

Insights into pelvic congestion syndrome



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Disclosures: None related to this talk

Company	Consulting / Advisory Board
BEANU Direct	X
Boston Scientific	X
Medtronic	X
Smith & Nephew	X
WL Gore	X

Pelvic Venous Disorder: The Scope of the problem

Definition: Pelvic venous disorder (PeVD) has become the terminology to describe women with chronic pelvic pain (CPP) of venous origin, combining many syndromic conditions such as May-Thurner syndrome, nutcracker syndrome, pelvic congestion syndrome (PCS), and pelvic dumping syndrome to improve diagnostic clarity accounting for specific pathophysiology. This new terminology is critical for the multisociety efforts to improve care for the large number of women living with CPP, which can account for up to *\$2.8 billion in health care costs and, ultimately*, an incomplete definitive diagnosis and lack of curative treatment

3. Meissner MH, Khilnani NM, Labropoulos N, et al. The symptoms-varices-pathophysiology (SVP) classification of pelvic venous disorders a report of the American Vein & Lymphatic Society international working group on pelvic venous disorders. J Vasc Surg Venous Lymphat Disord. Published online January 30, 2021. doi: 10.1016/j.jvsv.2020.12.084

Pelvic Venous Disorder: The Scope of the problem

Google

guideline pelvic congestion

×



Alle

Afbeeldingen

Shopping

Nieuws

Video's

Meer

Tools

Ongeveer 1.960.000 resultaten (0,39 seconden)

Google

guideline pelvic venous

×



Alle

Afbeeldingen

Shopping

Video's

Nieuws

Meer

Tools

Ongeveer 5.080.000 resultaten (0,45 seconden)

Pelvic Venous Disorder: Literature

➤ [Int Angiol.](#) 2019 Aug;38(4):265–283. doi: 10.23736/S0392-9590.19.04237-8. Epub 2019 Jul 24.

Diagnosis and treatment of pelvic congestion syndrome: UIP consensus document

Pier-Luigi Antignani¹, Zaza Lazarashvili², Javier L Monedero³, Santiago Z Ezpeleta⁴, Mark S Whiteley⁵, Neil M Khilnani⁶, Mark H Meissner⁷, Cees H Wittens⁸, Ralph L Kurstjens⁹, Ludmila Belova¹⁰, Mamuka Bokuchava¹¹, Wassila T Elkashishi^{12 13}, Christina Jeanneret-Gris¹⁴, George Geroulakos¹⁵, Sergio Giancesini¹⁶, Rick de Graaf¹⁷, Marek Krzanowski¹⁸, Louay Al Tarazi¹⁹, Lorenzo Tessari²⁰, Marald Wikkeling²¹

➤ [J Vasc Surg Venous Lymphat Disord.](#) 2021 May;9(3):568–584. doi: 10.1016/j.jvsv.2020.12.084. Epub 2021 Jan 30.

The Symptoms–Varices–Pathophysiology classification of pelvic venous disorders: A report of the American Vein & Lymphatic Society International Working Group on Pelvic Venous Disorders

Mark H Meissner¹, Neil M Khilnani², Nicos Labropoulos³, Antonios P Gasparis³, Kathleen Gibson⁴, Milka Greiner⁵, Lee A Learman⁶, Diana Atashroo⁷, Fedor Lurie⁸, Marc A Passman⁹, Antonio Basile¹⁰, Zaza Lazarshvili¹¹, Joann Lohr¹², Man-Deuk Kim¹³, Philippe H Nicolini¹⁴, Waleska M Pabon-Ramos¹⁵, Melvin Rosenblatt¹⁶



Pelvic Venous Disorder: The Scope of the problem

Large number of women living with CPP, “Chronic pelvic pain”. It is a common health problem that afflicts **39%** of women at some time in their life¹. “Chronic pelvic pain” accounts for 15% of outpatient’s gynaecological visits.

“Chronic pelvic pain” consists of Endometriosis (39%), *Pelvic Venous Disease (PeVD) formerly known as Pelvic Congestion Syndrome*, (31%), Pelvic Inflammatory disease (11%), Adhesions (10%), Fibroids (4%), Other (5%)².

1 Adams et al, Br J Obstet Gyn 1990; Beard et al, Br J Obstet Gyne 1991; Hobbs Br J Hosp Med 1990

2 Soysal et al, Hum Reprod 2001



Pelvic Venous Disorder: From a very heterogenous DDx

Bowel pathology

Cancer/metastases

Endometriosis

Fibroids

Fibromyalgia

Neurologic pathology

Orthopedic pathology

Ovarian cyst

Pelvic venous disease

*Pelvic inflammatory
disorder*

Porphyria

Urologic pathology

Uterine prolapse

Pelvic Venous Disorder: From a very heterogenous DDx

History taking very important !

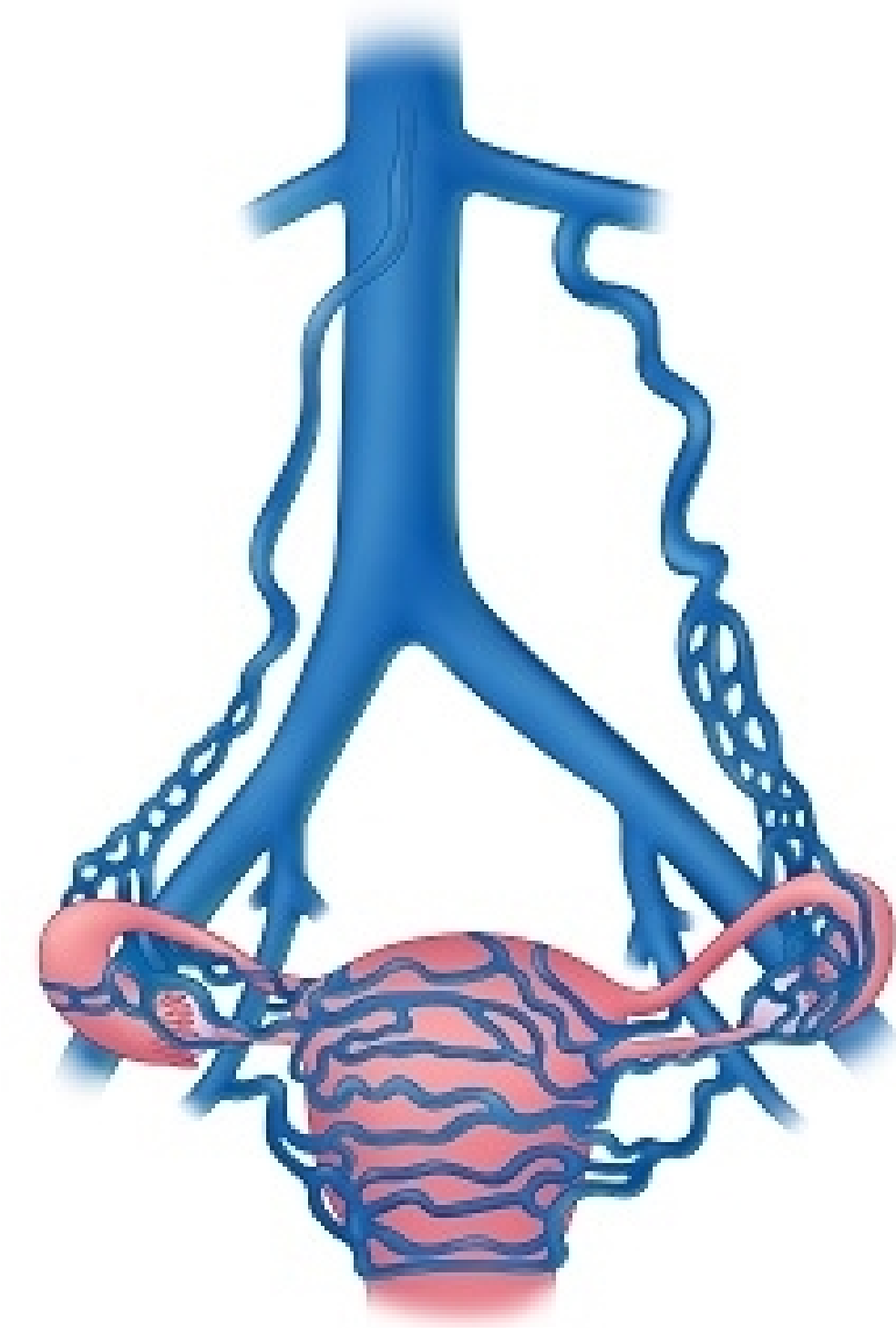
Chronic pain typically dull and aching in lower abdomen and back (> 6 m); increases

- following intercourse
- during menstrual periods
- when tired or standing (worse at end of day)

Varices

- perineal
- vulval
- gluteal and/or
- posterior thigh areas

Important: If asked
about pelvic discomfort,
Patients tend to under
report !



Pelvic Venous Disorder: From a very heterogenous DDx

History taking very important !



[What Is PCS?](#) [Our Story](#) [Our Approach](#) [Resources](#) [Contact](#)

[Self Assessment](#)



+65 8666 9639

Pelvic Congestion Syndrome Self Assessment Questionnaire

Take this questionnaire if you have heavy or painful menses; or lower abdominal or pelvic pain on a frequent basis; or varicose veins in the legs; or frequent pain during or after sex; or had piles (haemorrhoids) after pregnancy that have persisted; or have had multiple IVF cycles.

Section 1 Basic PCS score

Please click Yes or No as answers.

1. Do you suffer from pain in the legs on being in the standing or sitting position for a while?
☐ Y ☐ N
2. Do you suffer from leg swelling on being in the standing or sitting position for a while?
☐ Y ☐ N
3. Do you suffer from pain at the buttock and/ or perineal (undercarriage or private areas) region on being in the standing or sitting position for a while?
☐ Y ☐ N
4. Do you suffer from regular coital (related to sexual intercourse) pain?
☐ Y ☐ N

Section 2 PCS Specific score

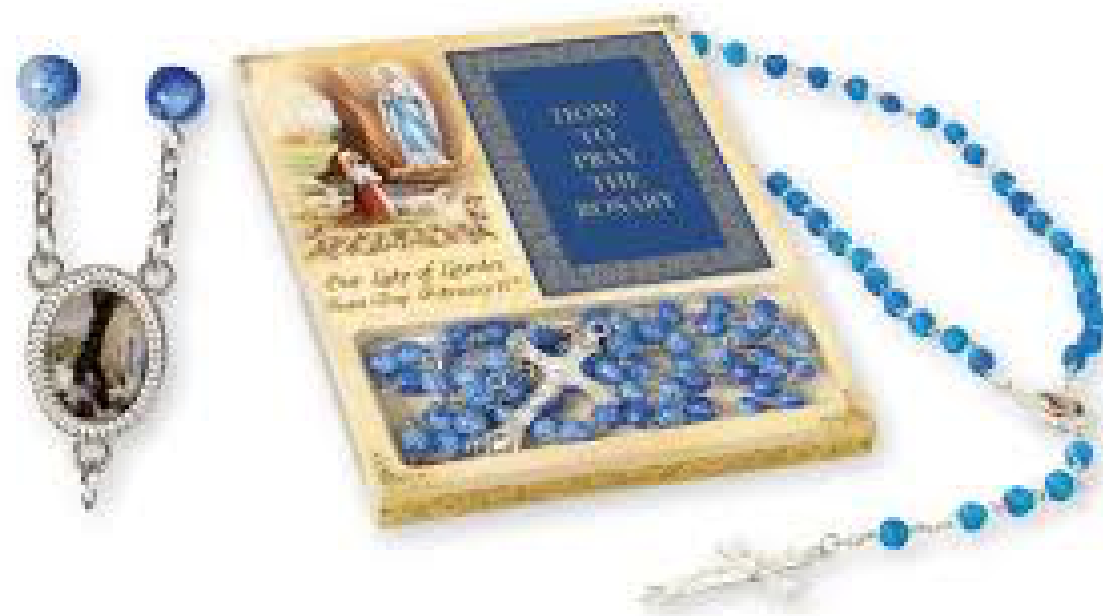
Please click Yes or No as answers.

1. Do you have varicose veins in the groin or in and around your private areas and vagina now; or have had them during or after pregnancy in the past?
☐ Y ☐ N
2. Do you suffer from regular post coital (after sexual intercourse) pain or an ache deep within the private areas and pelvis after sex?
☐ Y ☐ N
3. Have you had gynaecological procedures like laparoscopies, hormone treatments and implants or referrals to chronic pain management for a diagnosis of endometriosis over many years but have had no relief from the pain?
☐ Y ☐ N





Pelvic Venous Disorder: From a very heterogenous DDx



'Lourdes'- effect

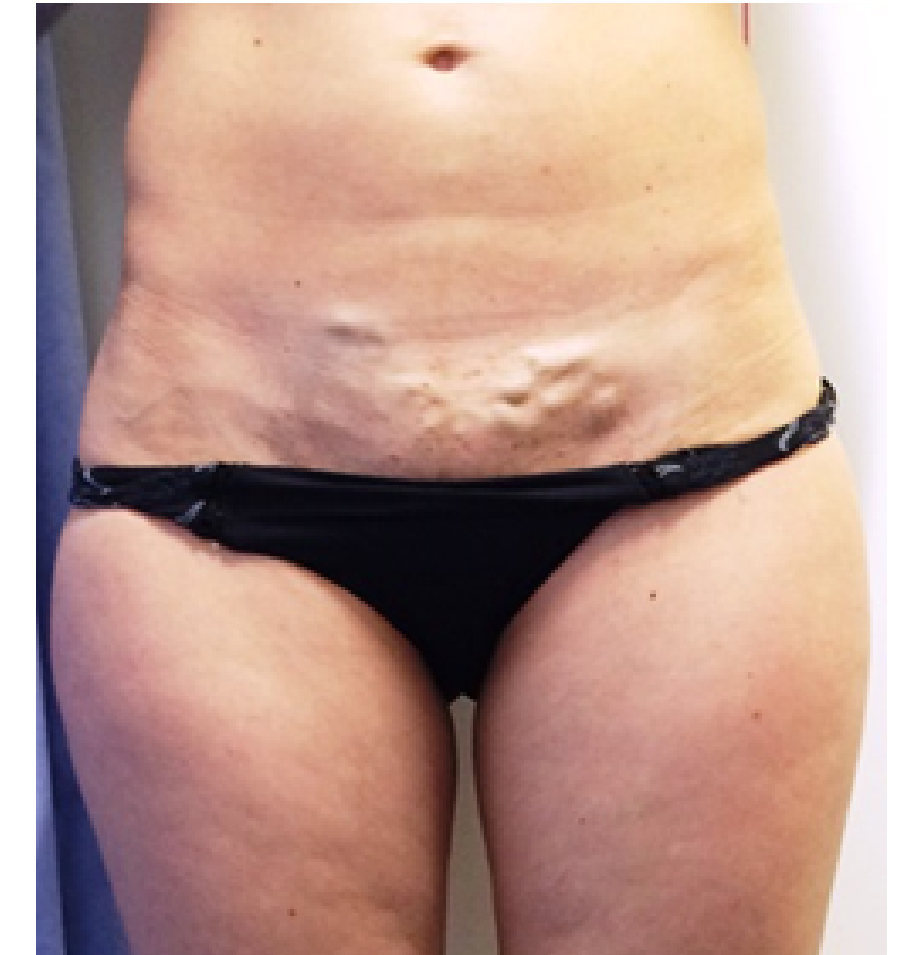
Bowel pathology
Cancer/metastases
Endometriosis
Fibroids
Fibromyalgia
Neurologic pathology
Orthopedic pathology
Ovarian cyst
Pelvic venous disease
Pelvic inflammatory disorder
Porphyria
Urologic pathology
Uterine prolapse

Exclude other pelvic pathology!!

Pelvic venous disease is not just pelvic varices. There must be pain too.

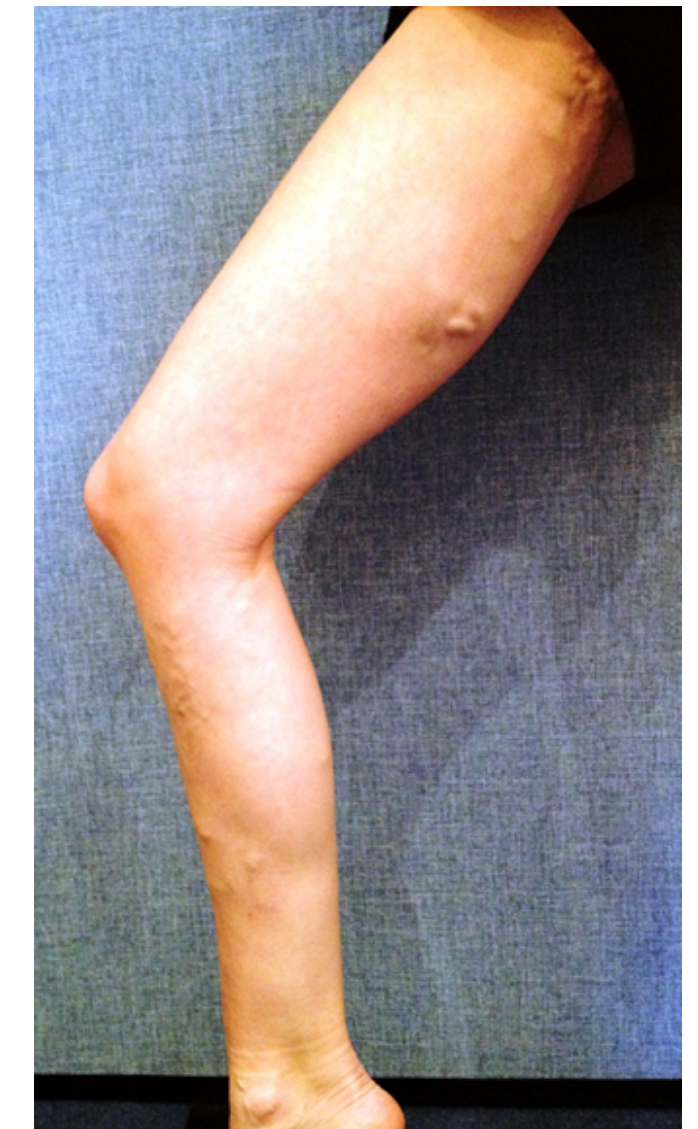
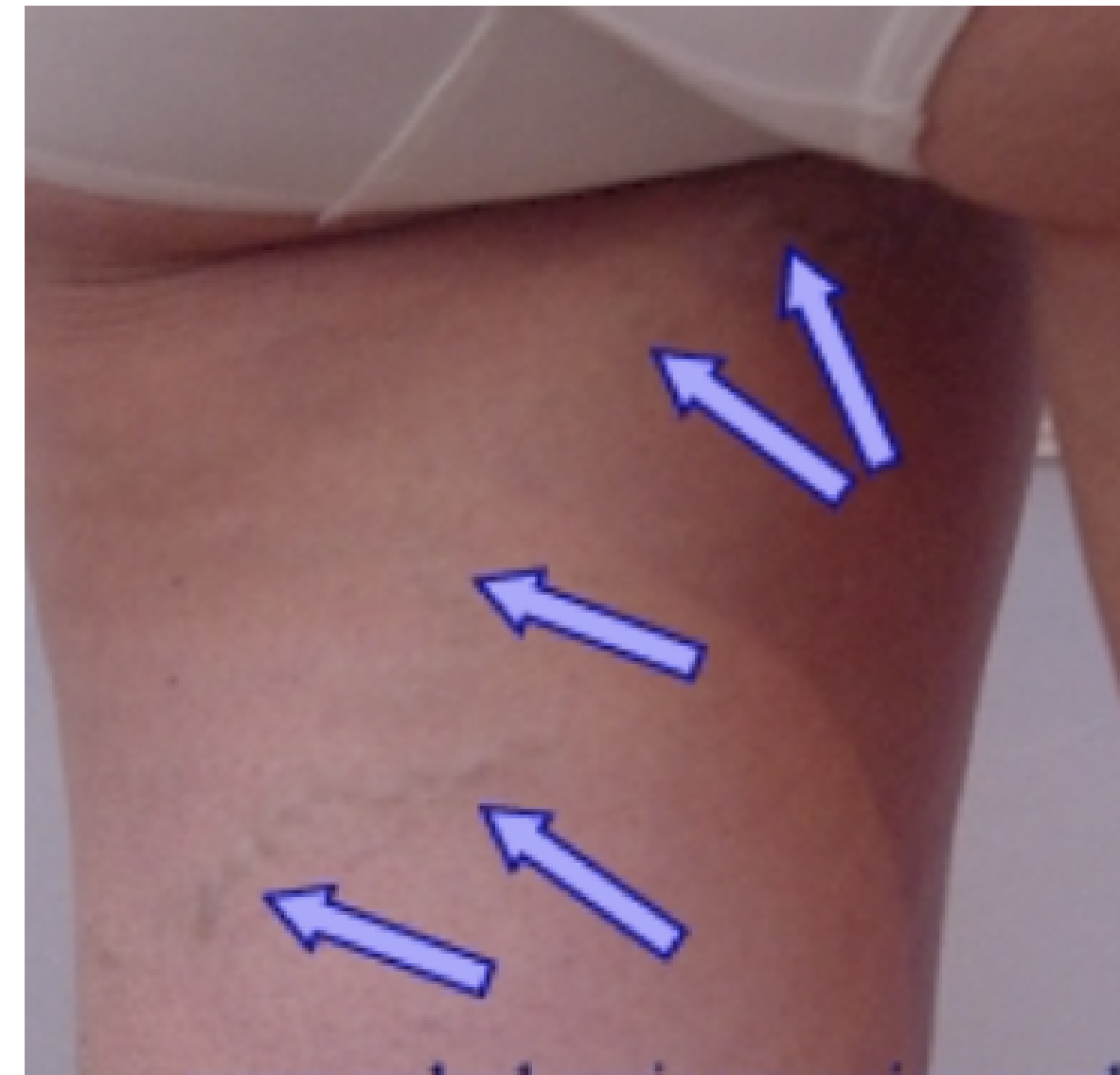
Pelvic Venous Disorder: Clinical examination / External Signs

- Vulval / Labial Varicose Veins
- Buttock Varicose Veins
- Perineal Varicose Veins
- Haemorrhoids
- Supra-Pubic Varices / Flank Varices



Pelvic Venous Disorder: Clinical examination / External Signs

- Leg varicose veins
- Varicose skin changes found to be due to Pelvic Varicose Veins
- This may cause:
 - Pain in Vulval / Labia
 - Back Pain (Low Back)
 - Hip Pain



Case Report

Pelvic congestion syndrome masquerading as osteoarthritis of the hip

Scott J Dos Santos^{1,2} and Mark S Whiteley^{1,2}

SAGE Open Medical Case Reports

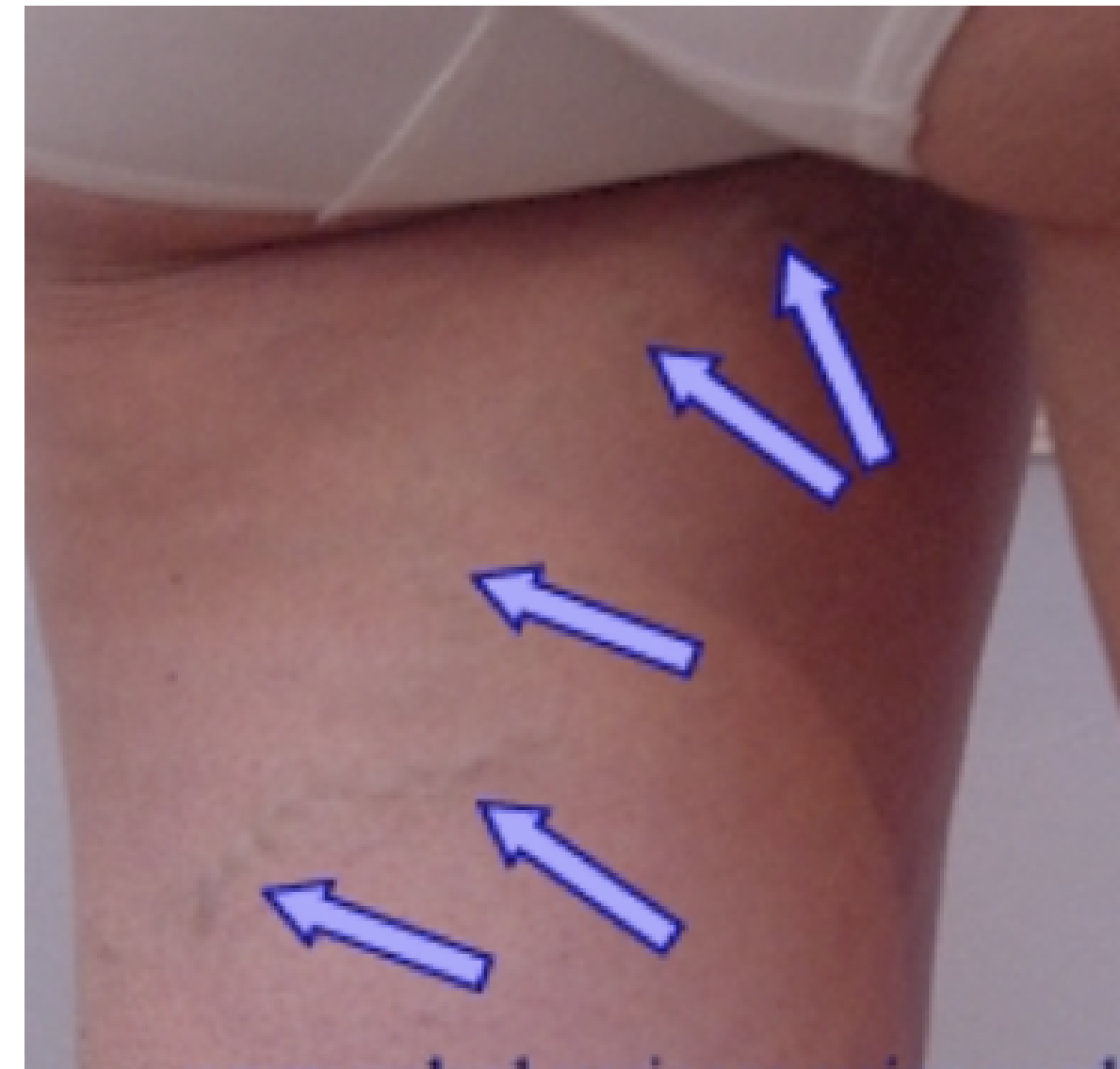
SAGE Open Medical Case Reports
Volume 4: 1-3
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DOI: 10.1177/2050313X16683630
sco.sagepub.com

SAGE

Pelvic Venous Disorder: Clinical examination / External Signs

This results in 3 different groups of symptoms:

- Pain in the lower abdomen, coherent with cyclus and worsened by standing (only +/- 5%)
- Combined with:
- Recurrent varicoses, due to venous filling from the pelvis (+/- 40%)
- Varicoses veins on the vulva or labia (+/-55%)



Pelvic Venous Disorder: Can be caused by

3 mechanisms

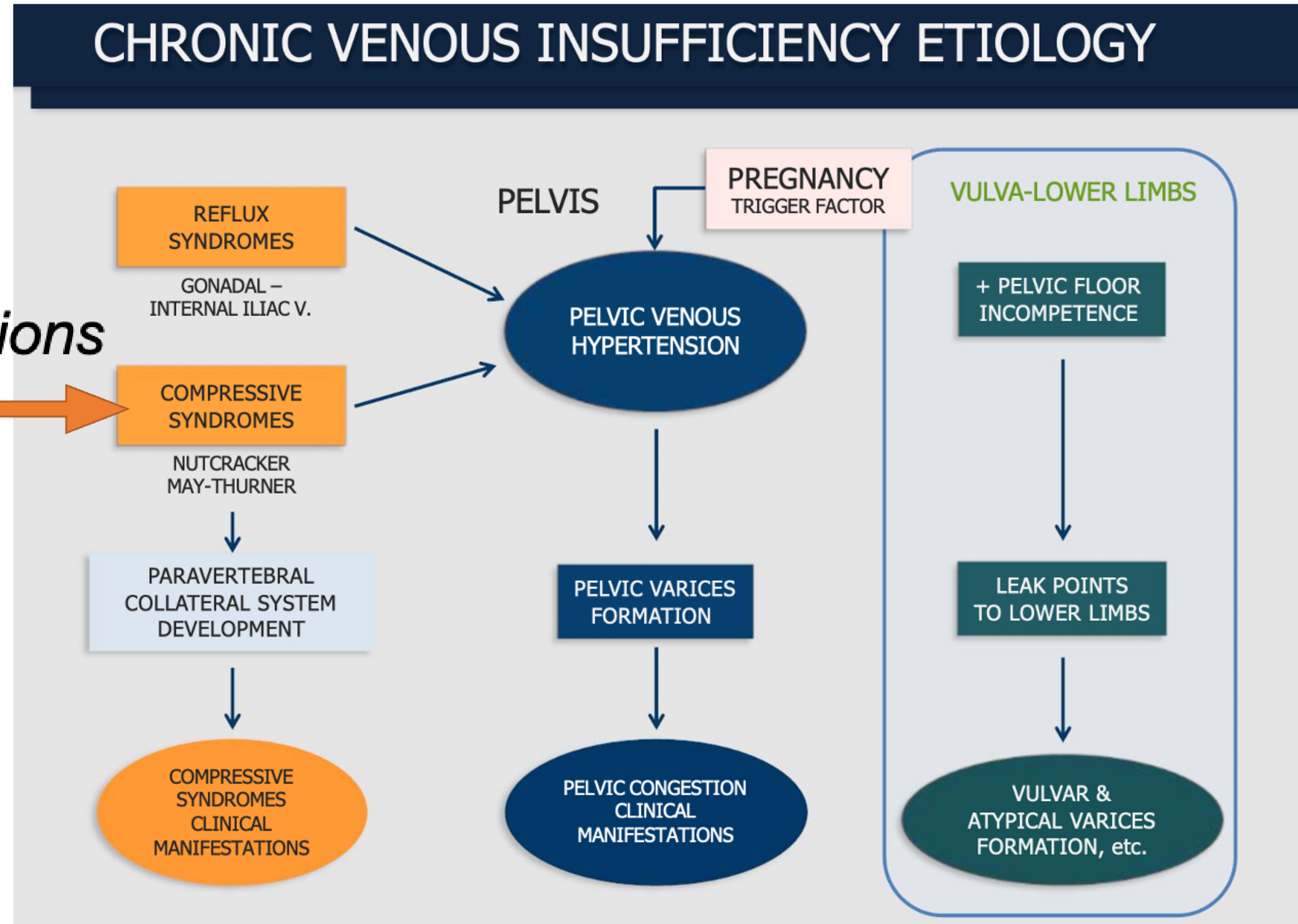
- Type 1 : Venous wall pathology with reflux
- Type 2 : Obstructive lesions (MTS, NCS, postDVT)
- Type 3 : Local cause (endometriosis, tumor)

Leg Varices Originating from the Pelvis: Diagnosis and Treatment

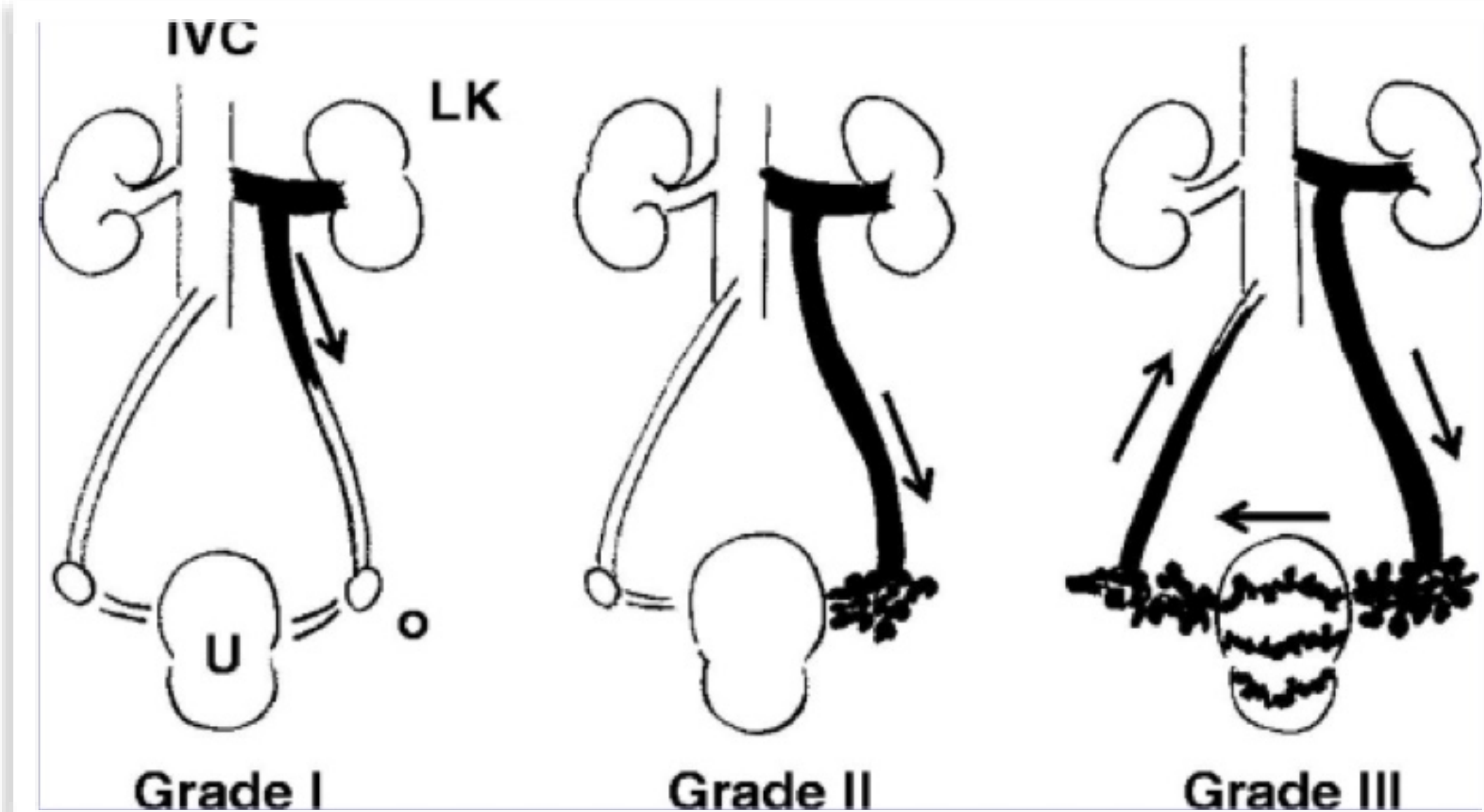
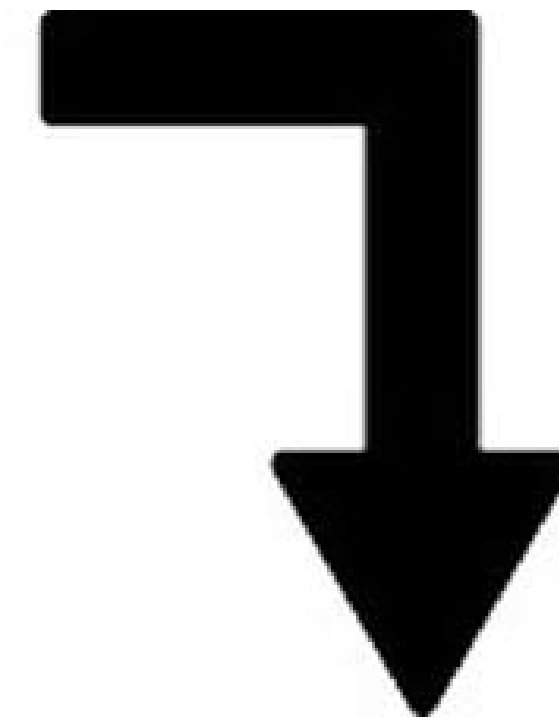
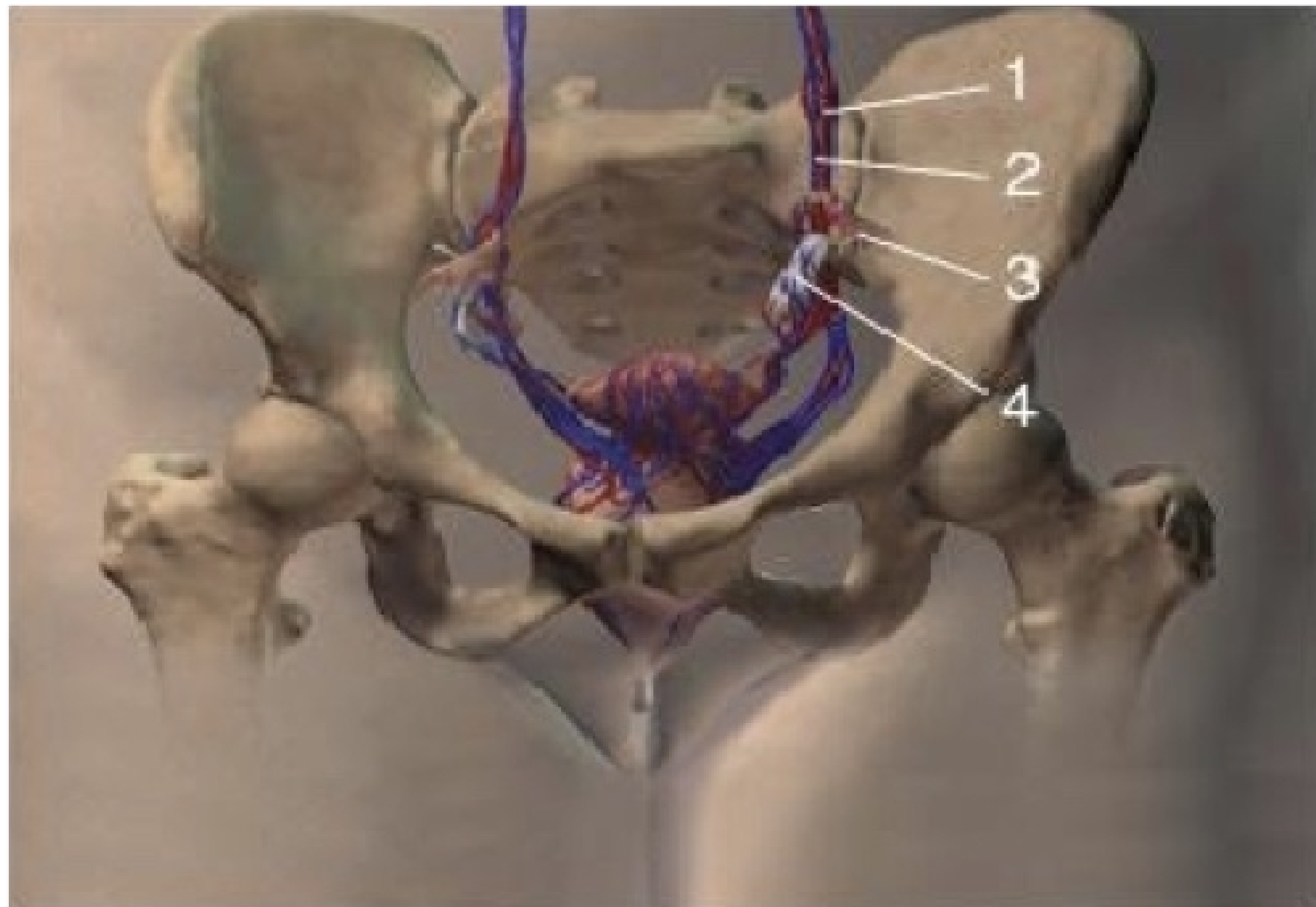
[Milka Greiner](#), [Geoffrey L. Gilling-Smith](#)

First Published April 1, 2007 | Research Article | [Find in PubMed](#)

Pelvic Venous Disorder: Can be caused by



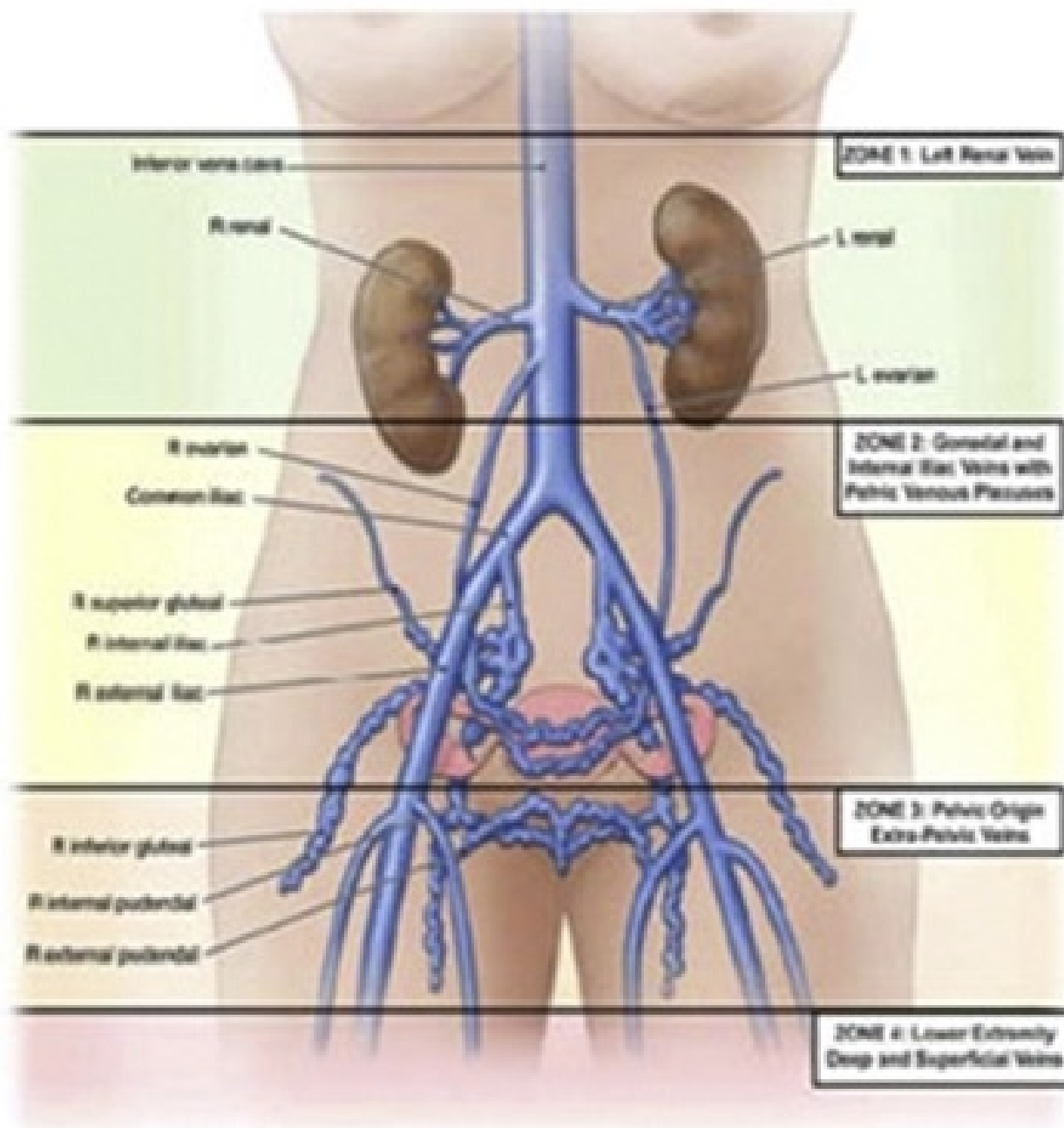
Pelvic Venous Disorder: Types



The Symptoms-Varices-Pathophysiology (SVP) Classification of Pelvic Venous Disorders



A Report of the American Vein & Lymphatic Society International Working Group on Pelvic Venous Disorders



(S) SYMPTOMS		(V) VARICES		(P) PATHOPHYSIOLOGY	
S₀	No symptoms	V₀	No abdominal, pelvic, or pelvic origin extra-pelvic varices	Anatomy	IVC Left renal vein Gonadal vein Common iliac vein External iliac vein Internal iliac vein Pelvic escape vein
S₁	Renal symptoms of venous origin	V₁	Renal hilar varices		
S₂	Chronic pelvic pain of venous origin	V₂	Pelvic varices		
S₃	Extra-pelvic symptoms of venous origin	V₃	Pelvic origin extra-pelvic varices		
a	Localized symptoms associated with veins of the external genitalia	a	Genital varices (vulvar varices and varicocele)	Hemo dynamics	Obstruction (O) Reflux (R)
b	Localized symptoms associated with pelvic origin non-saphenous leg veins	b	Pelvic origin lower extremity varicose veins arising from pelvic escape points, extending into the thigh.	Etiology	Thrombotic (T) Non-thrombotic (NT) Congenital (C)
c	Venous claudication				

Pelvic Venous Disorder: Imaging

Ultrasound (20-53%)
CT (< 20%)
MRI Literature = 59% →
Duplex
Laparoscopy (20-40%)
Transabdominal Duplex
Ultrasound
Transvaginal Duplex
Ultrasound

Venography



CW Arnoldussen, MA de Wolf, CH Wittens Phlebology. 2015 Mar;30(1 Suppl):67-72. doi: 10.1177/0268355514568063. Diagnostic imaging of pelvic congestive syndrome.



Kim et al. JVIR 2006, in press; Park et al. AJR 2004; 182: 683-88; Umeoka et al. Radiographics 2004; 24: 193-208; Desimpelaere et al. Abdom Imag 1999; 24: 100-02; Beard et al. Lancet 1984; 2: 946-49



Isolated dilatation of a ovarian vein is not specific for PCS

Pelvic Venous Disorder: Imaging

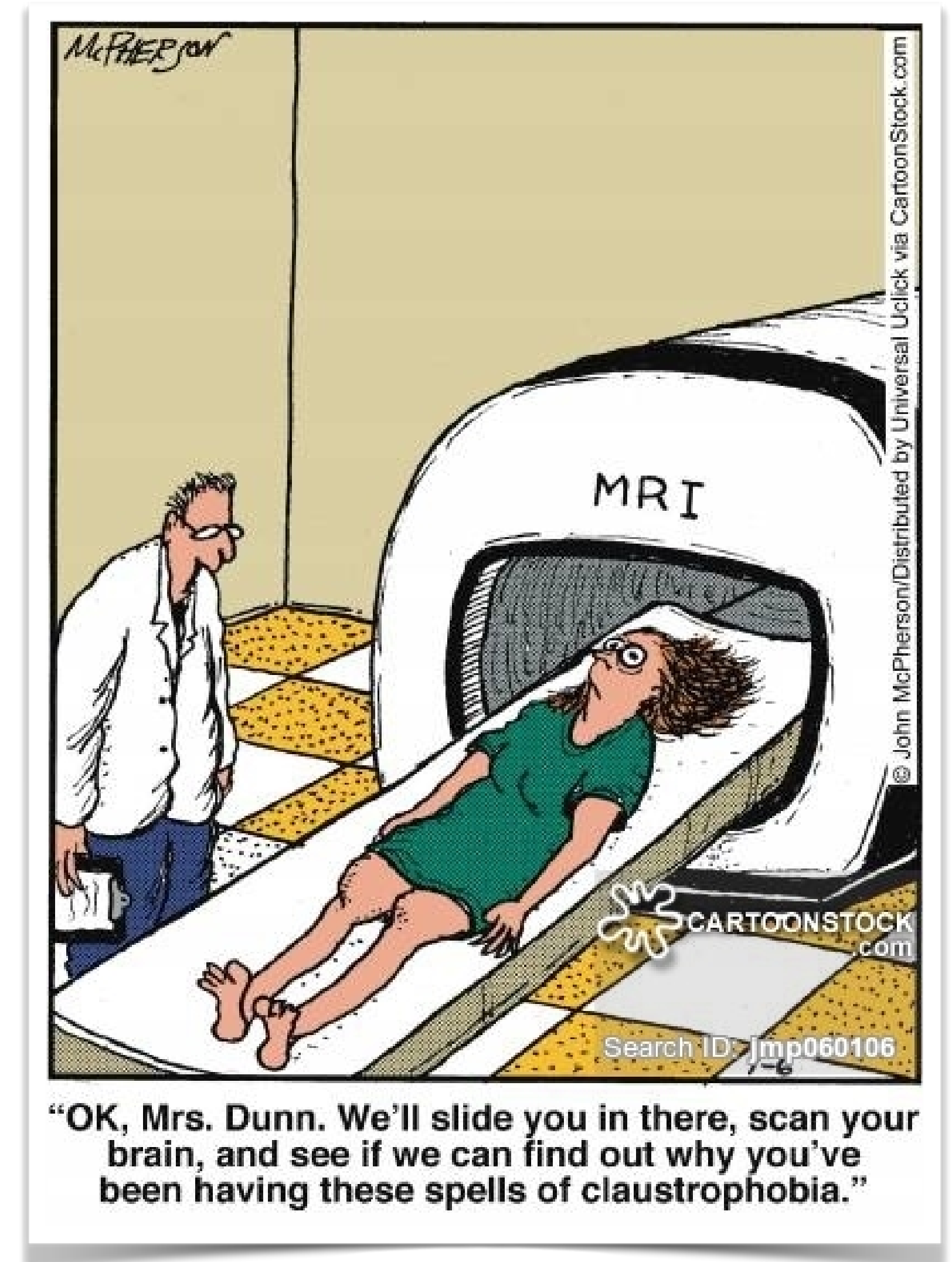
By S.S. Virani, MD, PhD, FACC, FAHA
Associate Professor in Cardiology and
Cardiovascular Research Sections at
Baylor College of Medicine in Houston,
Texas.

Pelvic Congestion: Menu of Radiologic Tests

<i>Test</i>	<i>Key Findings</i>	<i>Advantages</i>	<i>Disadvantages</i>
Ultrasound	<ul style="list-style-type: none"> ▪ Dilated ovarian veins ▪ Pelvic varices > 5mm ▪ Reversed flow with Doppler 	<ul style="list-style-type: none"> ▪ Non invasive ▪ Readily available ▪ Can detect other causes of symptoms 	<ul style="list-style-type: none"> ▪ Operator dependent
Contrast CT / CTA	<ul style="list-style-type: none"> ▪ Dilated ovarian veins ▪ Tortuous pelvic varices 	<ul style="list-style-type: none"> ▪ Non operator dependent ▪ Can visualize vascular anatomy for possible etiology 	<ul style="list-style-type: none"> ▪ Supine position can underestimate size of veins ▪ Contrast exposure
MRI / MRV	<ul style="list-style-type: none"> ▪ Dilated ovarian veins ▪ Pelvic varices often hyperintense on T2 	<ul style="list-style-type: none"> ▪ Non invasive ▪ No contrast ▪ MRV becoming popular; can image pelvic venous system in 1 breath hold 	<ul style="list-style-type: none"> ▪ Expense ▪ Patient comfort ▪ Supine position can underestimate size of veins ▪ Follow up limited for patients who have had embolization with metal coils
Direct Venography	<ul style="list-style-type: none"> ▪ Dilated veins ▪ Reflux 	<ul style="list-style-type: none"> ▪ Gold standard ▪ Can be done @ time of embolization 	<ul style="list-style-type: none"> ▪ Invasive ▪ Contrast

Pelvic Venous Disorder: Imaging

- Venography / MRI / MRV / CT
- Size of veins $> \underline{8mm}$ (6 -10, TBD)
- Poor functional information
- Only see veins with contrast flow in
- Usually lying flat
- (No reflux when Flat!)



Pelvic Venous Disorder: Imaging

Magnetic Resonance Venography

Preferred over CT
contrast, radiation

Features:

Dilated arcuate vessels within the endometrium

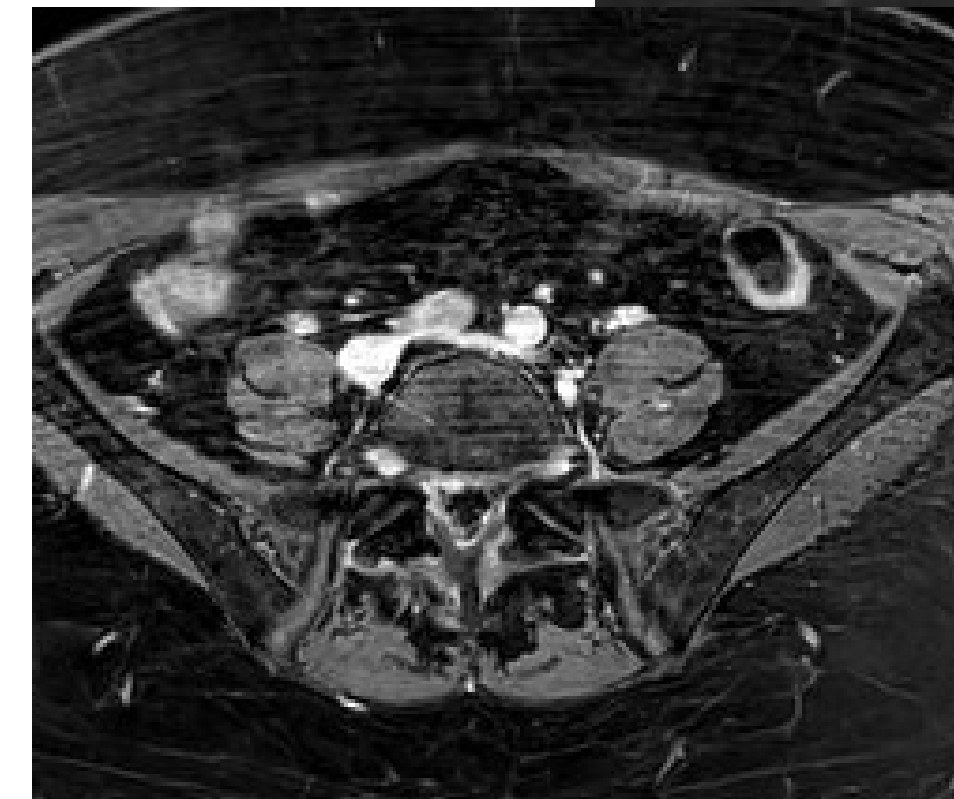
Pelvic varicosities in the broad ligament

Large peri uterine veins

Compressive syndromes:

May-Thurner

Nutcracker



Pelvic Venous Disorder: Imaging retrograde selective venography

Catheter-directed Venography

Work in a standardised way

Both ovarian veins & internal iliac veins

Femoral, jugular, cubital access

Various catheters:

Cobra II, III

Simmons I, II

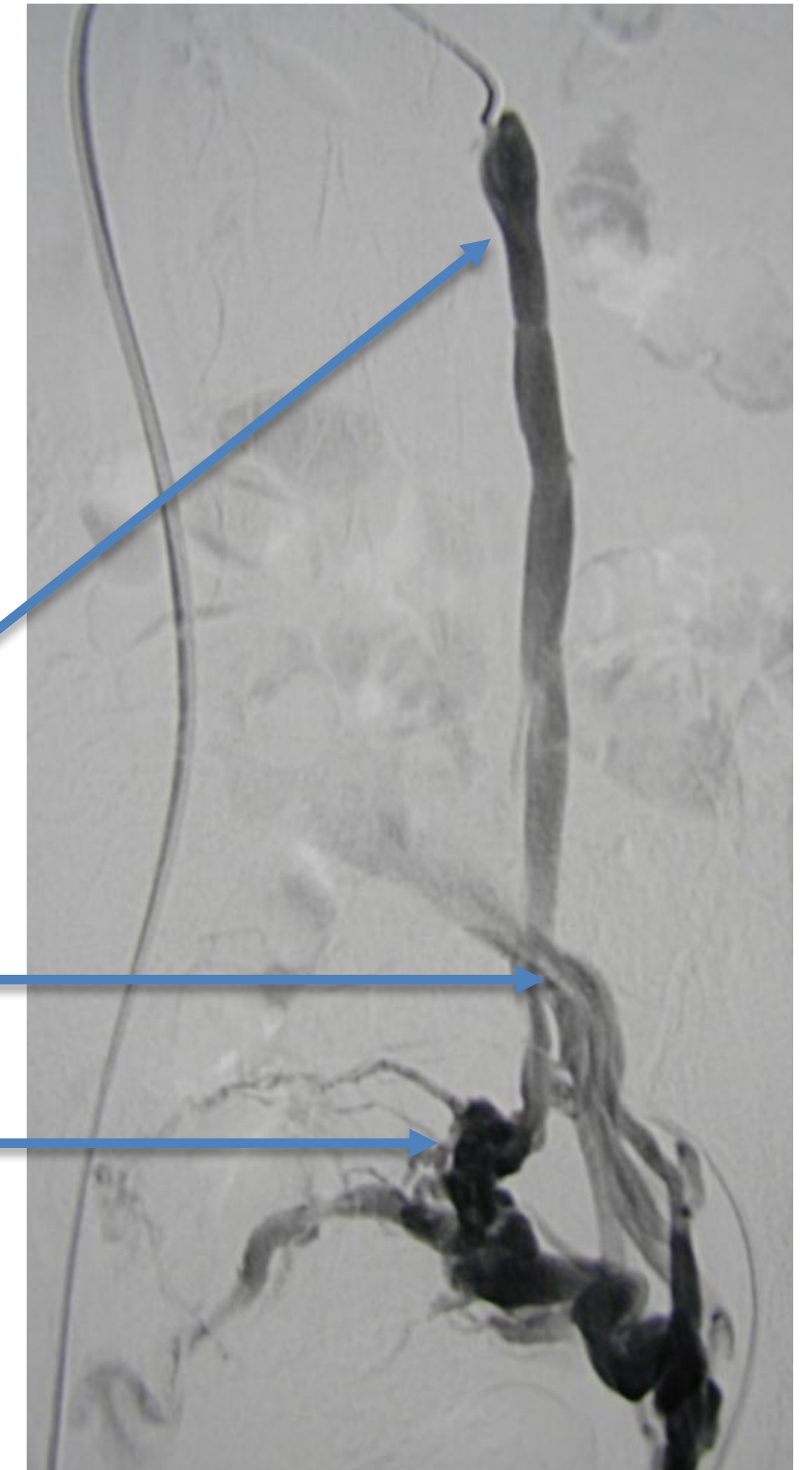
Semi-erect, Valsalva

ovarian vein > 6 (+/-)mm

filling iliac vein

retention > 20 s

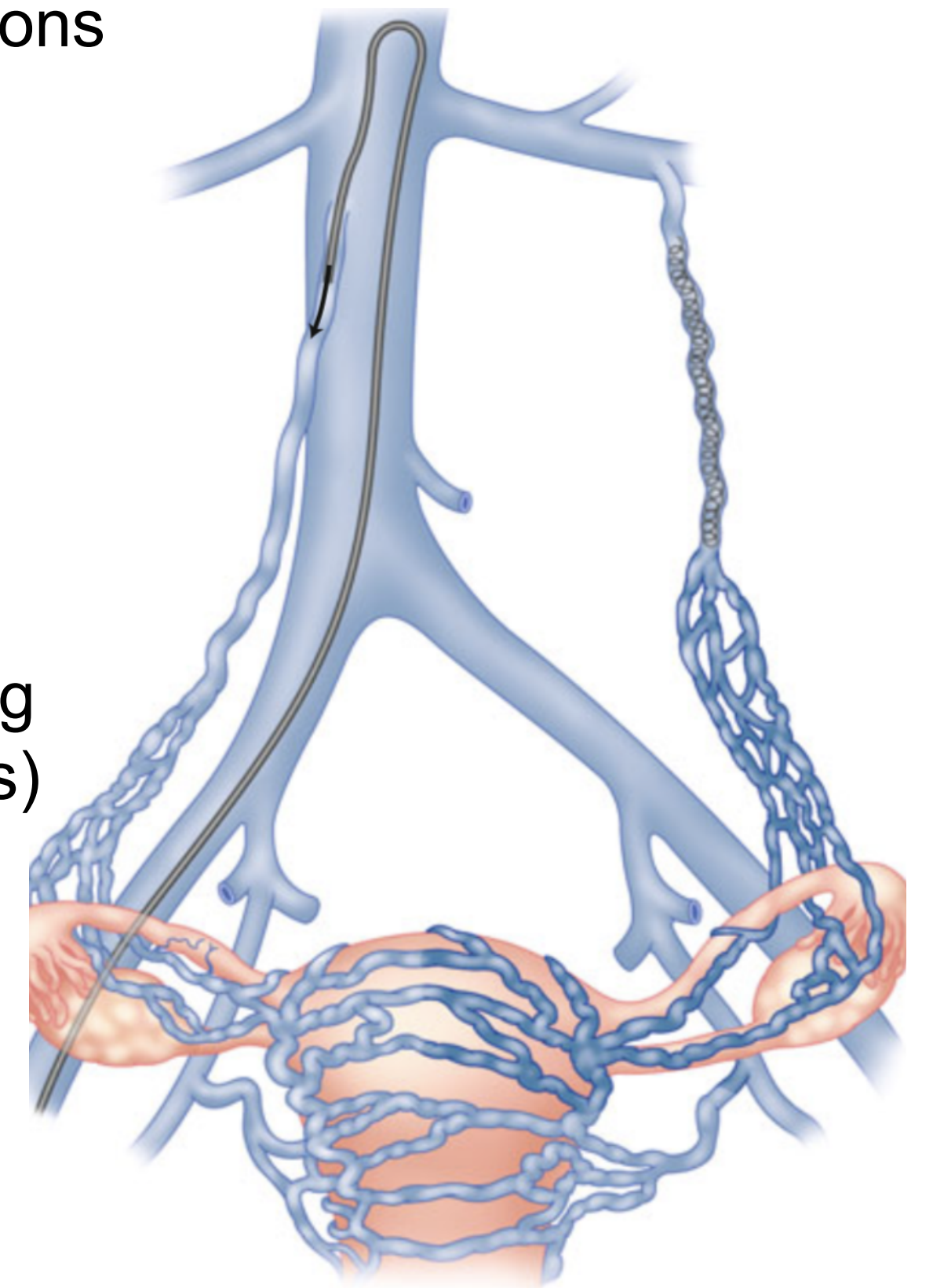
filling thigh varico's



Pelvic Venous Disorder: Imaging retrograde selective venography

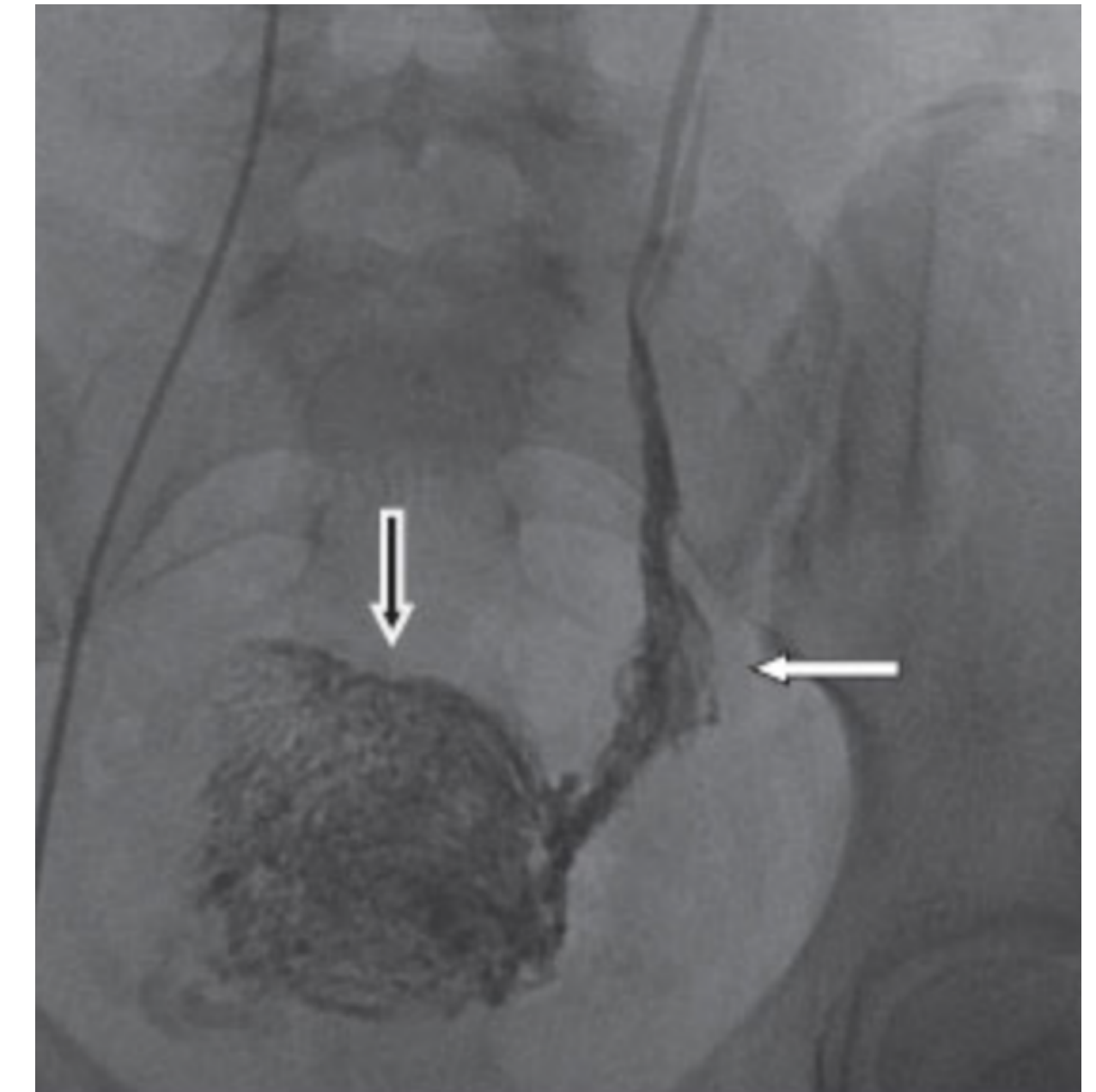
From the inferior vena cava, the right ovarian vein is then selectively catheterized using a Simmons I or II shaped catheter. Some operators prefer a cobra catheter for this vein. A microcatheter is often helpful to advance access down the right ovarian vein. The microcatheter should be advanced coaxially into the right pelvic varices. After right ovarian venography, the embolization procedure is repeated.

An alternative to the use of an expensive microcatheter and guidewire is the use of a Simmons-shaped 7 Fr guiding catheter and a coaxially advanced 4 or 5 Fr catheter (e.g., 5 Fr Bentson-Hanafee-Wilson 1(JB1) (Terumo Medical Corp, Somerset, NJ)). This shape is achieved by taking the Hopkins hook 7 Fr guiding catheter and heat shaping it into the reverse curve (i.e., Simmons) configuration



Pelvic Venous Disorder: Imaging retrograde selective venography

- Dilation of the ovarian vein (diameter > 6 (8) mm)
- Ovarian vein reflux
- Uterine vein engorgement
- Filling of the ovarian venous plexus
- Filling of pelvic veins across midline
- Filling of vulvovaginal or thigh varicosities



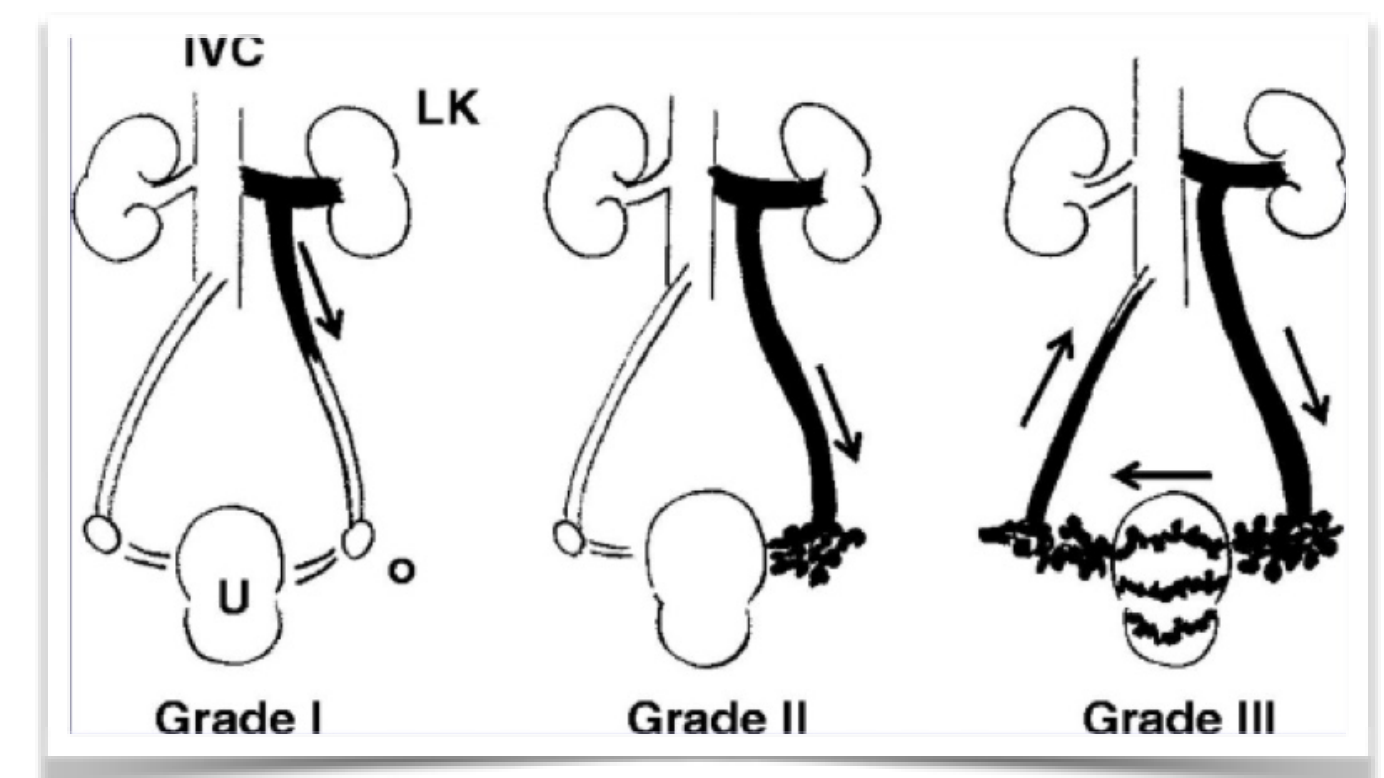
REVIEW ARTICLE

Year : 2018 | Volume : 5 | Issue : 4 | Page : 244-252

Pelvic congestion syndrome: A review of the treatment of symptomatic venous insufficiency in the ovarian and internal iliac veins by catheter-directed embolization

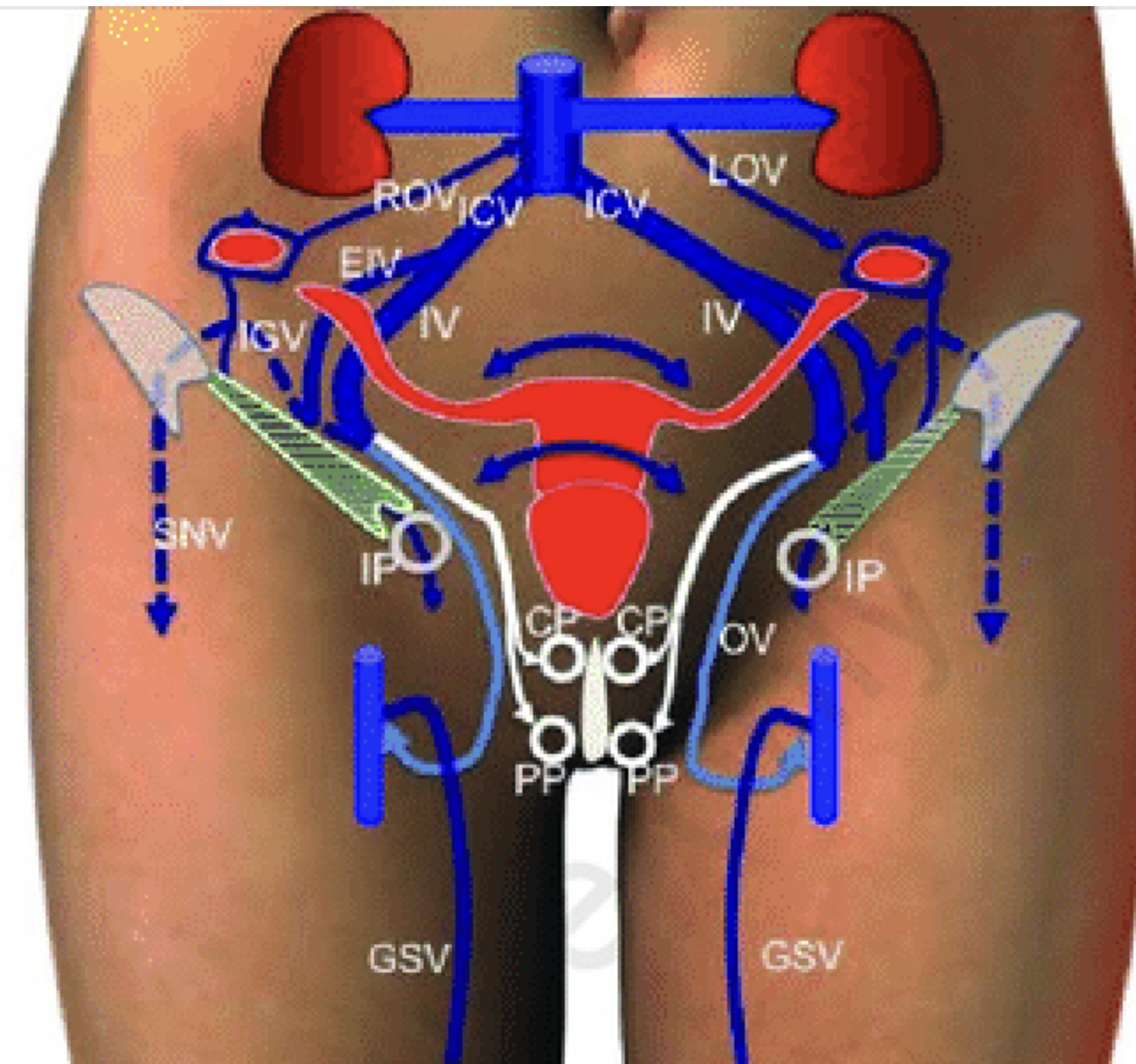
Previn Diwakar

Whiteley Clinics, London, UK



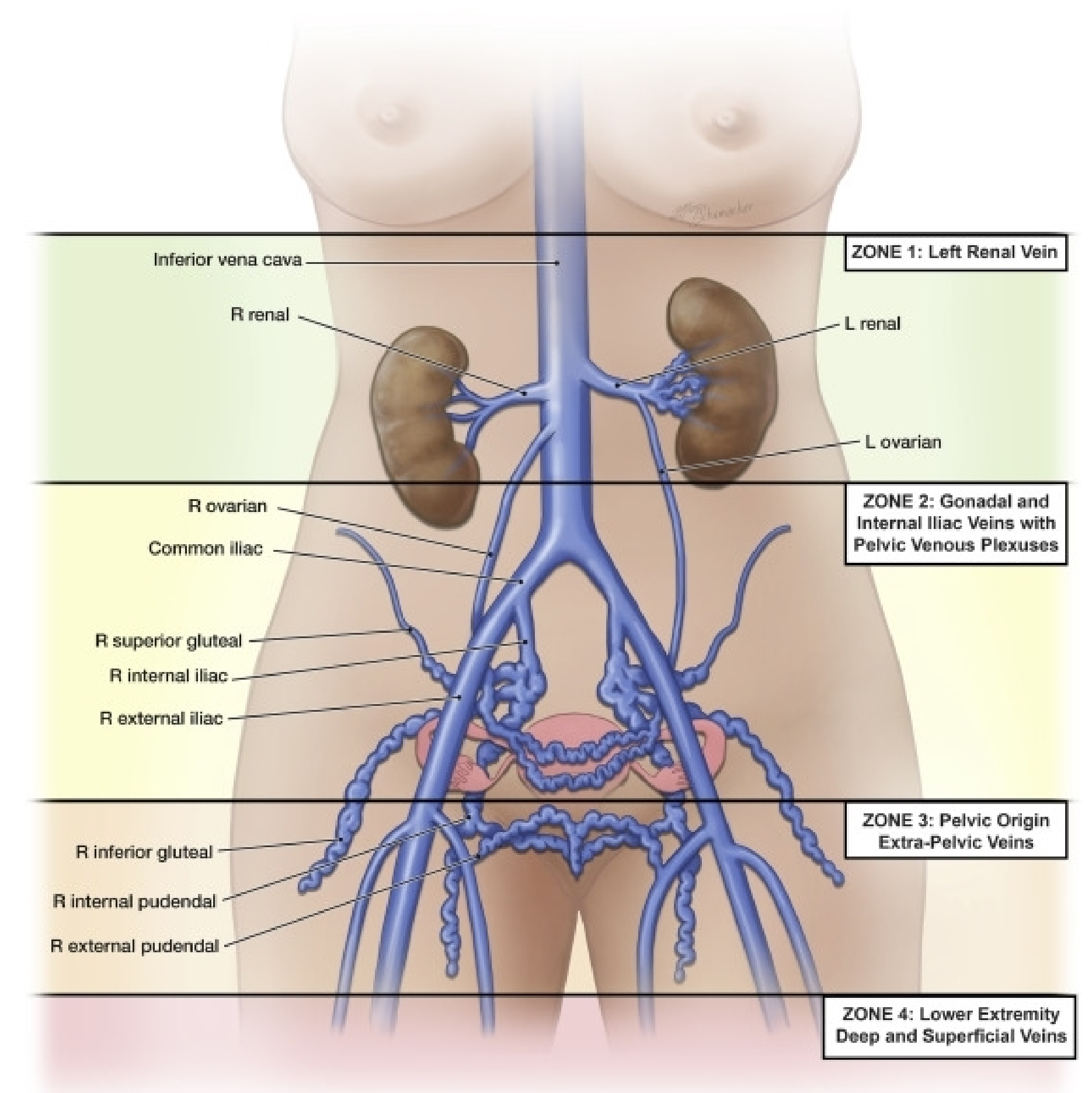
Pelvic Venous Disorder: Imaging retrograde selective venography

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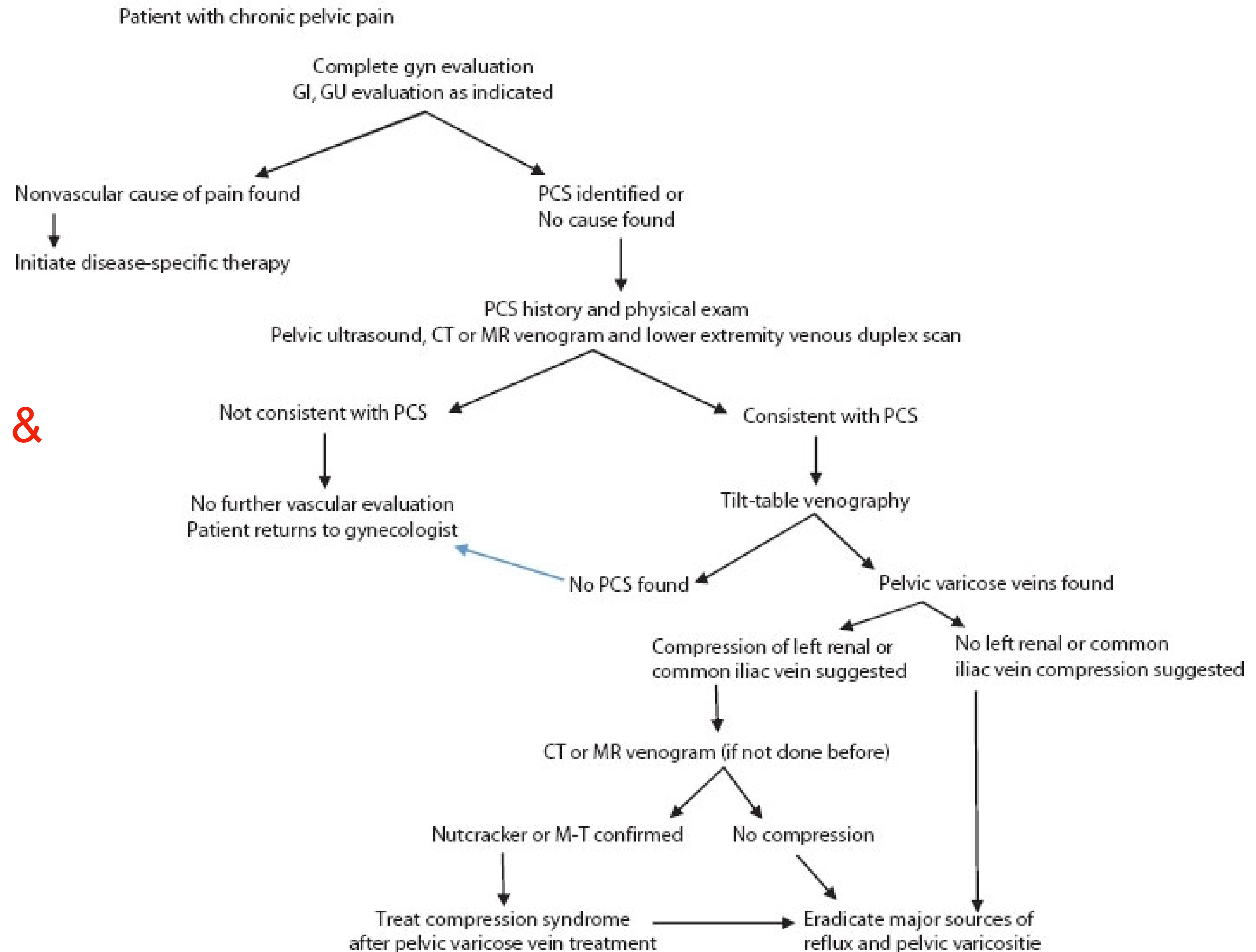


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Pelvic Venous Disorder



- Heterogenous group of patients & symptoms
- DDx (LONG !)
- Work - Up (a priori change !)
- Venography; Standardized

Pelvic Venous Disorder

Technical success in our series 95%

Beware of / Clinical failures mainly due to:

- Wrong indications
- Secondary Pelvic Insufficiency due to deep venous pathology (about 10% in our selected series (MT, NCS)).
- How was /is (your) clinical succes measured and defined ? use the same pre as post intervention ?
- Patient scores: To Be Debated !

Pelvic Venous Disorder: Take Home

- 1. Meticulous History Taking*
- 2. Proper work-up & Investigation*
- 3. Treat all insufficiënt*

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&



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mrs. J.L. Dickinson-Blok, MD, PhD
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