Compressive POCUS for Evaluation of DVT in the Lower Extremity

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Disclosures

- I have no financial conflict of interests.
- This is a brief overview. This presentation does not provide adequate training to provide POCUS evaluation for deep vein thrombosis.

Objectives

- Review predictive risk factors for DVT
- Recall the anatomy of the veins of the lower extremity.
- Recognize normal lower extremity venous anatomy.
- Identify DVT in lower extremity veins.
- Differentiate structures that may mimic DVT.
- Practice performing the 3 Point Lower Extremity Venous US.

Introduction

- Point of Care Compression Ultrasound is a quick and non-invasive way to assess for DVT with very high sensitivity and specificity (Burnside 2008).
- We will review the predictive risks, anatomy, then look at normal and abnormal US findings.
- After the Power Point we will demonstrate how to perform a 3 Point Lower extremity US and you will get to practice the techniques.

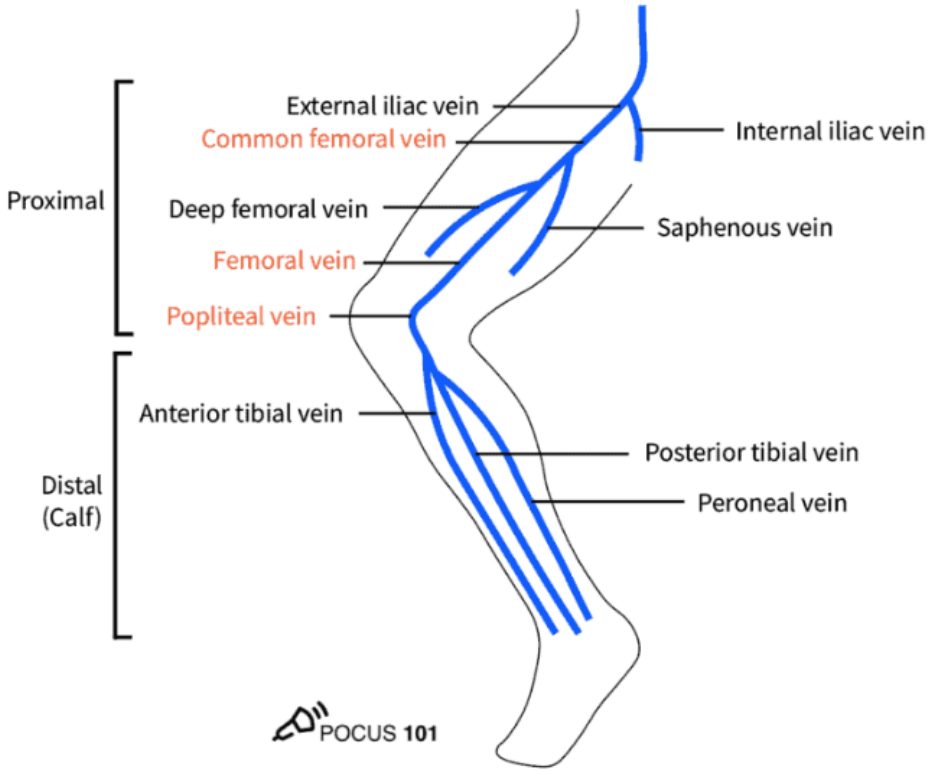
Well's Criteria

Table 1. Clinical Model for Predicting the Pretest Probability of Deep Venous Thrombosis[19]

Clinical Characteristic	Score
Active cancer (patient receiving treatment for cancer within the previous 6 months or currently receiving palliative treatment)	1
Paralysis, paresis, or recent plaster immobilization of the lower extremities	1
Recently bedridden for ≥3 days, or major surgery within the previous 12 weeks requiring general or regional anesthesia	1
Localized tenderness along the distribution of the deep venous system	1
Entire leg swollen	1
Calf swelling at least 3 cm larger than the asymptomatic side (measured 10 cm below the tibial tuberosity)	1
Pitting edema confined to the symptomatic leg	1
Collateral superficial veins (nonvaricose)	1
Previously documented deep venous thrombosis	1
Alternative diagnosis at least as likely as deep venous thrombosis	–2

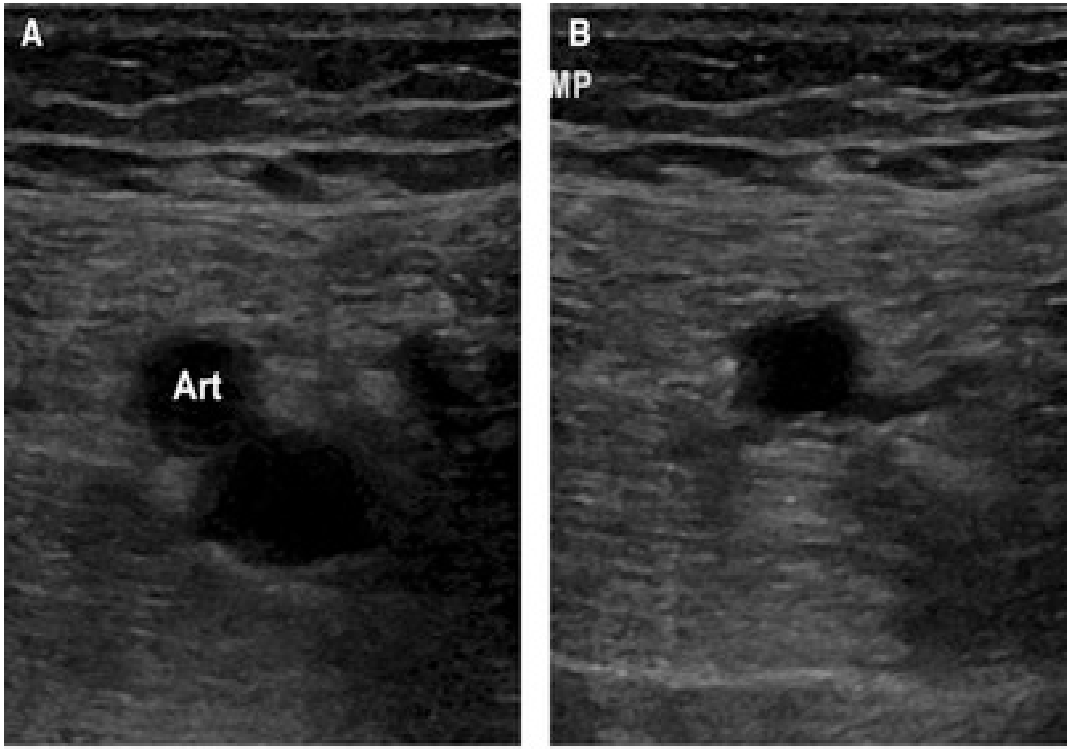
A score of ≥2 indicates that the probability of deep venous thrombosis is likely; a score of <2 indicates that the probability of deep venous thrombosis is unlikely. In patients with symptoms in both legs, the more symptomatic leg is used. Reprinted from Wells et al19 with permission. Copyright © 2003, Massachusetts Medical Society.

Veins of the Lower Extremity

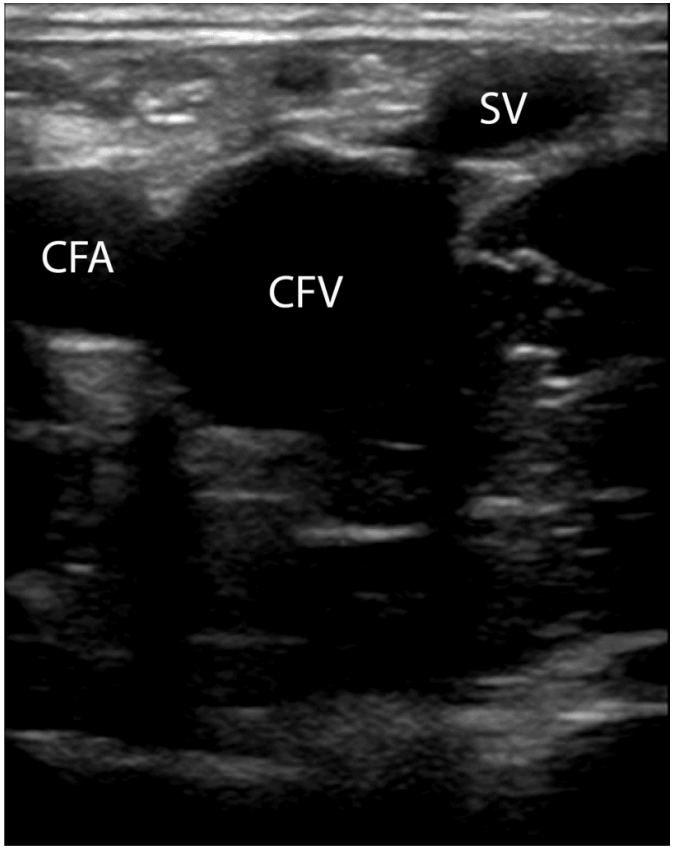


Veins of the Lower Extremity

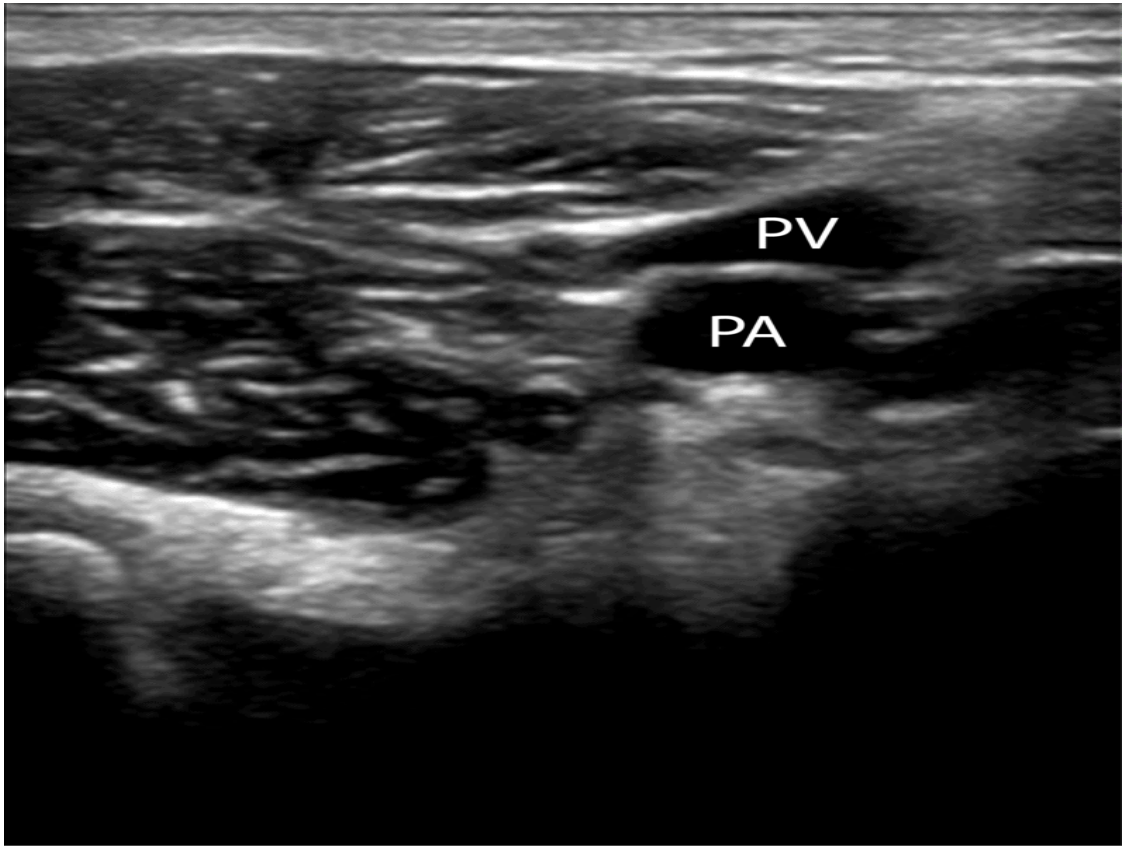
Normal View of the Femoral Vein



Normal View of the Saphenous Vein

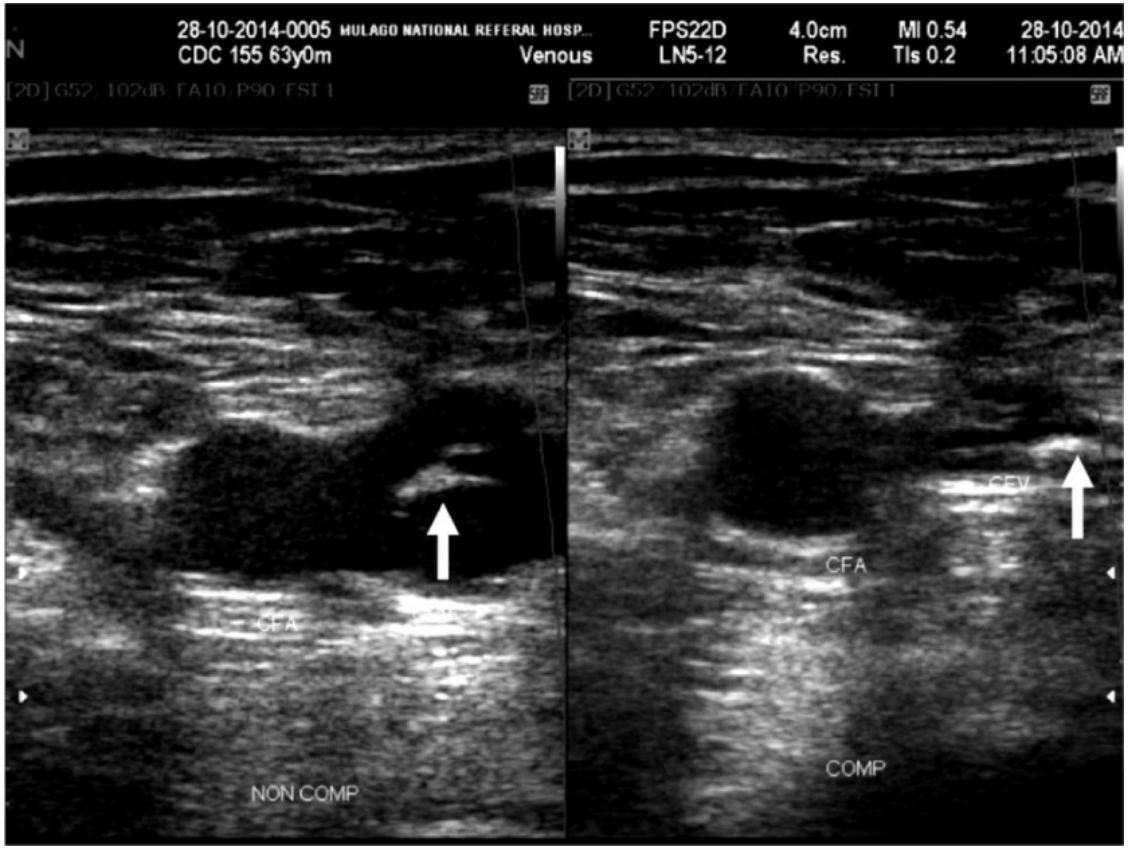


Normal View of the Popliteal Vein

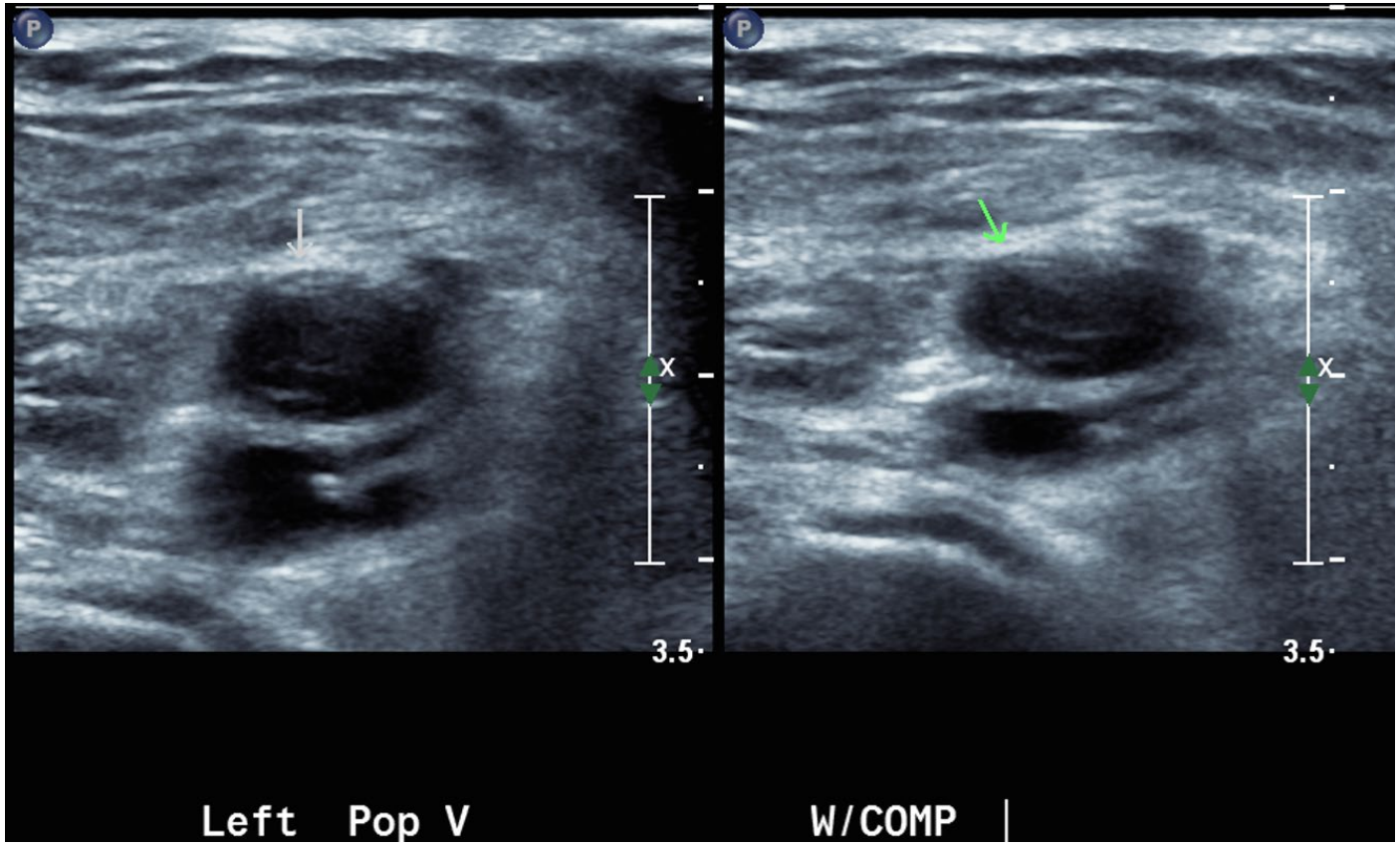


Example of DVT of the Femoral Vein

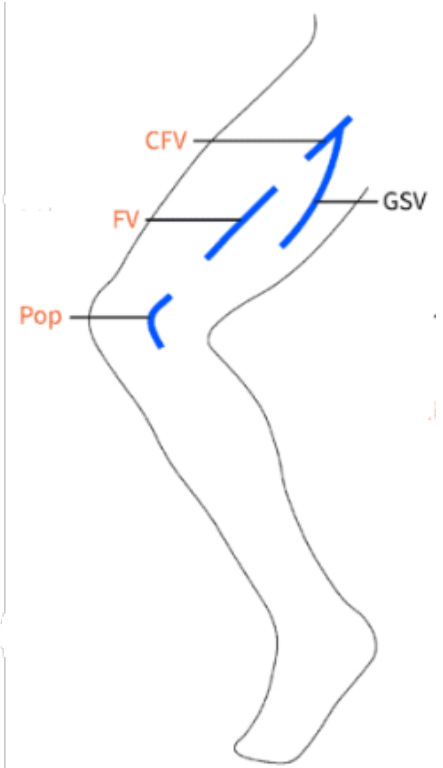
Example of a DVT in the Saphenous Vein



Example of DVT of the Popliteal Vein



3 Point Lower Extremety Venous US

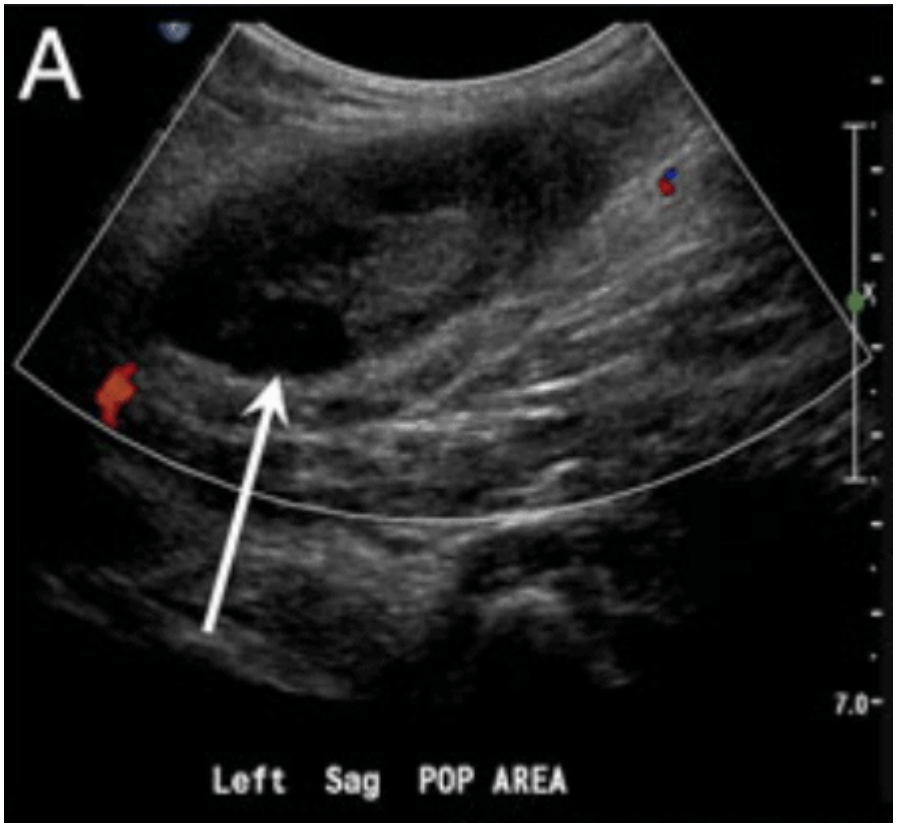


3-Point Leg US

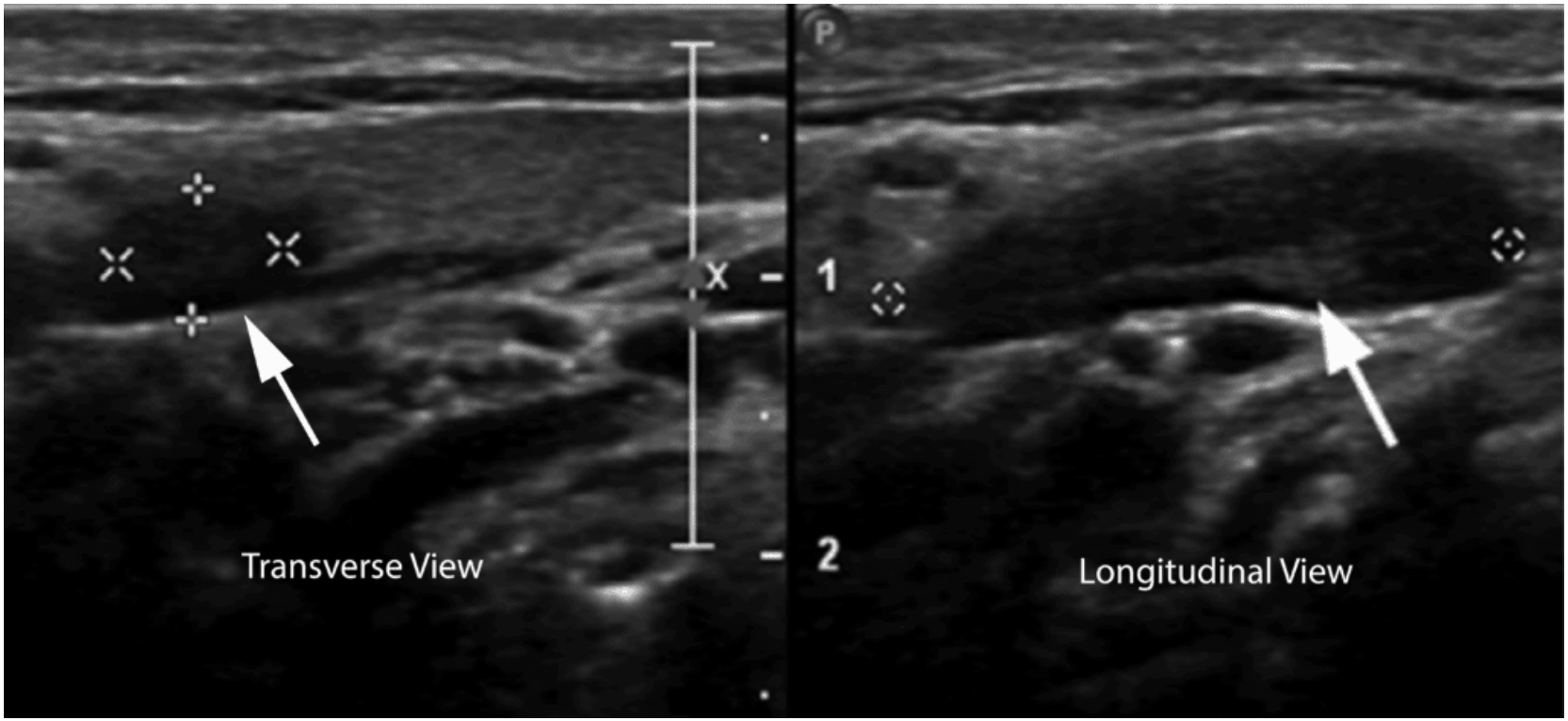
What if you find a DVT?

- Is the patient stable?
- Is the patient appropriate for anticoagulation?
- Start anticoagulation.
- Schedule a Complete Duplex US (CDUS).

Bakers Cyst



Lymph Node



References

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- **Mark H. Meissner**
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