

## When evaluating superficial disease When do you look for Venous Obstruction?

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### Disclosures

- Boston Scientific – Consultant/ Speaker
- Medtronic- Consultant /Speaker
- Med Avail Systems- Advisory Board
- Cook- Speaker
- Mentice- Consultant
- Philips- Speaker
- BD- Speaker
- Penumbra- Speaker
- Optimed- Consulting/ Speaker

### Obstruction and Reflux

- 55% of affected limbs
- Advanced stages C4-6

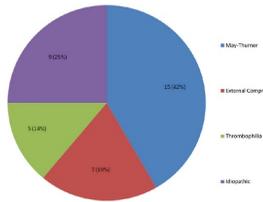


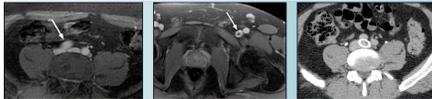
Fig 2. Underlying etiology of venous occlusion. Radiological imaging for venous occlusive disease. Jessica M. Tzou, MD, Myrle A. Moran, MD, James Barco, MS, Sean P. Lyden, MD, and Daniel G. Clark, MD. Cleveland Clin J Vasc Surg 2013;26:87-93.

### Top 4 Categories ...

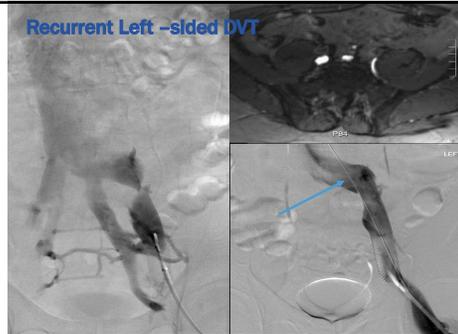
- Who should be tested?
- What modality?
- Pain out of proportion
- Miscellaneous

### #1 Who should be tested?

- Pain out of proportion to US findings
- Prior venous thrombosis or no explanation of their symptoms  
Meissner J Vasc Surg 2007;46:68S-83S
- Recurrent venous disease/ Failed treatment of SV
- Associated sx: Pelvic pain/ back pain
- US Doppler indicative of upstream venous obstruction
- Dominance of venous claudication Delis KT et al. Ann Surg 2004; 239: 118-126



### Recurrent Left -sided DVT



### SVS guidelines 2023 – Evaluation for Obstruction

- ✓C2 patients:
  - ✓if suprapubic or abdominal wall varicosities
  - ✓symptoms of proximal obstruction, including thigh and leg fullness, heaviness, swelling and venous claudication.
- ✓C3-6: Warrant DUS or other imaging

Benfor B, Peden EK. A systematic review of management of superficial venous reflux in the setting of deep venous obstruction. *J Vasc Surg Venous Lymphat Disord* 2022;10:945-54.e2.

Glovicki P. The 2023 Society for Vascular Surgery, American Venous Forum, and American Vein and Lymphatic Society clinical practice guidelines for the management of varicose veins of the lower extremities. Part II: Endorsed by the Society of Interventional Radiology and the Society for Vascular Medicine. *J Vasc Surg Venous Lymphat Disord*. 2024 Jan;32(1):1018-70.



## #2 What Modality?

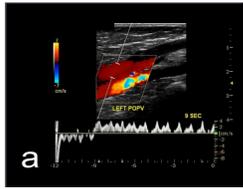
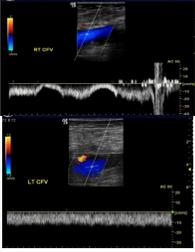
ESVS 2022

<b>Recommendation 4</b>		New
For patients with suspected supra-inguinal venous obstruction, in addition to full leg duplex assessment, ultrasound of the abdominal and pelvic veins should be considered, as part of the initial assessment.		
Class	Level	References <span style="float: right;">ToE</span>
IIa	C	Metzger <i>et al.</i> (2016) <sup>51</sup>

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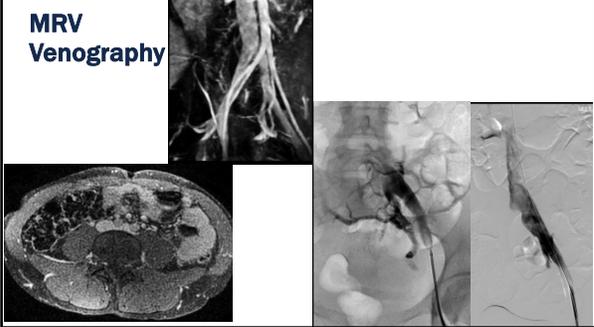
<b>Recommendation 6</b>		Unchanged
For selected patients with suspected supra-inguinal venous obstruction, where cross sectional diagnostic imaging is inadequate or not available, venography and/or intravascular ultrasound may be considered.		
Class	Level	References <span style="float: right;">ToE</span>
IIb	B	Gagne <i>et al.</i> (2017), <sup>58</sup> Lau <i>et al.</i> (2019) <sup>57</sup>

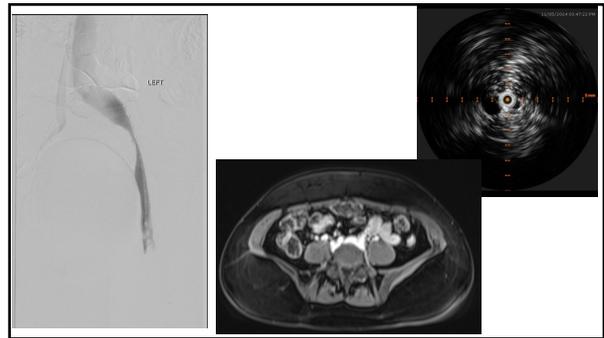
### #3 Pain out of proportion

46 year old female with symptomatic varicose veins, ultrasound (a) showed significant deep venous reflux (9 seconds) prompting further evaluation of the pelvis.

### MRV Venography





**Summary: Evaluation of Venous Obstruction**

- C2: suprapubic/abdominal wall VV, thigh and leg fullness, heaviness, swelling and venous claudication
- C3-6: Evaluate for obstruction
- Pain that is atypical, persistent or refractory
- US first, then cross sectional imaging (MRA, CTA)
- Venography+IVUS: Gold standard

