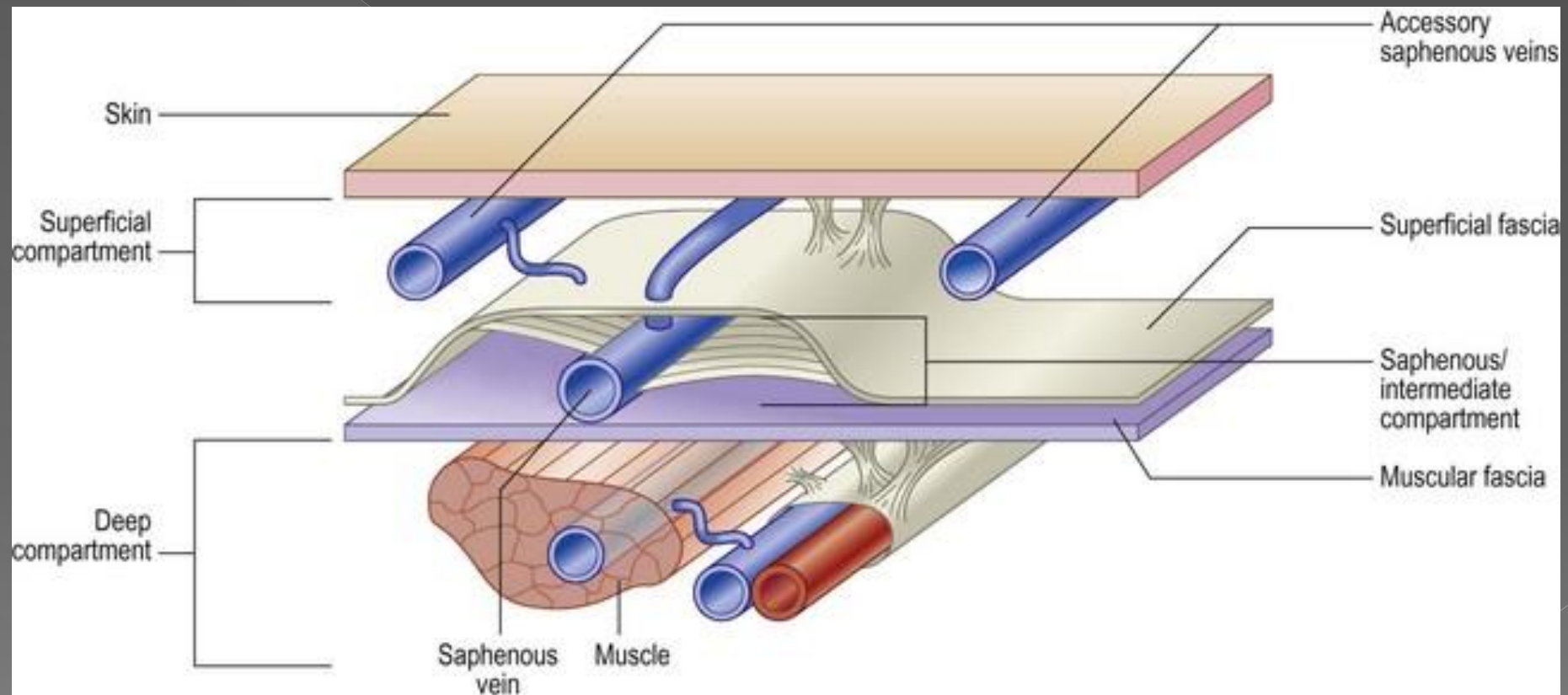
Superficial Vein
Thrombosis (SVT) ??



Terminology

- ◉ Varicose vein thrombosis
- ◉ Superficial vein thrombosis (SVT) or Superficial thrombophlebitis
 - > Non varicose
 - > Varicose
- ◉ Most common sites
 - > GSV and SSV

Anatomy



deep venous thrombosi X + -

← → ↺ 🏠 🔒 https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&q=deep+venous+thrombosis&btnG=

Google Scholar

deep venous thrombosis 🔍

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574 K for DVT

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A prospective registry of 5,451 patients with ultrasound-confirmed **deep vein thrombosis**
SZ Goldhaber, VF Tapson... - The American journal of ..., 2004 - Elsevier
... **Venous** thromboembolism (VTE) comprises **deep vein thrombosis (DVT)** and pulmonary embolism (PE) and accounts for >250,000 hospitalizations annually in the United States.1, 2 The most serious complication of **DVT** is PE, which has a 3-month mortality rate as high as 17 ...
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The long-term clinical course of acute **deep venous thrombosis** [PDF] academia.edu
P Prandoni, AWA Lensing, A Cogo... - Annals of internal ..., 1996 - Am Coll Physicians
Background: In patients who have symptomatic **deep venous thrombosis**, the long-term risk for recurrent **venous** thromboembolism and the incidence and severity of post-thrombotic sequelae have not been well documented. Objective: To determine the clinical course of ...
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Google Scholar

superficial venous thrombosis 🔍

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153 K for SVT

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☒ include citations

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Superficial venous thrombosis and venous thromboembolism: a large, prospective epidemiologic study [PDF] jvascsurg.org
H Decousus, I Quéré, E Presles, F Becker... - Annals of internal ..., 2010 - annals.org
Background: **Superficial venous thrombosis (SVT)** is perceived to have a benign prognosis. Objective: To assess the prevalence of **venous** thromboembolism in patients with SVT and to determine the 3-month incidence of thromboembolic complications. Design: National cross ...
☆ 🔗 Cited by 282 Related articles All 16 versions

[HTML] Progression of **superficial venous thrombosis** to deep vein thrombosis [HTML] sciencedirect.com
DL Chengelis, PJ Bendick, JL Glover, OW Brown... - Journal of vascular ..., 1996 - Elsevier
Purpose: We have evaluated the progression of isolated **superficial venous thrombosis** to deep vein **thrombosis** in patients with no initial deep **venous** involvement. Methods: Patients with **thrombosis** isolated to the **superficial** veins with no evidence of deep **venous** ...
☆ 🔗 Cited by 244 Related articles All 10 versions

DVT treatment

- As we know
 - > Main treatment = anticoagulant
 - > Initial treatment (at least 5 d)
 - > Long-term treatment (3 m)
 - > Extended treatment (3+ m to indefinite)

Initial treatment

- ◉ LMWH is suggested over UFH (Grade 2B)
- ◉ Fondaparinux is suggested over UFH (Grade 2C)

Long-term treatment

- ◉ No cancer
 - > DOAC > VKA > LMWH
- ◉ Cancer related
 - > LMWH ≥ DOAC, VKA

SVT treatment

Observation

Compressive
stocking

Topical
heparin

NSAIDs

UFH

LMWH

Fondaparinux

Warfarin

DOACs

Di Nisio, Marcello, Iris M. Wickers, and Saskia Middeldorp. "Treatment for superficial thrombophlebitis of the leg." *Cochrane Database of Systematic Reviews* 2 (2018).

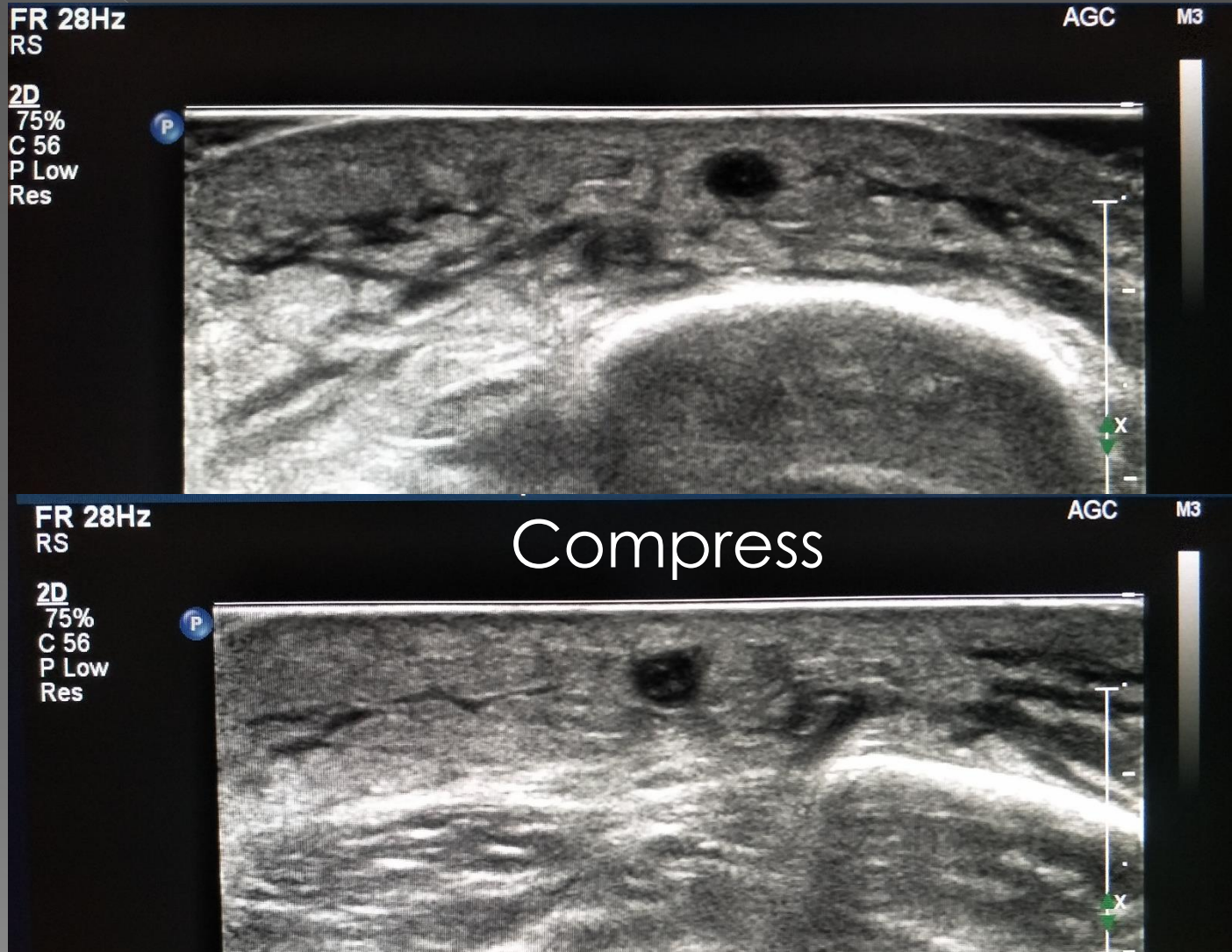
Clinical presentation

- Localized pain
- Redness
- Tenderness
- Edema
- Palpable cord



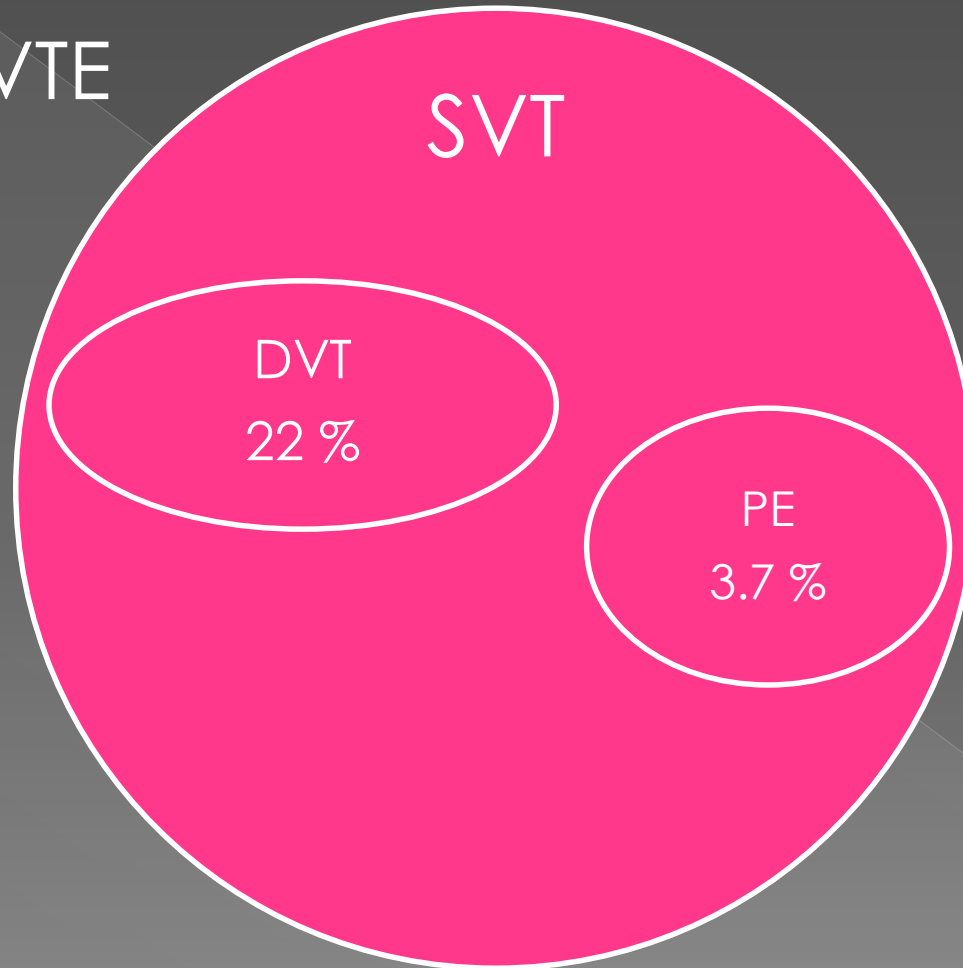


Confirmed diagnosis



Epidemiology

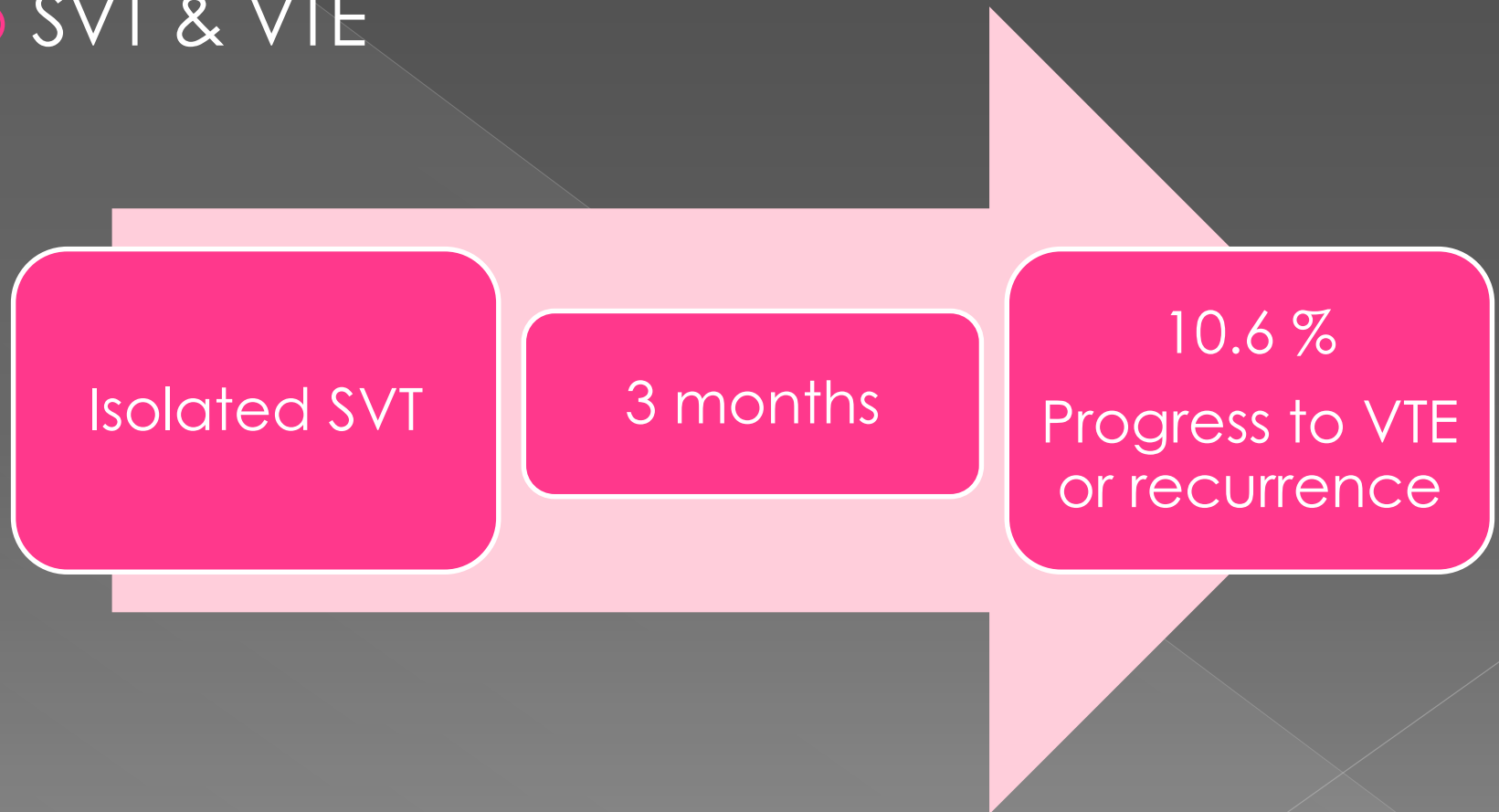
● SVT & VTE



Decousus H, Quere I, Presles E, Becker F, Barrellier MT, Chanut M, et al. Superficial venous thrombosis and venous thromboembolism: a large, prospective epidemiologic study. *Ann Intern Med.* 2010;152(4):218-24.

Epidemiology

● SVT & VTE



Risk factors for SVT

- ◉ Same as VTE

- > Malignancy
- > Post-op
- > Increasing age
- > Obesity
- > Trauma
- > Varicose vein
- > Immobility
- > Pregnancy
- > Post-partum
- > Use of HRT or OCP

Risk factors for complications

- > Length of SVT
- > SVT close to SFJ
- > Absence of varicose veins
- > Previous history of DVT
- > Male genders
- > Previous cancer
- > Immobility

Decousus H, Quere I, Presles E, Becker F, Barrellier MT, Chanut M, et al. Superficial venous thrombosis and venous thromboembolism: a large, prospective epidemiologic study. *Ann Intern Med*. 2010;152(4):218-24.

Hill SL, Hancock DH, Webb TL. Thrombophlebitis of the great saphenous vein--recommendations for treatment. *Phlebology*. 2008;23(1):35-9.

Guidelines for Treatment SVT



SVT treatment

Observation

Compressive
stocking

Topical
heparin

NSAIDs

UFH

LMWH

Fondaparinux

Warfarin

DOACs

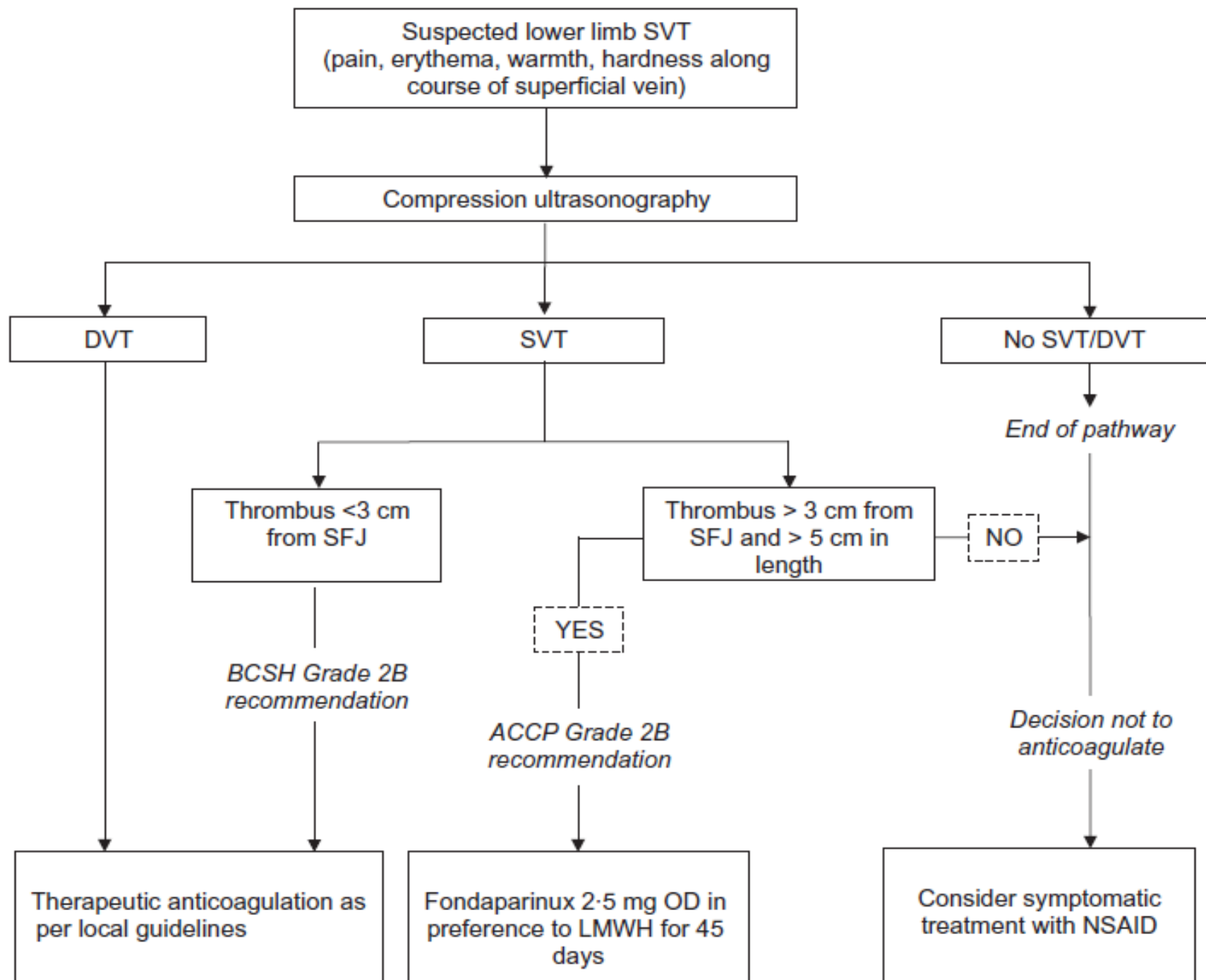
Di Nisio, Marcello, Iris M. Wickers, and Saskia Middeldorp. "Treatment for superficial thrombophlebitis of the leg." *Cochrane Database of Systematic Reviews* 2 (2018).

Guidelines for SVT

- The British Committee for Standards in Hematology, 2012
 - Patients w/ SVT, ≤ 3 cm of SFJ should be considered for **therapeutic** anticoagulation (2B).
 - Patients w/ SVT and risk factors for extension, recurrence or progression should be offered treatment with **prophylactic doses** of LMWH for 30 d or *fondaparinux* for 30–45 d (1B).
 - Other patient's w/ SVT should be offered 8–12 d NSAIDs unless contraindicated (1A).

Guidelines for SVT

- The American College of Chest Physicians, 2012
 - > Patients w/ SVT of the lower limb, ≥ 5 cm in length, we suggest the use of a **prophylactic dose** of *fondaparinux* or *LMWH* for 45 days over no anticoagulation (2B).
 - > Patients w/ SVT who are treated with anticoagulation, we suggest *fondaparinux* 2.5 mg daily over a prophylactic dose of *LMWH* (2C) .



Guidelines for SVT

● The SURPRISE trial, 2016

> RCTs

- Fondaparinux 2.5 mg SC OD, 45 days
- Rivaroxaban 10 mg Oral OD, 45 days

> Same efficacy

> No major bleeding

Guideline for SVT in Varicose vein



Trials of surgical treatment

Vascular and Endovascular Surgery

Volume 37, Number 6, 2003

Low-Molecular-Weight Heparin Versus Saphenofemoral Disconnection for the Treatment of Above-Knee Greater Saphenous Thrombophlebitis: A Prospective Study

Francisco S. Lozano, MD, PhD and Arturo Almazan, MD, PhD, *Salamanca, Spain*

- 84 patients with SVT, w/o DVT
- Random, F/U 6 mo
 - > Compression + SFJ ligation
 - > Compression + LMWH
- Compression + SFJ ligation
 - > 6.7% → wound infection
 - > 3.3% → recurrence SVT
 - > 6.7% → PE
- Compression + LMWH
 - > 6.7% → minor bleeding
 - > 10% → recurrence SVT

| Group | Days of Hospitalization (Mean and Range) | Cost of Treatment (Dollars) |
|------------------|---|--------------------------------|
| SF disconnection | 1.6 (1–14) | 42,000 (1,400 × patient)* |
| LMWH | 0 | 9,000 (300 × patient)† |

*Hospitalization/day (\$250) + surgery (\$1,000)
†LMWH/day (\$10).

- LMWH group: OPD cases
- Conclusion
 - LMWH – treatment of choice

Endovenous saphenous vein ablation in patients with acute isolated superficial-vein thrombosis

Wayne S Gradman

Phlebology

2015, Vol. 30(3) 204–209

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- ◉ 72 isolated SVT w/ saphenous reflux
 - > 41 = EVSA +/- phlebectomy
 - > 31 = Compression + LMWH

- ◉ EVSA group

- > Only 1 case = calf deep vein thrombosis

- ◉ Compression + LMWH group

- > No complication
 - > 40% → come back to EVSA

- ◉ Conclusion

- > EVSA = Safe and good outcome, may be offered as initial treatment to patients /w SVT and Saphenous reflux.

Take home messages



- ◉ SVT: clear evidence
 - > Thrombus , ≤ 3 cm of SFJ
 - Therapeutic anticoagulation
 - > Thrombus , ≥ 5 cm in length
 - Prophylactic anticoagulation for 45 days
 - Fondaparinux
 - LMWH
 - Rivaroxaban

Take home messages

- VV thrombosis – No specific guideline
 - > Compression + anticoagulant then definitive treatment
 - > Endovenous ablation
- Our guideline for high risk VV thrombosis
 - > Start anticoagulant for 30-45 days then
 - > Schedule for VV surgery or endovenous ablation

THANK YOU

