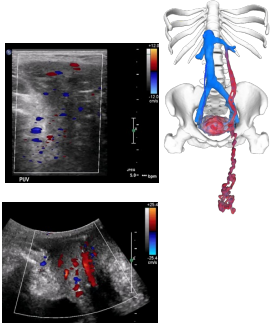


**Evaluation for Pelvic Venous Reflux**

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**Reflux**

**Gonadal**  
**Internal iliac vein tributaries**  
**Pelvic floor and lower limbs veins**

Associated with  
 Iliac vein obstruction  
 Post-thrombotic disease  
 IVC hypoplasia  
 Combinations

**History and physical examination**  
**Signs and symptoms**

Pelvic pain Dyspareunia Fullness Heaviness Flank pain Lower back pain Limb pain	Varicose veins Pelvis, buttock, limbs Edema Hematuria Skin damage Ulcer
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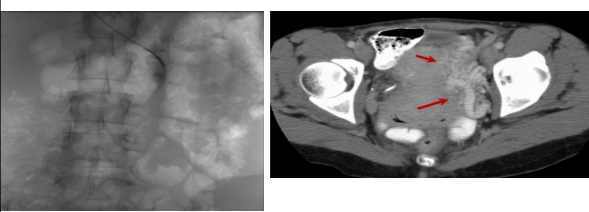
**Atypical varicose veins**



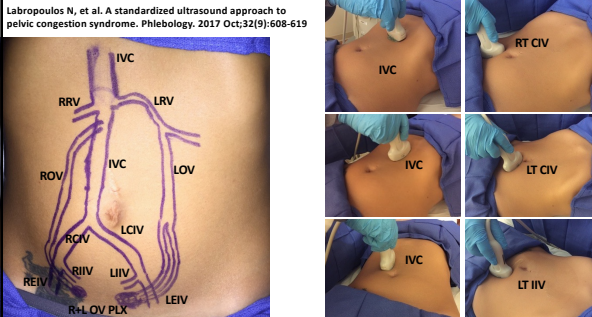
Varices from the vulvar, perineal and gluteal area extending down in the lower extremity of females that had pregnancies. In such patients the pelvic veins should be examined.

Many patients present with chronic pelvic pain. Evaluation by a gynecologist is necessary prior to any venous treatment.

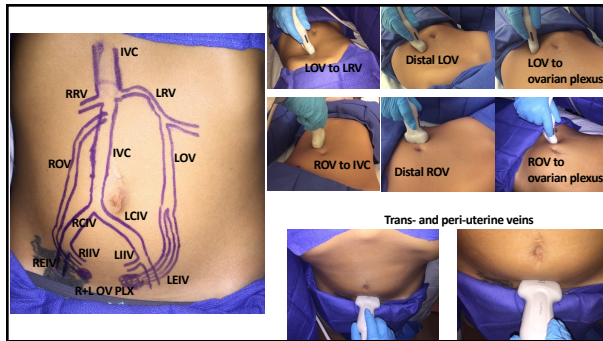
**Reflux in the left ovarian vein extending to trans- and peri-uterine veins and pelvic floor**



Labropoulos N, et al. A standardized ultrasound approach to pelvic congestion syndrome. Phlebology. 2017 Oct;32(9):608-619



The diagram labels the following veins: IVC, RRV, LRV, ROV, LOV, RCV, LCV, REIV, RIIV, LIIV, R+L OV PLX, and LEIV. The clinical photographs show the location of these veins on the abdomen and lower back, labeled as IVC, RT CIV, LT CIV, and LT IIV.



**Examination in the standing position**

- It uses hydrostatic pressure
- The Valsalva maneuver can be performed without any interference from the abdomen
- Veins have the largest diameter
- The trans- and peri-uterine veins, distal tributaries of the internal iliac vein and the connections with the pelvic floor and lower limbs can be easily assessed
- In vast majority of patients imaging is performed with a linear array transducer

**Pelvic outlet**  
View from inferior in the supine position

Excellent imaging can be achieved even with a linear transducer of the pelvic veins and their connections with the pelvic floor and lower limbs.

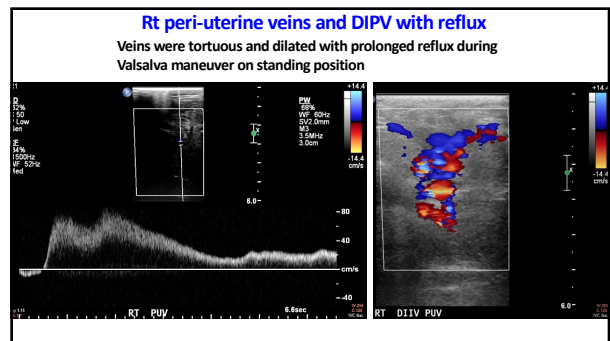
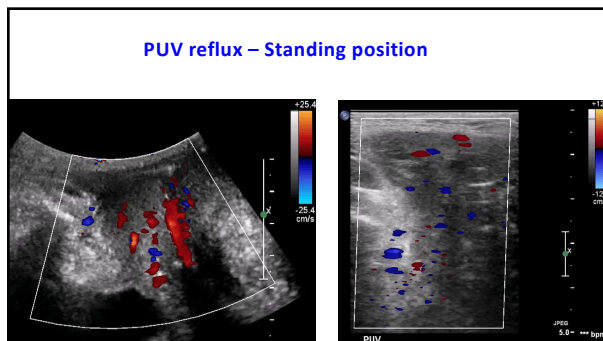
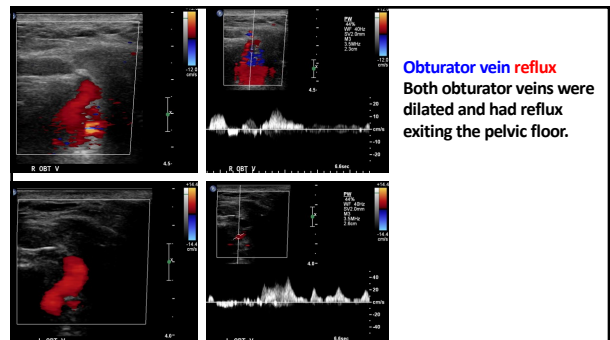
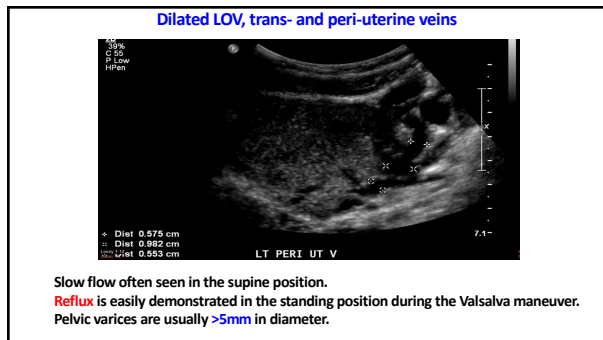
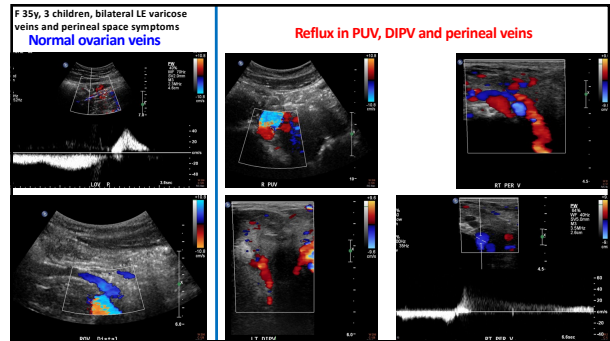
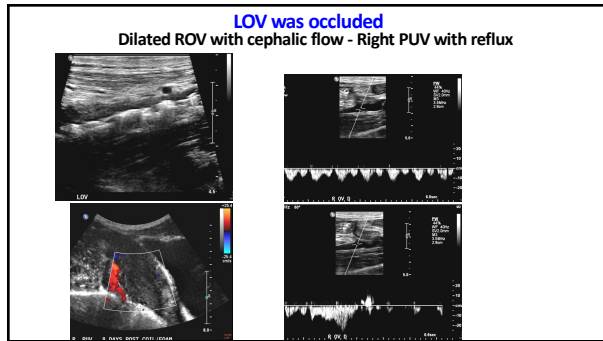
**LOV reflux in a patient with PCS and bilateral lower limb varicose veins**

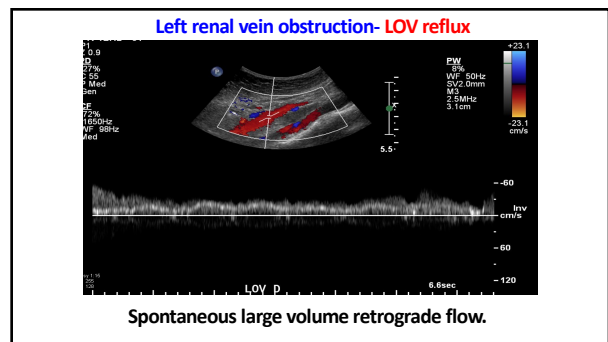
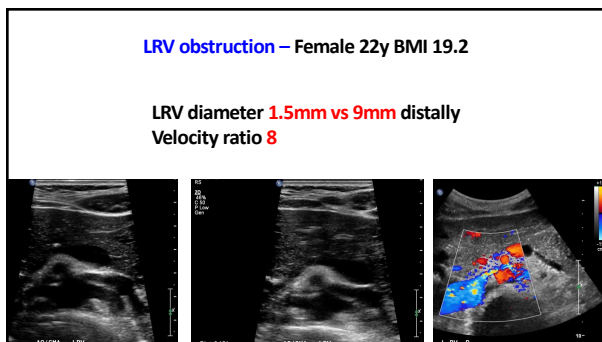
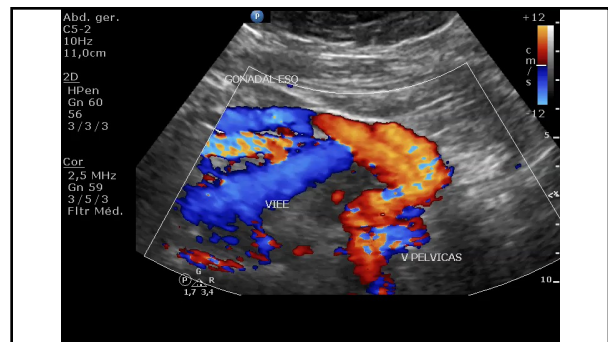
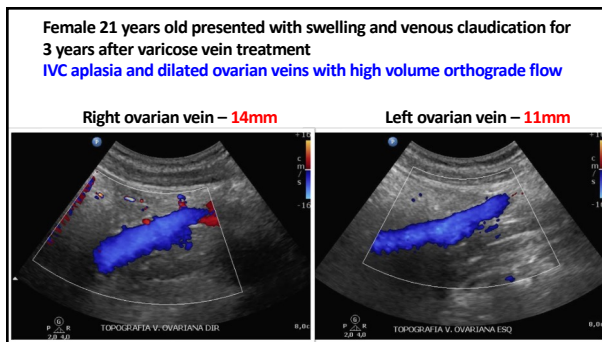
**LOV dilation with reflux in the RP space lying over the muscle**

LOV should not be confused with the mesenteric vessels

**ROV joins IVC**      **Right ovarian vein**      **ROV reflux – same color with RCIA**

ROV is dilated but has no reflux. The flow is enhanced due to LOV reflux.





**Conclusions - Pelvic Venous Disorders**

**Reflux, obstruction or both**  
 Ovarian and pelvic veins  
 Iliac veins – CIV, IIV, EIV  
 Common femoral vein  
 Connections with lower extremity veins

**Ultrasound is the diagnostic test of choice**  
 Other tests such as CTV and MRV may be useful  
 when there is suboptimal imaging or limited  
 experience with ultrasound