



Controversies & updates in Vascular Surgery

Paris - january 21 2017

Venous session

Vulvar varicose veins during pregnancy

PATHOGENESIS

Philippe Lemasle

Le Chesnay - France

Disclosure

Speaker name : Lemasle Philippe

I have the following potential conflicts of interest to report:

- ☐ Consulting
- ☐ Employment in industry
- ☐ Shareholder in a healthcare company
- ☐ Owner of a healthcare company
- ☐ Other(s)
- ☒ I do not have any potential conflict of interest

Pathogenesis

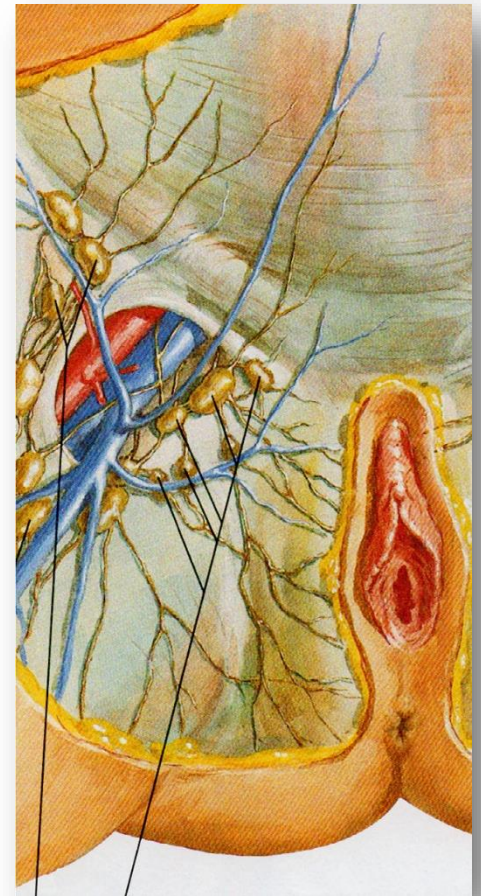
- anatomical structures
- varicose heredity
- specific factors related to pregnancy

Anatomical structures

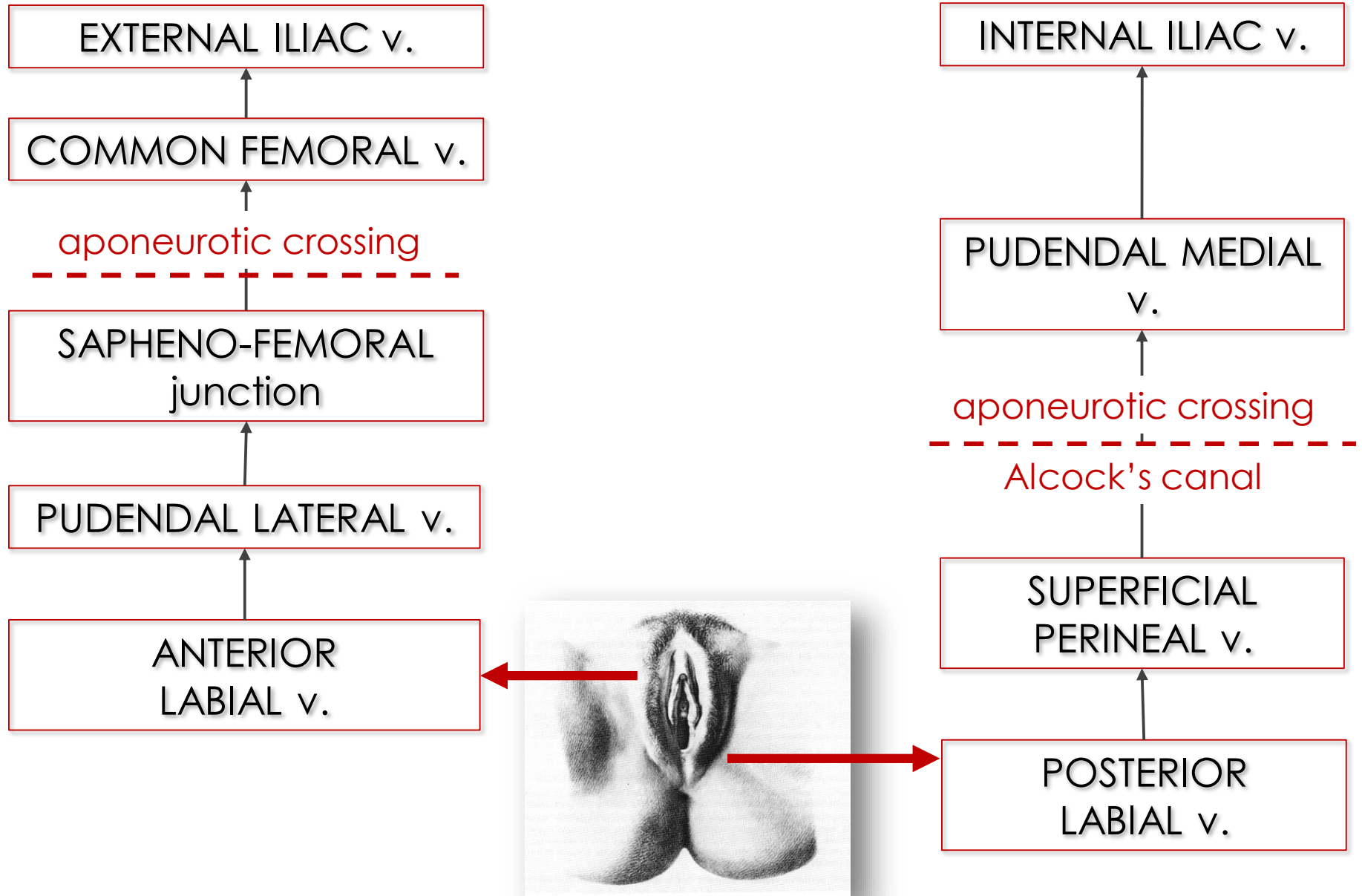
The venous drainage of the vulva is double

- forward
by the lateral pudendal veins
- backward
by superficial perineal veins

Netter



Anatomical structures



Varicose heredity

- study of twins (2 060 pairs sex ♀)
- concordance rate for varicose veins:
 - 67% in homozygous twins
 - 45% in heterozygous twins

>> there is a genetic factor
but ...

- discordance rate = 33% in homozygous twins

>> there are others factors :

environnemental, hormonal & hemodynamic

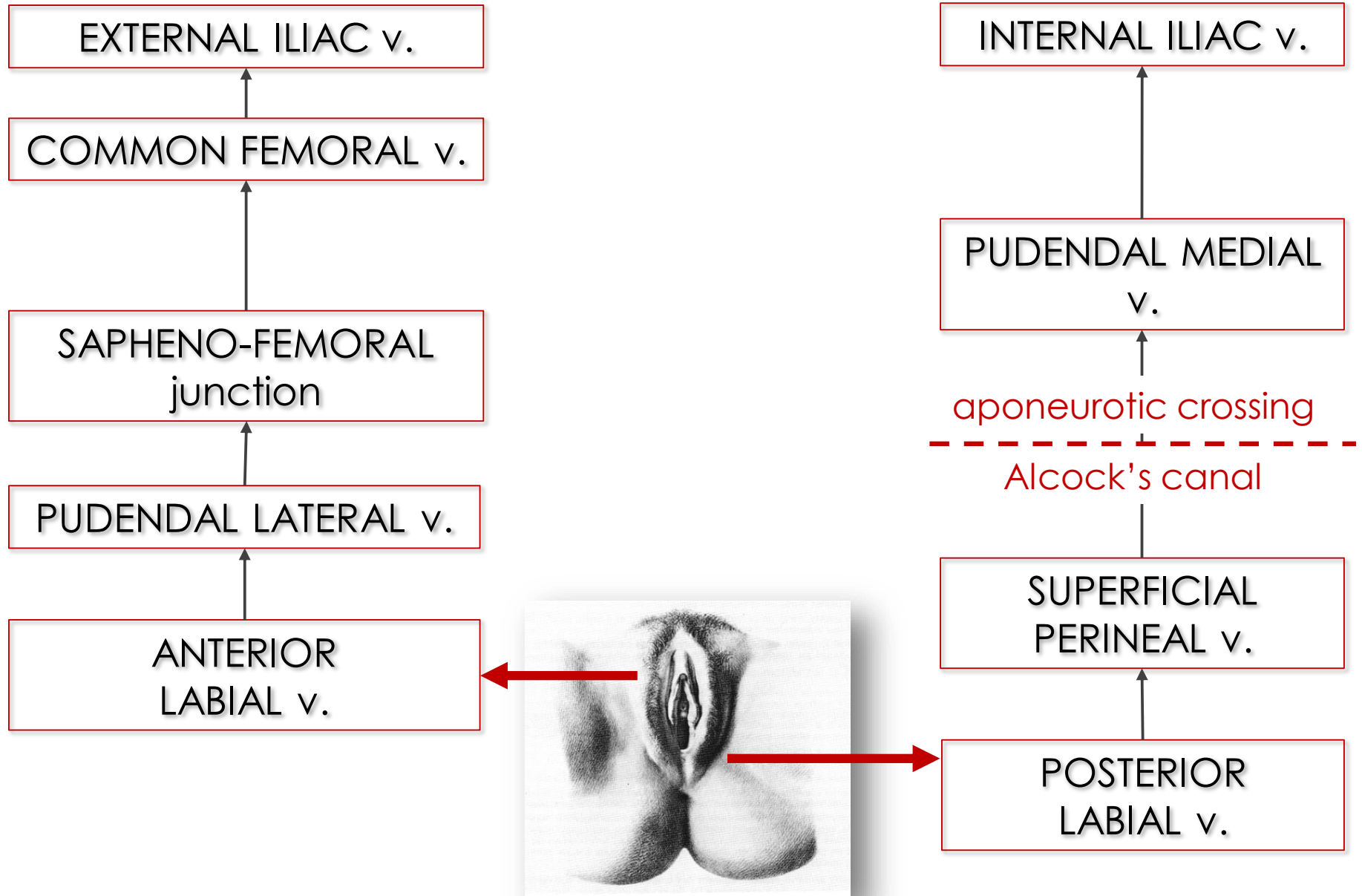
specific factors related to pregnancy

- **hormonal factors :** (specific receptors on the venous wall)
 - **hyperprogesteroneemia** >> relaxation of smooth muscle fibers
>> parietal tonicity ↓ >> compliance ↑ >> venous dilatation ↑
 - **hyperoestrogenism** >> capillary permeability ↑, vasodilatation ↑
- **mechanical factors :**
 - impediment to venous return by pregnant uterus
 - ↑ lumbar lordosis >> positional compression of the LRV
- **hemodynamic factors :**
 - ↑ blood volume + 50% (between 8-9 months) *
 - ↑ intra-venous pressure x 3 (close to term) *
(with placenta growth = high flow AV communication)
 - ↑ flow of ovarian veins x 60 (from the 36th weeks) **

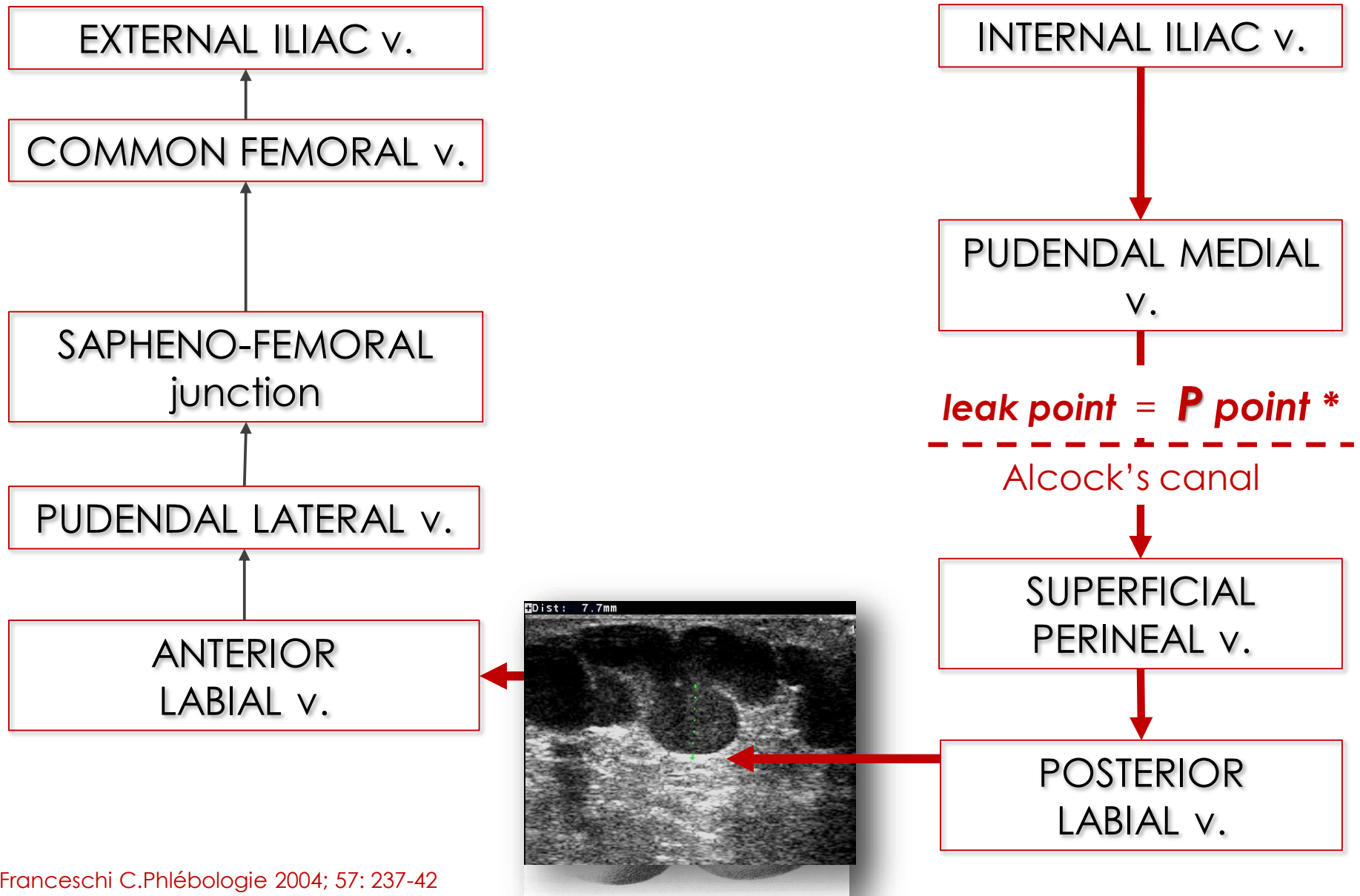
* Greiner M, Franceschi C. Hémodynamique veineuse physiologique et pathologique du pelvis et des MI I7
in Thérapeutiques endovasculaires des pathologies veineuses. Greiner M. – Springer 2013

** Hodgkinson CP. Physiology of the ovarian veins during pregnancy. Obstetrics and Gynecology 1953; 1: 26-37

Draining path = Alcock's canal



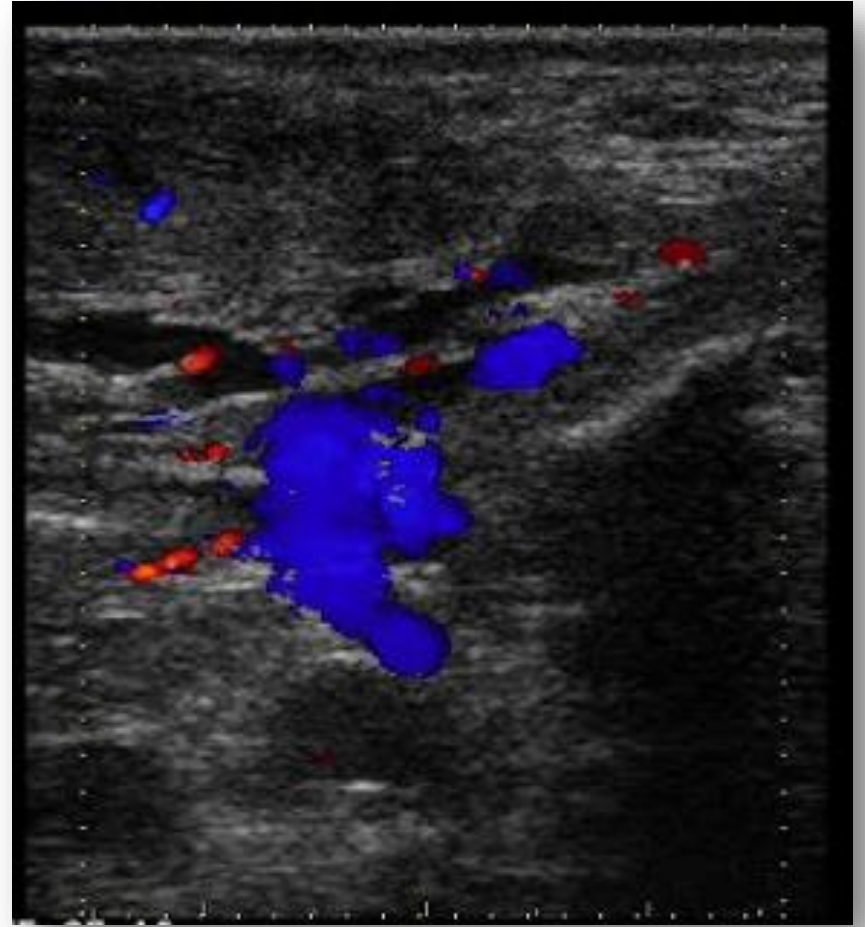
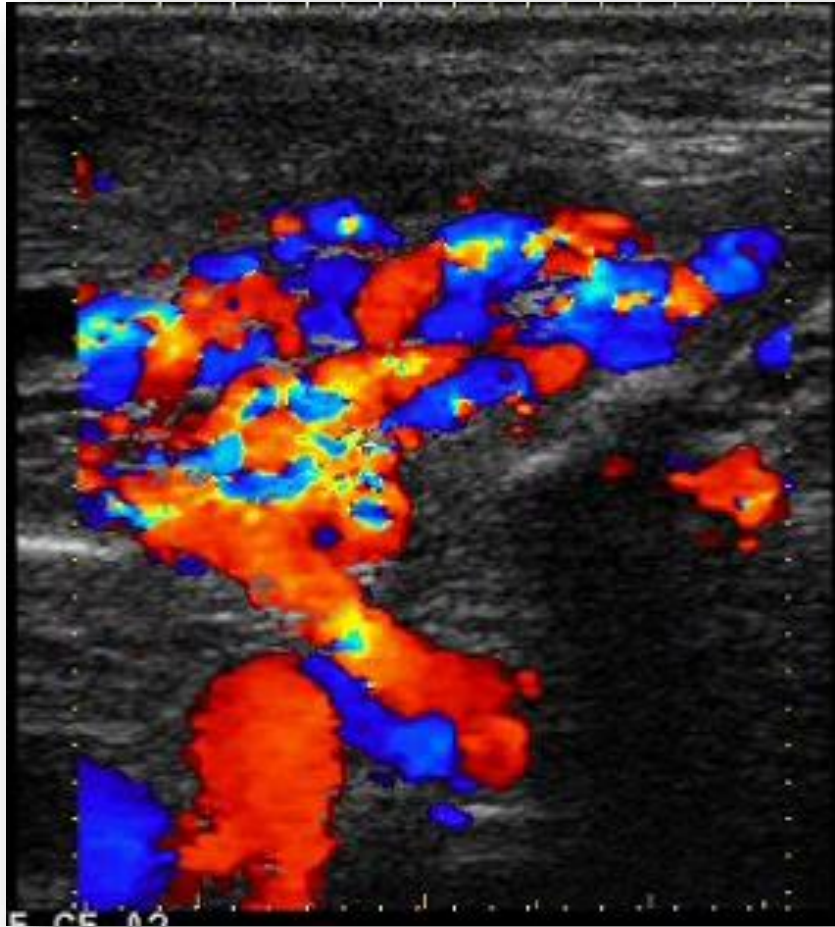
Leak point = P point



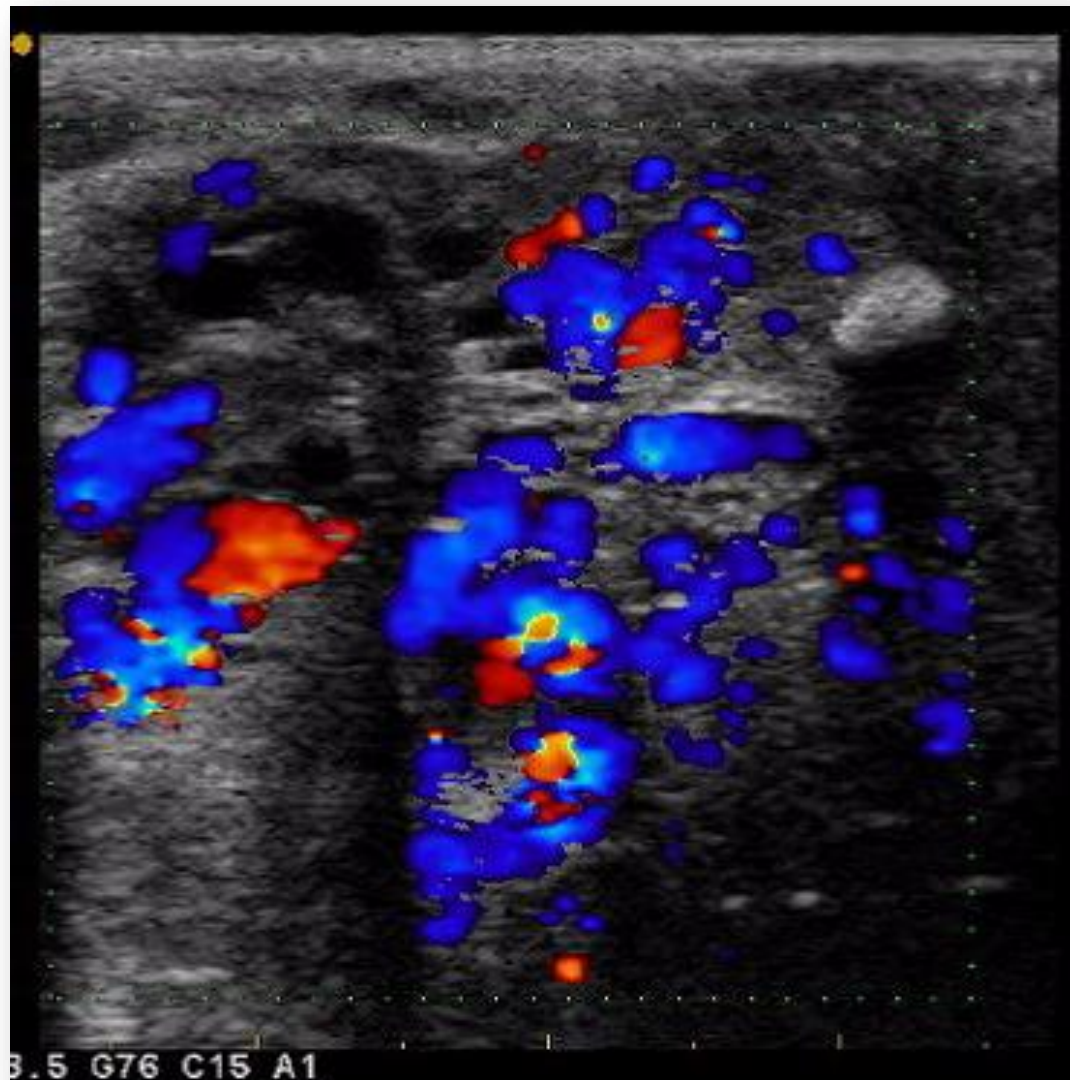
* Franceschi C. Phlébologie 2004; 57: 237-42
* Franceschi C. Ann Vasc Surg 2005; 19 : 284 – 8

Leak point

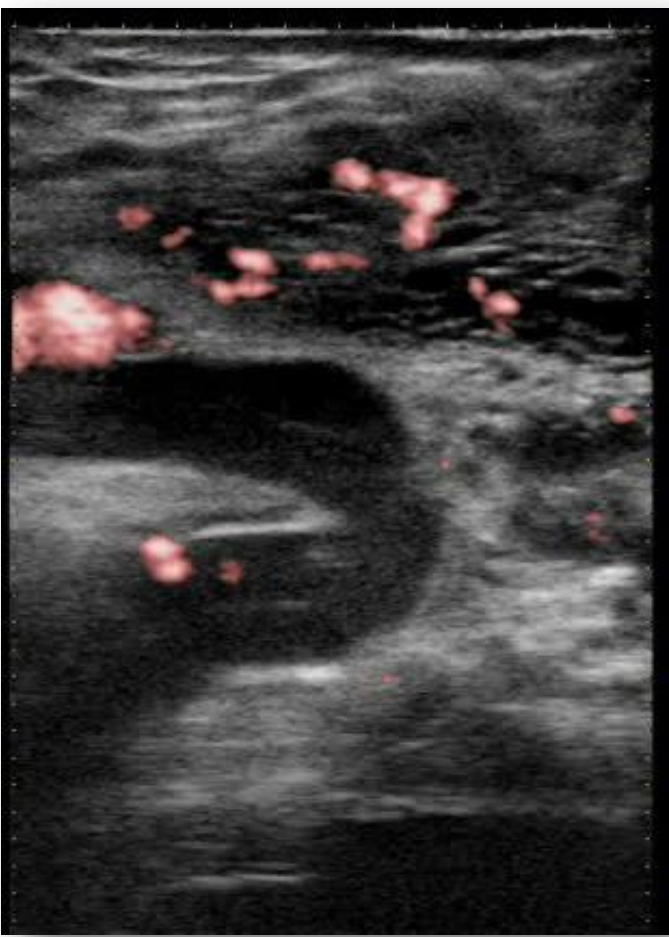
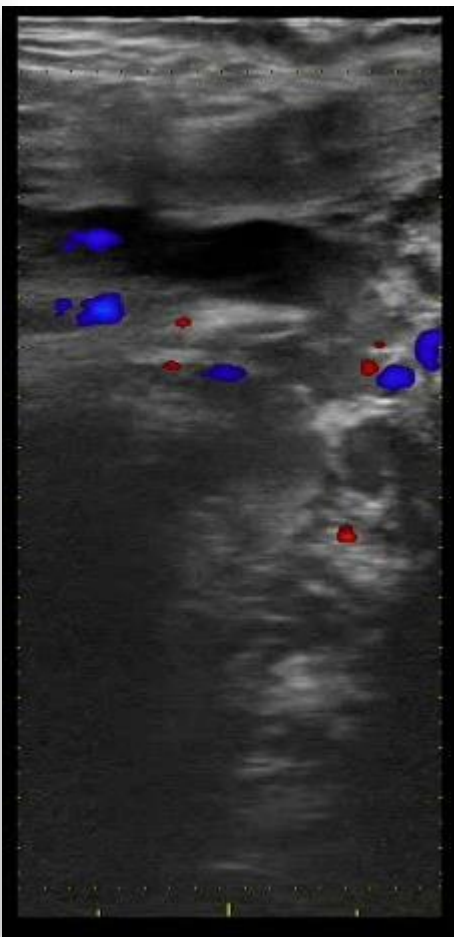
= reverse flow in an anatomical drainage pathway



left P point



varicose veins in the left labia majora



right P point

ANATOMICAL STRUCTURES

DRAINING TRUNKS



VULVA

ANATOMICAL STRUCTURES

DRAINING TRUNKS



VULVAR VARICOSE VEINS

VARICOSE
HEREDITY



ANATOMICAL STRUCTURES

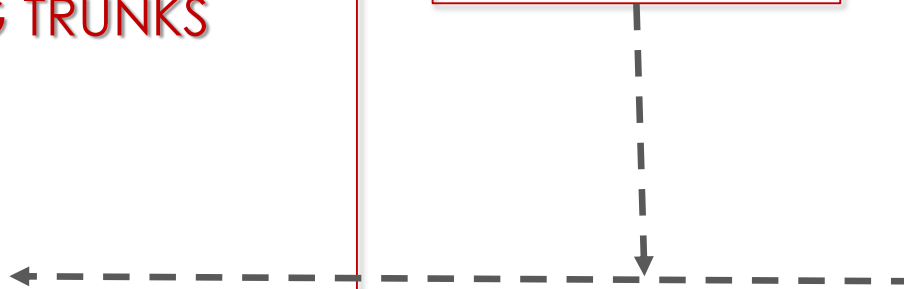
DRAINING TRUNKS



VULVAR VARICOSE VEINS

PREGNANCIES

VARICOSE
HEREDITY





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