



# Chronic Venous Disease

*An overview for referral providers*

# Chronic venous insufficiency (C<sub>3-6</sub>)

Severe leg pain, extensive grade 3 swelling, discoloration, dermatitis, lipodermatosclerosis, venous ulcer



Images courtesy of Peter Neglén, MD and Paul Gagne, MD

# Classification

**Table 1. Revised clinical classification of chronic venous disease of the leg**

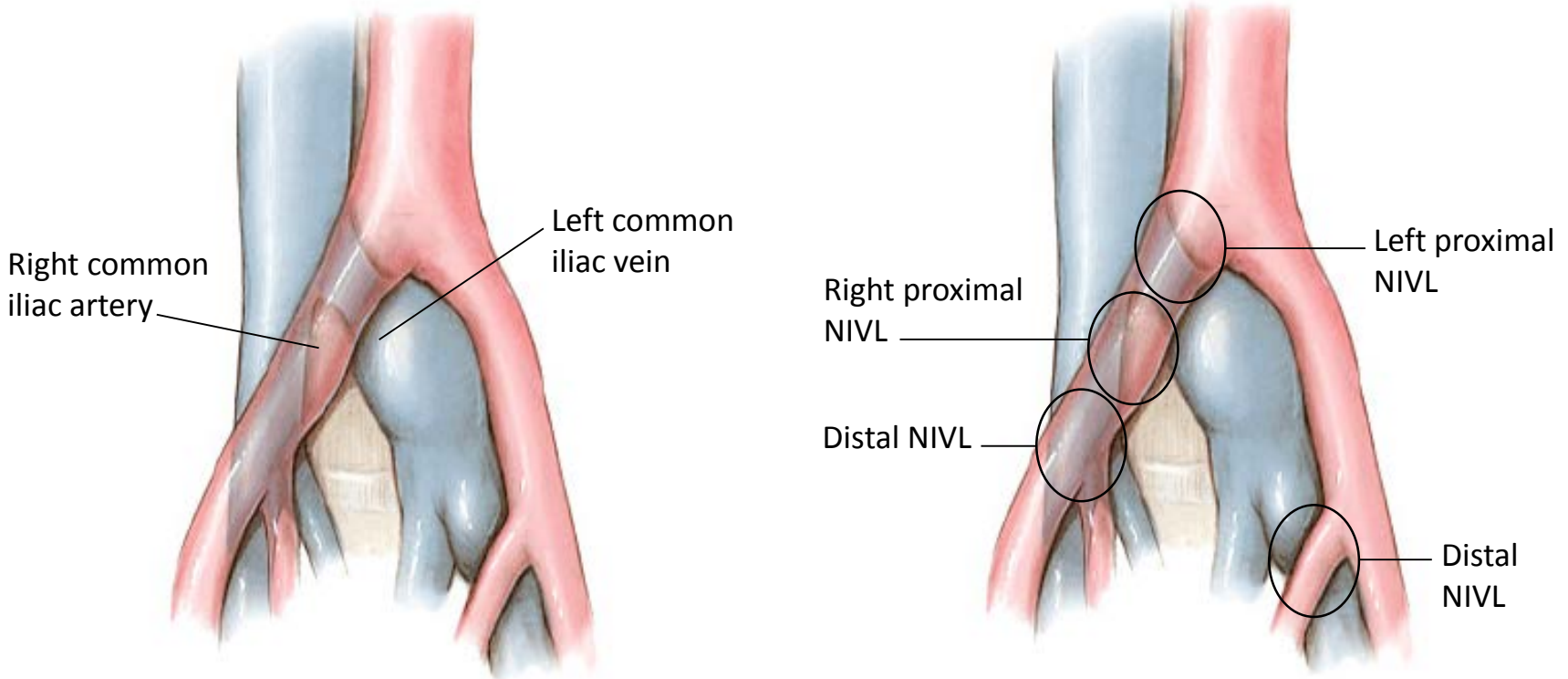
Class	Definition	Comments
C <sub>0</sub>	No visible or palpable signs of venous disease	
C <sub>1</sub>	Telangiectases, reticular veins, malleolar flare	Telangiectases defined by dilated intradermal venules < 1 mm diameter Reticular veins defined by dilated, nonpalpable, subdermal veins ≤ 3 mm in diameter
C <sub>2</sub>	Varicose veins	Dilated, palpable, subcutaneous veins generally > 3 mm in diameter
C <sub>3</sub>	Edema without skin changes	
C <sub>4</sub>	Skin changes ascribed to venous disease	
C <sub>4A</sub>		Pigmentation, venous eczema, or both
C <sub>4B</sub>		Lipodermatosclerosis, atrophie blanche, or both
C <sub>5</sub>	Skin changes with healed ulceration	
C <sub>6</sub>	Skin changes with active ulceration	



**Figure 1. Clinical manifestations of chronic venous disease** Telangiectases (clinical, etiological, anatomical, and pathophysiological [CEAP] class C<sub>1</sub>) are shown in Panel A, varicose veins (CEAP class C<sub>2</sub>) in Panel B, pigmentation (CEAP class C<sub>4</sub>) in Panel C, and active ulceration (CEAP class C<sub>6</sub>) in Panel D.

# Iliac vein compression syndrome

Chronic, repetitive compression at the site causes fibrosis of the vein that results in stenosis or even occlusion of the lumen.

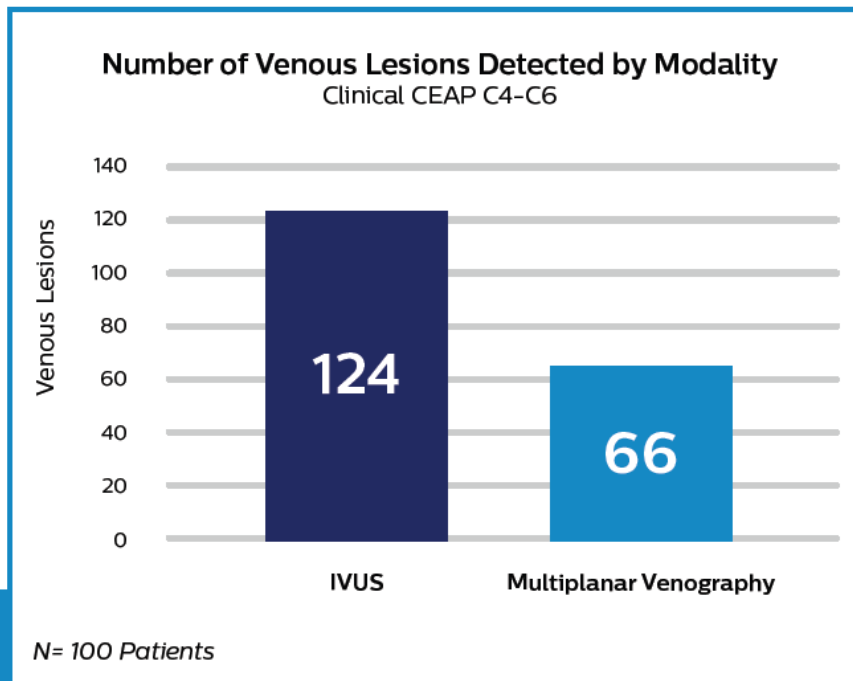


1. Raju S, Neglen P. High prevalence of non-thrombotic iliac vein lesions in chronic venous disease: a permissive role in pathogenicity. *J Vasc Surg* 2006 Jul;44(1):136-43; discussion 144.

2. Forauer AR, Gemmete JJ, Dasika NL, Cho KJ, Williams DM. Intravascular ultrasound in the diagnosis and treatment of iliac vein compression (May-Thurner) syndrome. *J Vasc Interv Radiol* 2002;13:523-7.

# Clinical Data

## Venogram Versus Intravascular Ultrasound for Diagnosing and Treating Iliofemoral Vein Obstruction (VIDIO)



In VIDIO, the first prospective multicenter study comparing multiplanar venography to phased array intravascular ultrasound, IVUS detected 88% more lesions.<sup>1</sup>

Diagnose, size, and assess treatment with the help of the Philips Volcano Visions PV .035 Digital IVUS Catheter.

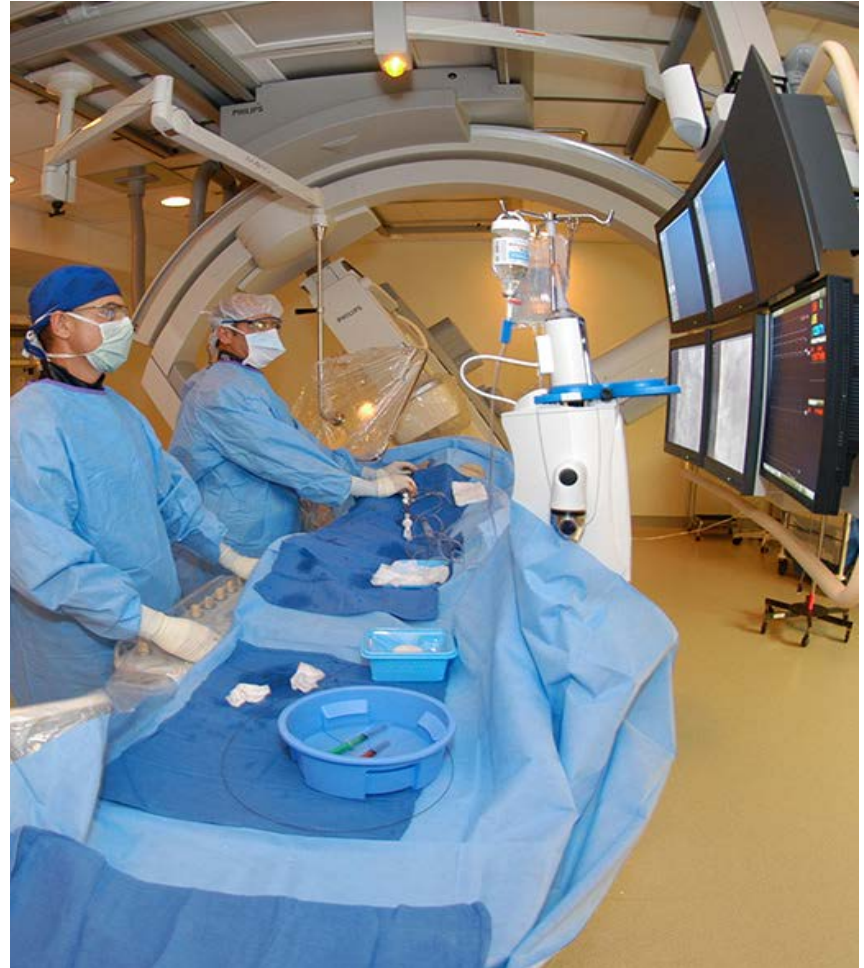
Be sure to visit our website as we update with the latest information:  
[www.volcanocorp.com/VIDIO](http://www.volcanocorp.com/VIDIO).

1. Gagne, P.J. et al. Venogram Versus Intravascular Ultrasound for Diagnosing and Treating Iliofemoral Vein Obstruction (VIDIO): Abstract from a Multicenter, Prospective Study of Iliofemoral Vein Interventions. J Vasc Surg. 2016; 4(1):136. Lesion detection as reported by site Investigators during the index procedure.



# IVUS and venous stenting

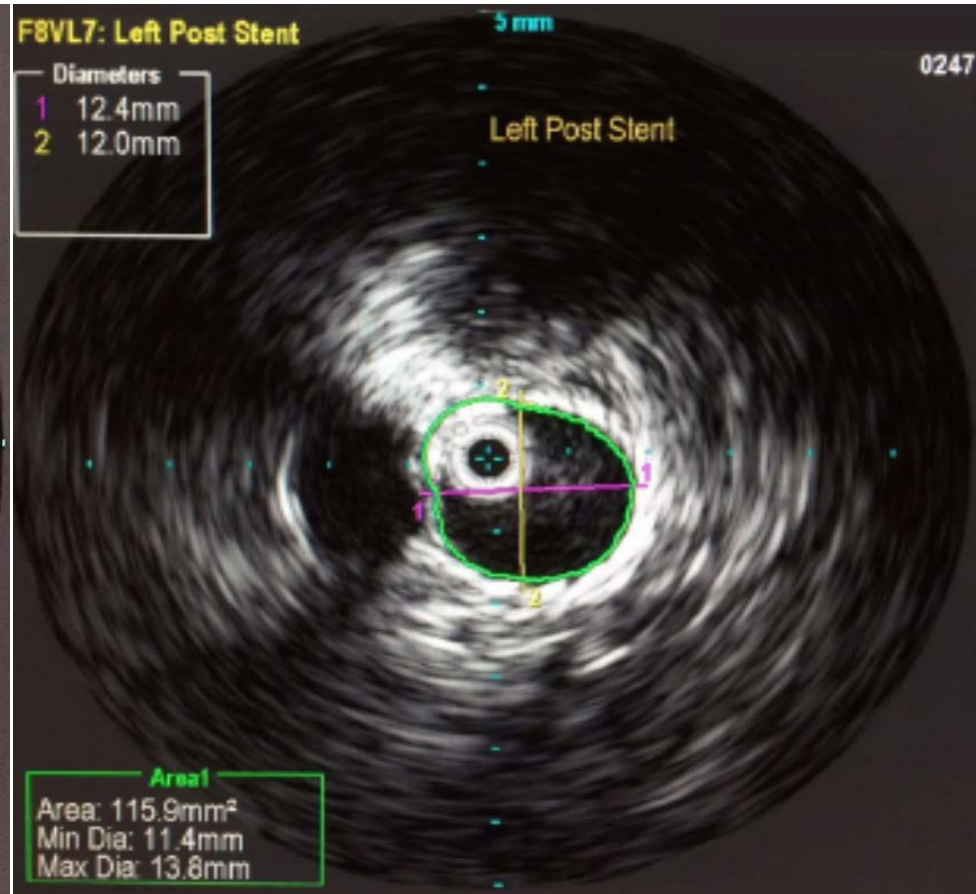
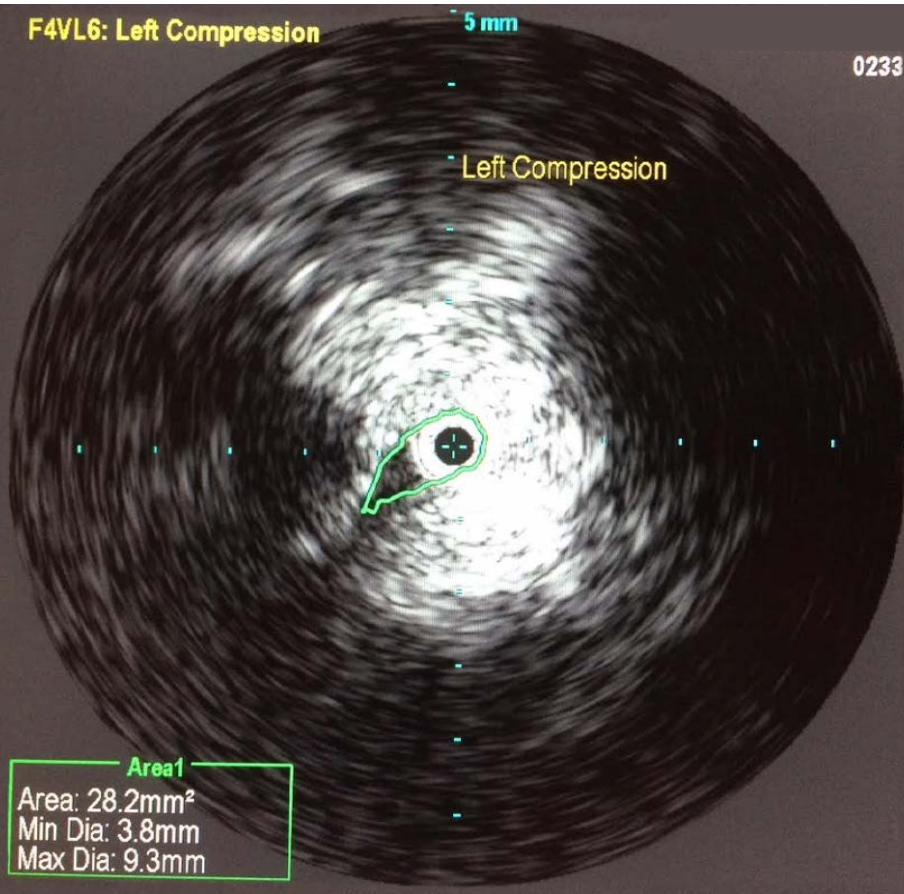
- Minimally invasive endovascular procedure
- Outpatient procedure
- Minimal morbidity
- Quick symptomatic relief
  - Decrease leg edema
  - Decrease wound weeping
  - Promote ulcer healing



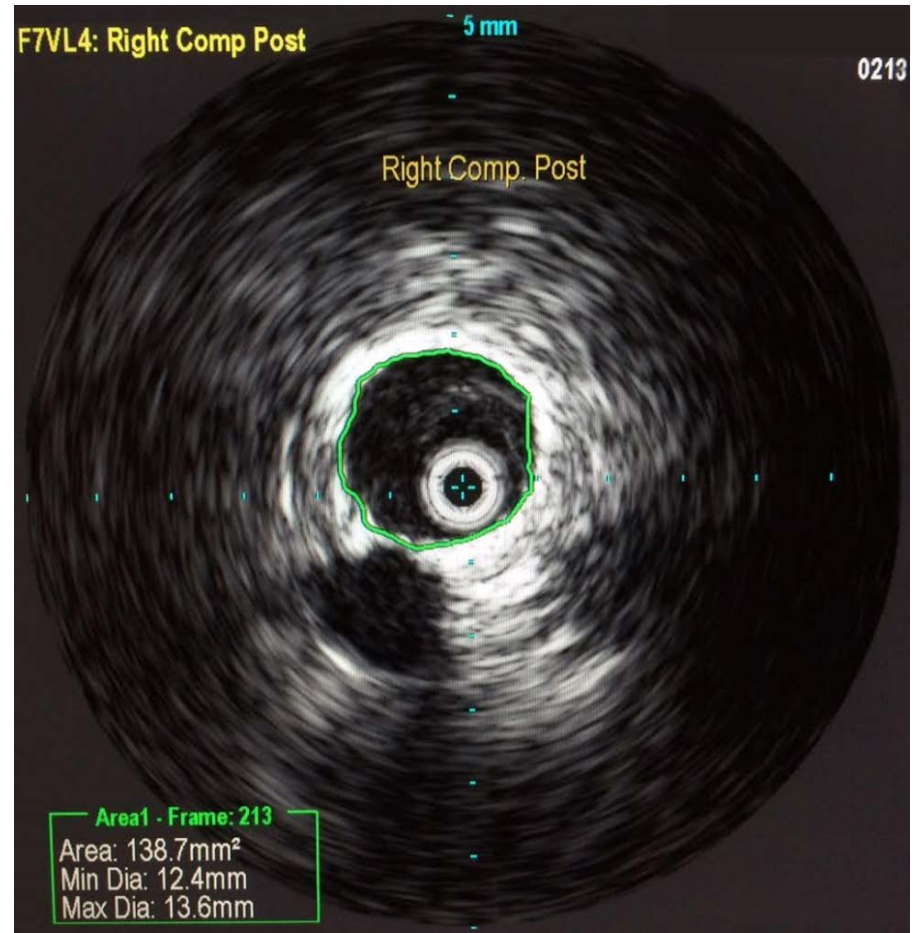
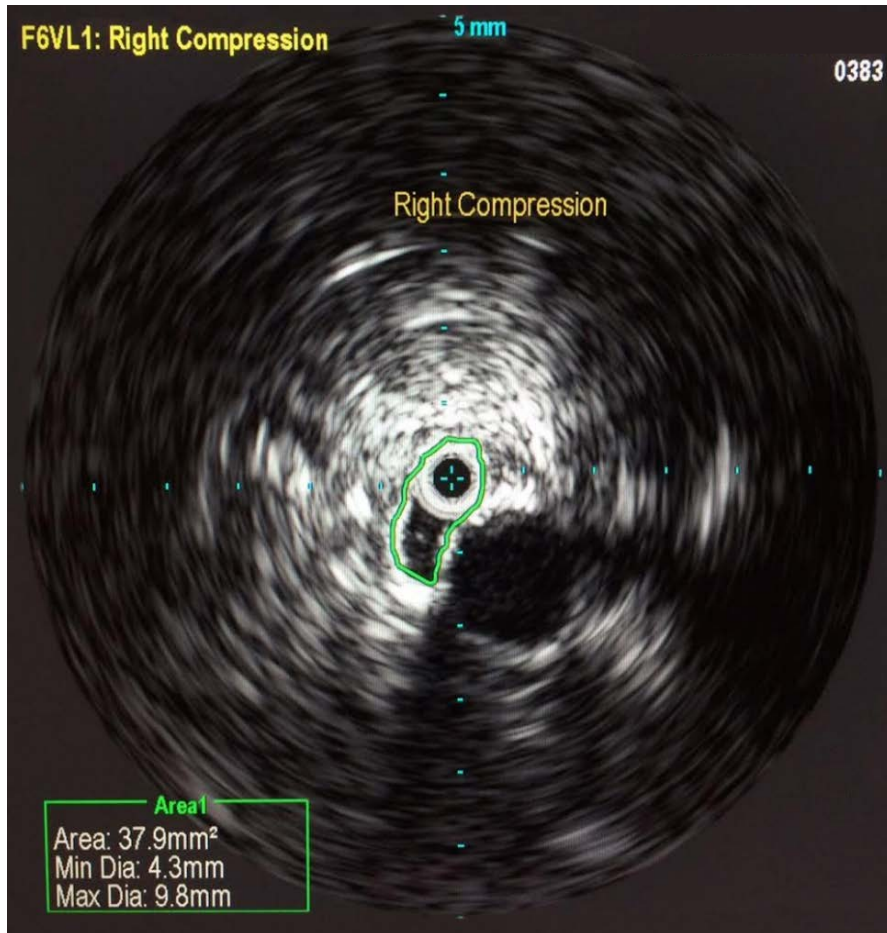
1. Mussa FF, Peden EK, Zhou W, Lin PH, Lumsden AB, Bush RL. Iliac vein stenting for chronic venous insufficiency. Tex Heart Inst J 2007;34:60-6.

2. Alhalbouni S, Hingorani A, Shiferson A, Gopal K, Jung D, Novak D, Marks N, Ascher E. Iliac-femoral venous stenting for lower extremity venous stasis symptoms. Ann Vasc Surg 2012;26:185-9.

# IVUS left leg



# IVUS right leg





# Before and after



Results are not predictive of future outcomes. Images obtained from actual cases with consent from the clinician. Data on file at Philips Volcano.

# Additional information:

## Clinical references

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