

Objective definition of post-thrombotic syndrome. Is it possible?

George Geroulakos FRCS,DIC,PhD

Professor and Chair of Vascular Surgery, National and Kapodistrian University of Athens, Athens



- There is currently no gold biomarker, imaging or physiologic test that establishes the diagnosis of PTS.
- PTS is currently diagnosed on clinical grounds from clinical symptoms and signs in a patient with a history of DVT

The exact pathophysiological mechanism that leads to the development of the PTS is unknown. The scores of the various scoring systems that assess the PTS only measure markers of the disease such as symptoms and signs. Thus no score is truly valid.

Sosainathan et al, JVascSurg 2013

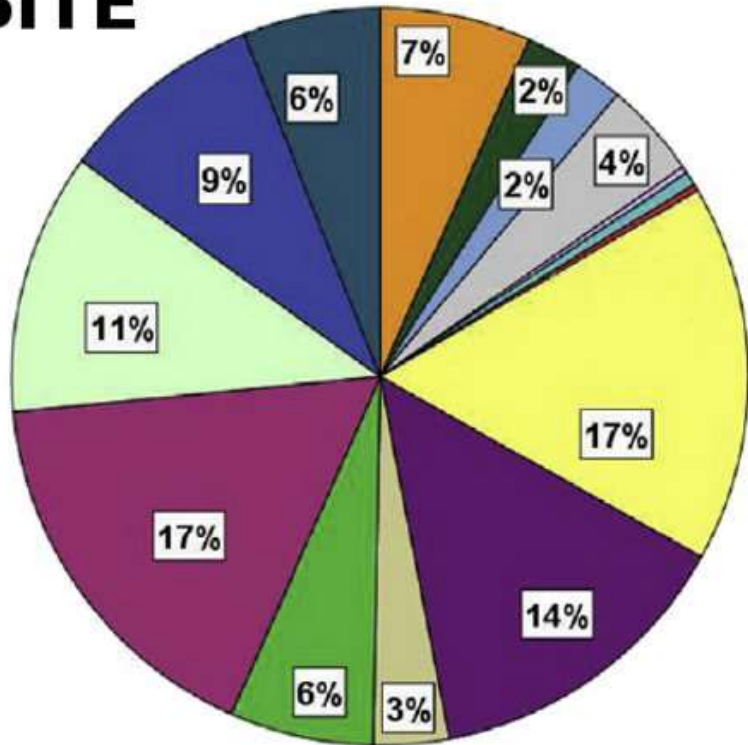
- An optimal scoring system should be both sensitive and specific for PTS, but this has been difficult to achieve because the symptoms and signs of PTS can be similar to other conditions leading to complaints in the lower limb. These conditions include primary chronic venous disease, sequelae from trauma, arthritis, skin conditions.

- In the absence of clinical features of PTS in a patient with previous DVT, demonstrating the presence of venous abnormalities such as valvular reflux, persistent venous obstruction or venous hypertension on imaging does not indicate a diagnosis of PTS.

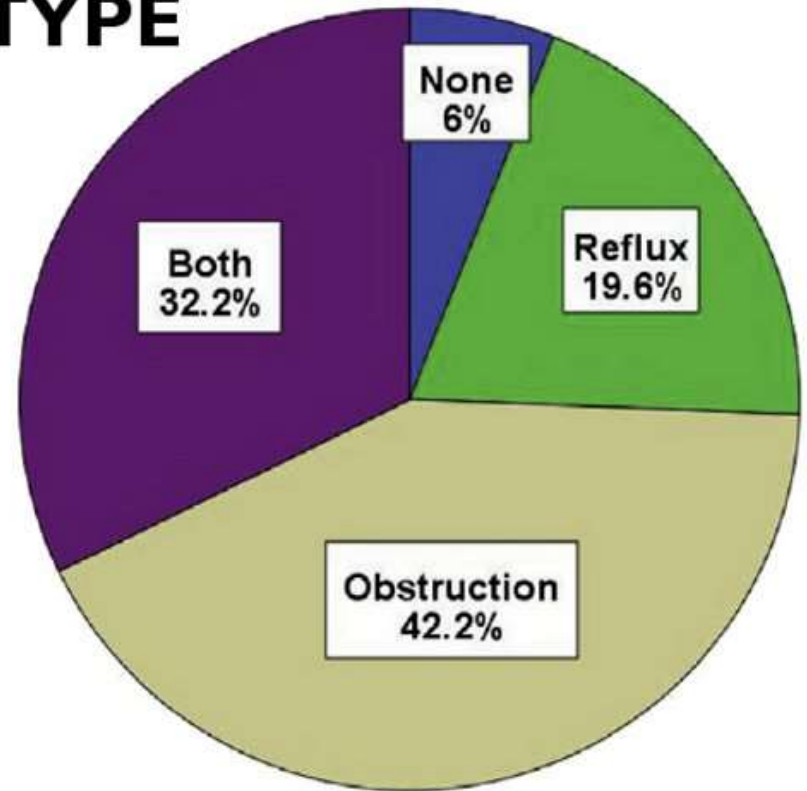
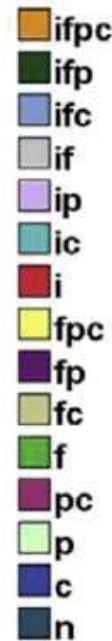
- In patients who have a characteristic presentation of PTS but do not have a history of DVT objective confirmation of PTS should be performed . Compression ultrasonography is the initial investigation of choice to confirm the presence of findings compatible with chronic DVT.

Assessments of reflux/obstruction in 40 lower extremities post DVT

SITE

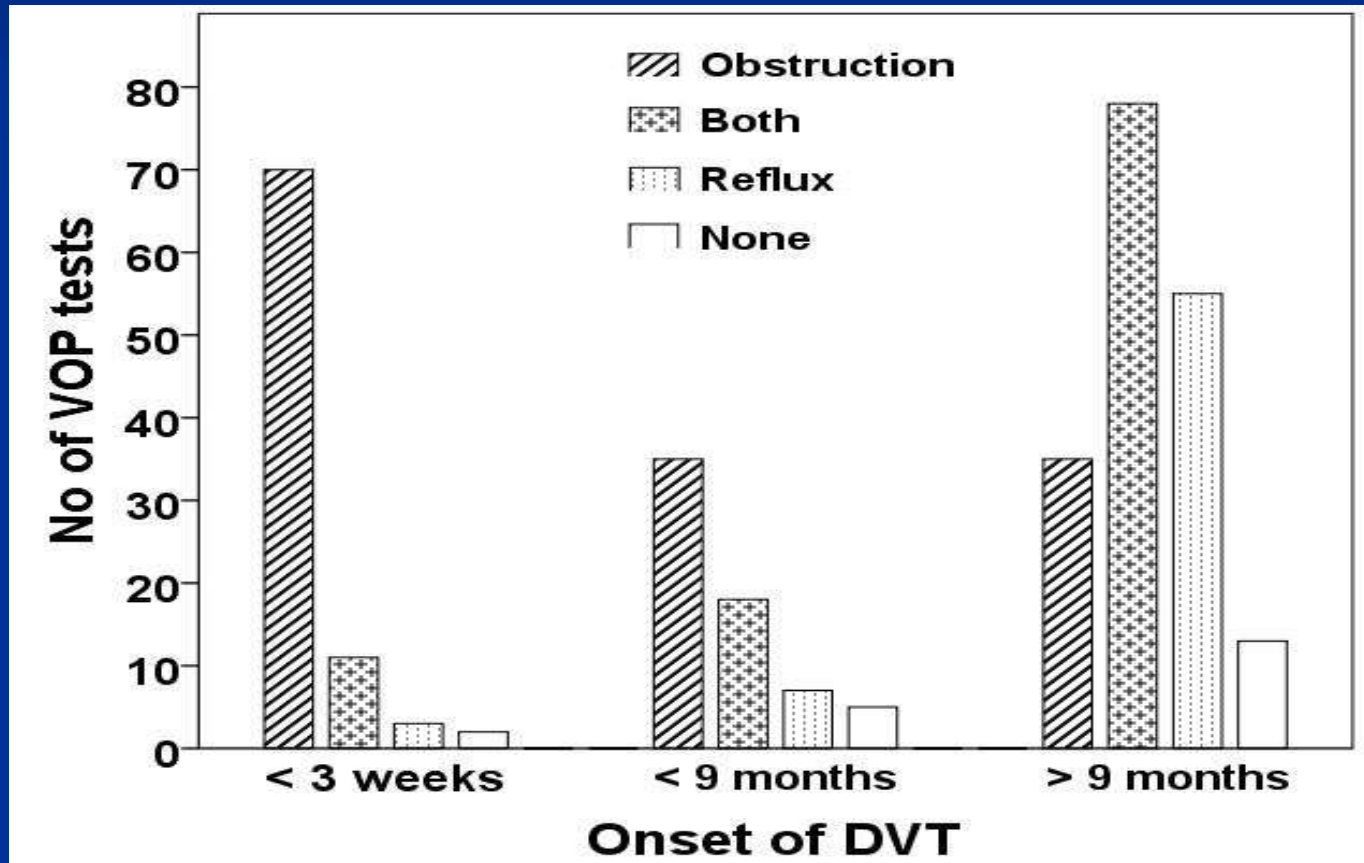


TYPE



Haemodynamic evolution

332 tests in 192 patients between 1989 - 1999



- The Villalta scale has been adopted by the International Society on Thrombosis and Haemostasis as a standard to diagnose and grade the severity of DVT in clinical studies.

Kahn et al. J Thromb Haemost 2009

Villalta Scale

Table I. Summary of the scoring used in the Villalta scale (VS)

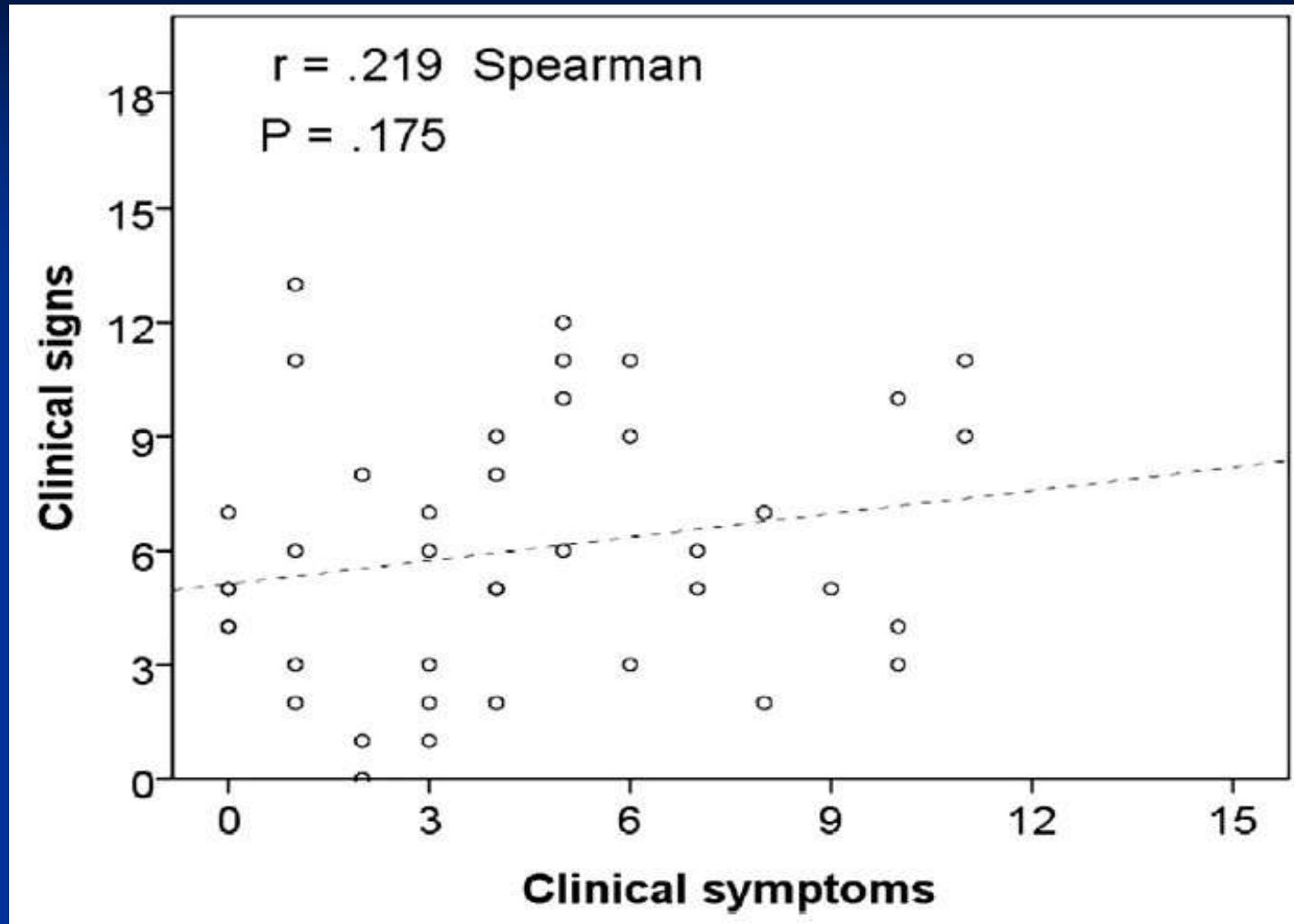
	<i>None</i>	<i>Mild</i>	<i>Moderate</i>	<i>Severe</i>
Symptoms				
Pain	0	1	2	3
Cramps	0	1	2	3
Heaviness	0	1	2	3
Paresthesia	0	1	2	3
Pruritis	0	1	2	3
Signs				
Pretibial edema	0	1	2	3
Skin induration	0	1	2	3
Hyperpigmentation	0	1	2	3
Redness	0	1	2	3
Venous ectasia	0	1	2	3
Pain on calf compression	0	1	2	3

Comparison of different PTS systems

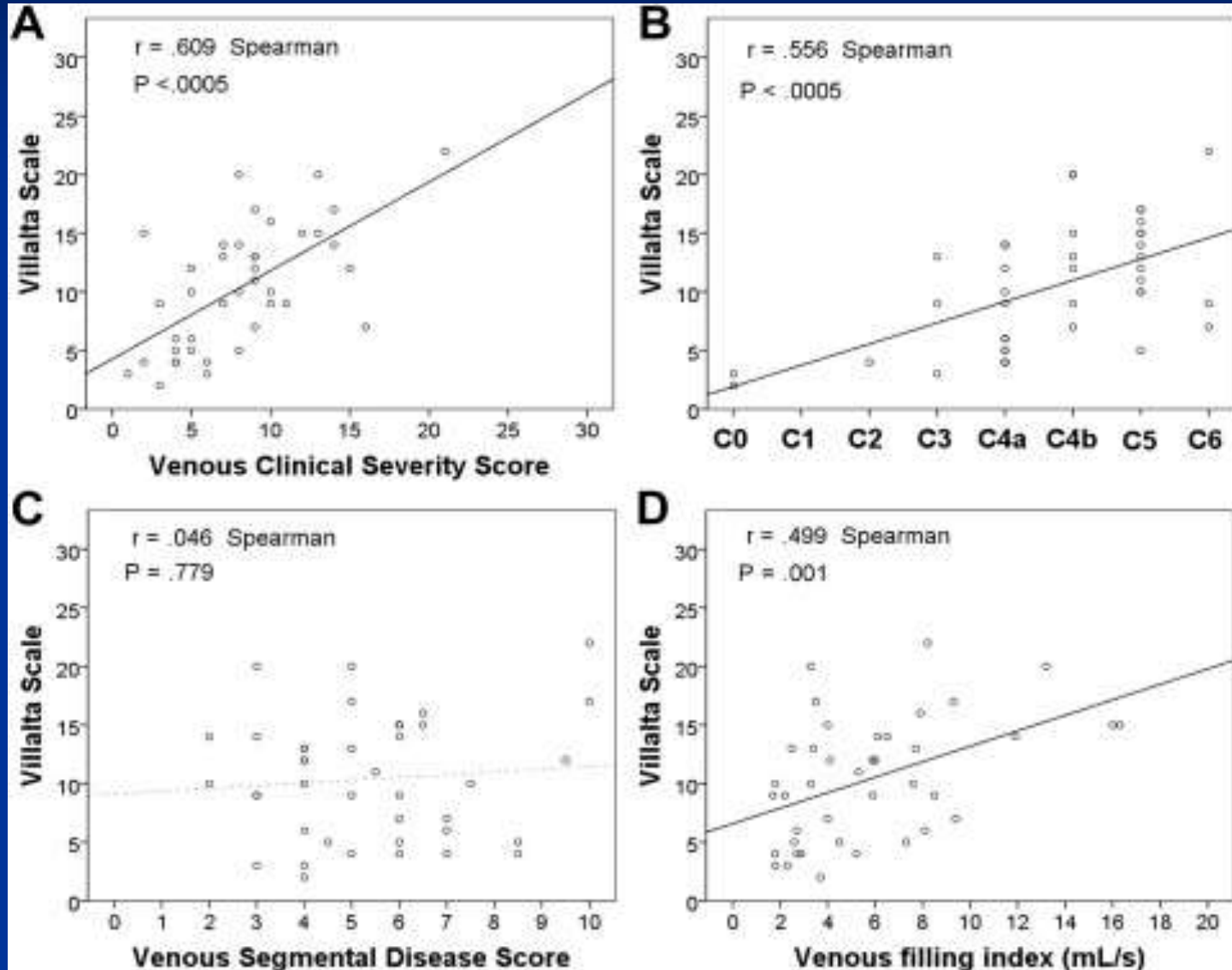
Soosainathan et al, JVascSurg 2013

Criteria	Villalta	Ginsberg	Brandjes	Widmer	VCSS
Interobserver reliability	Yes	No evidence	No evidence	No evidence	No evidence ^a
Association with AVP	Yes	Yes	Yes	Yes	Yes
Association with patient quality-of-life scores	Yes	Yes	No evidence	No evidence	No evidence
Validity	Yes	Yes	Yes	Yes	Yes
Ability to assess PTS severity	Yes	No	Yes	Yes	Yes
Ability to assess change over time/with treatment	Yes	No	No	No	Yes

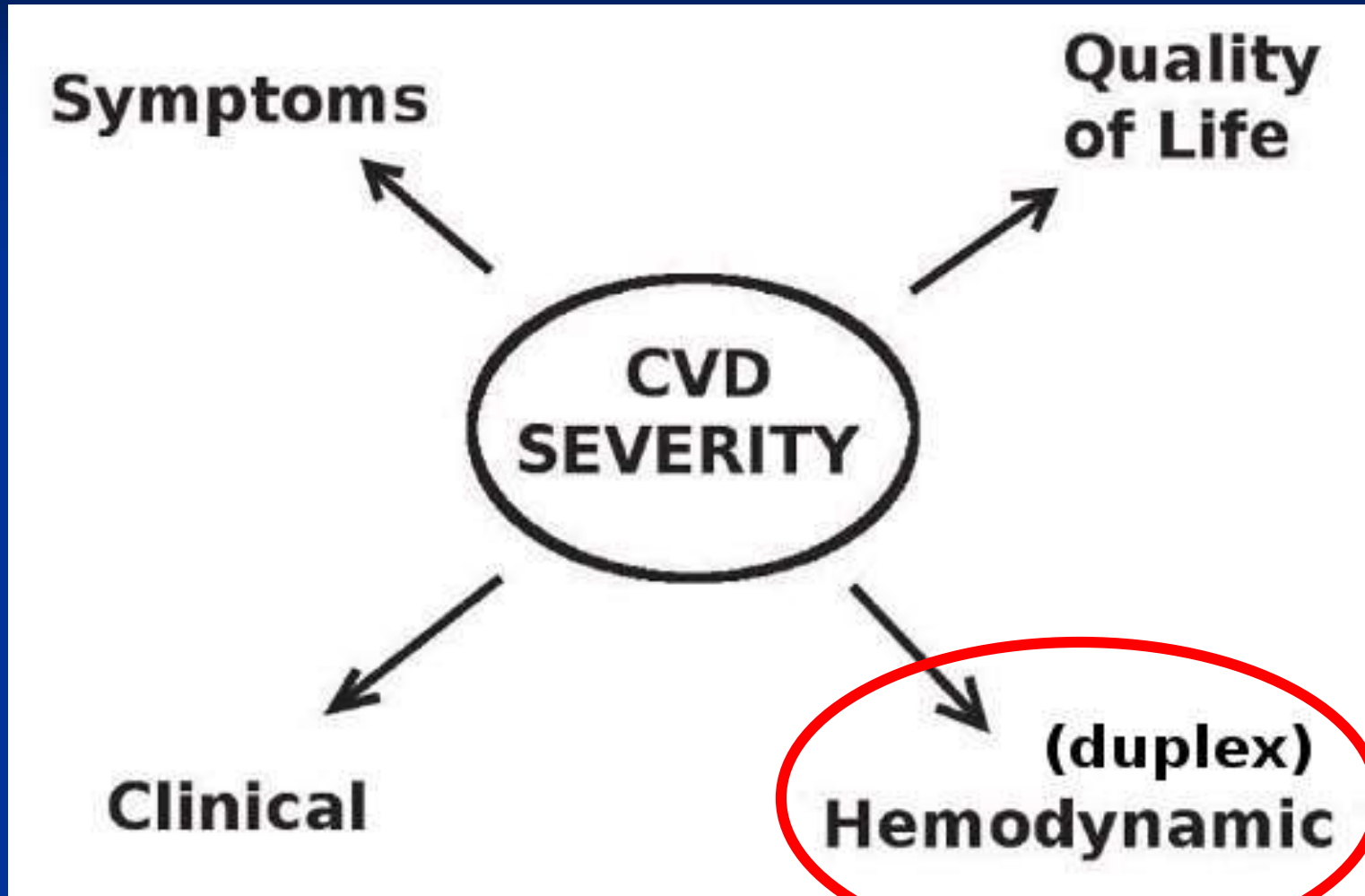
Symptoms *versus* signs in 40 PTS legs



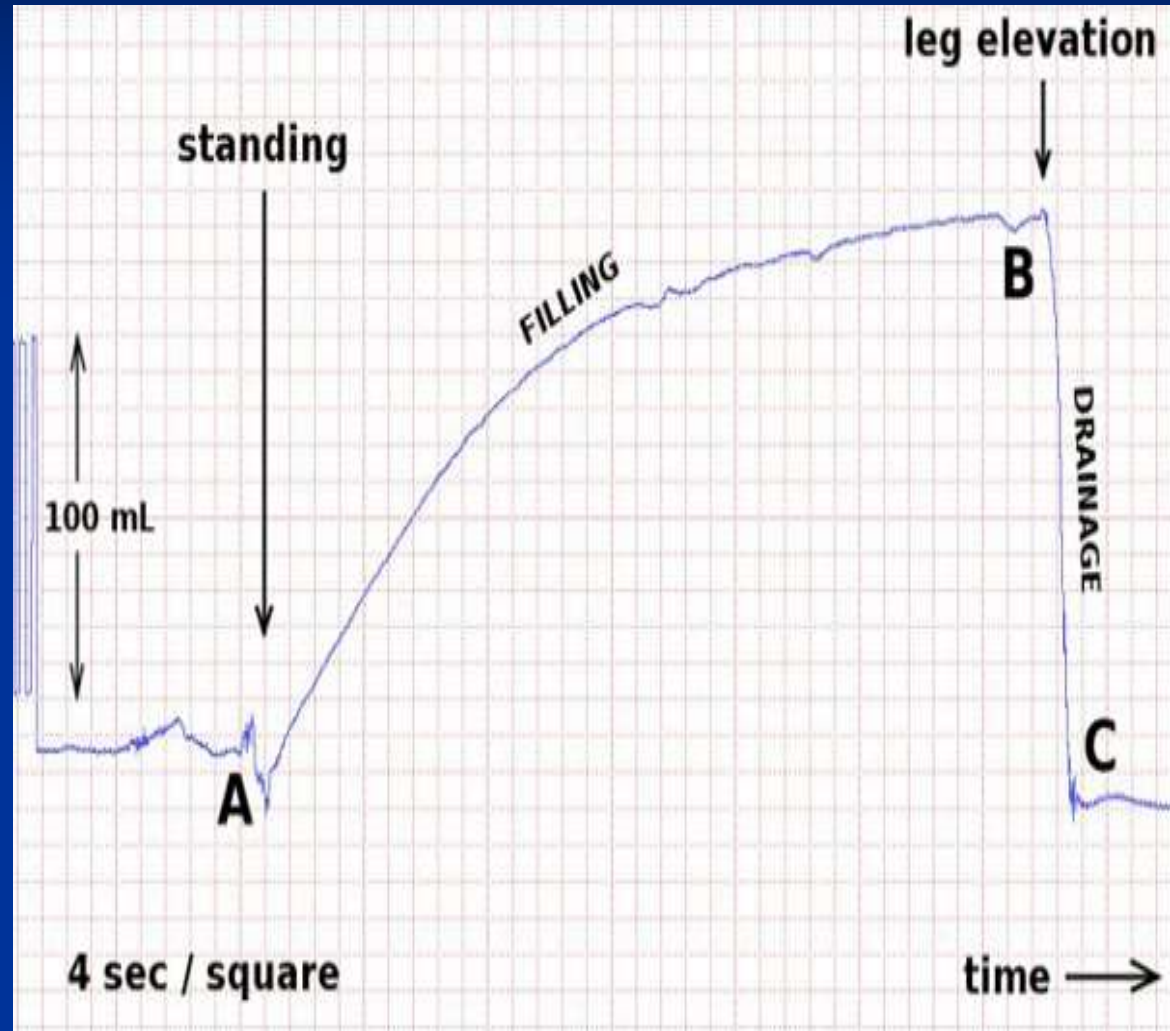
Correlation of Villalta scale with other instruments. Lattimer et al, JVascSurg Venous and Lym 2014



Severity assessments



Venous filling and drainage



- DVT patients with PTS have poorer QOL than DVT patients without PTS and scores worsen as the severity of PTS increases.
- Strong correlations have been shown between Villalta scale and QOL instruments.

Kahn et al, Arch Intern Med 2002

Conclusions

There is a need for improvement in the diagnosis and grading of severity of PTS.

VS is currently the best tool we have for the diagnosis and classification of the severity PTS.

More work needs to be done to establish whether the addition of quality of life instruments and haemodynamic measurements improves the sensitivity of VS

SYMPOSIUM DIRECTORS

G. Geroulakos

Department of Vascular Surgery,
Attikon University Hospital, Athens Greece

Ch. Kotoulas

Department of Cardiac Surgery,
401 Military Hospital, Athens Greece

A. Nicolaidis

Cardiovascular Disease Educational
and Research Trust, UK

D. Dougenis

Department of Cardiac Surgery,
Attikon University Hospital, Athens Greece

Organization



Hellenic Society of Thoracic and
Cardiovascular Surgeons HCTSS

Scientific Partners

Cardiovascular
Disease and Research
Trust, UK

Department of Vascular Surgery,
Attikon University Hospital,
Athens, Greece



Department of Cardiac Surgery,
Attikon University Hospital,
Athens, Greece

Under the auspices of the



HELLENIC REPUBLIC, National and
Kapodistrian University of Athens

2nd Athens Cardiovascular & Thoracic Symposium



SAVE THE DATE

November 8&9, 2019
Divani Caravel Hotel
ATHENS

Conferre S.A.

Organizing - Administrative Bureau/Secretariat: **Conferre S.A.**: "The art of Bringing People Together" Slavou Niarchou Avenue, Mares Position, GR455 00 Ioannina, GREECE, Tel. +30 26510 68610, Fax. +30 26510 68611, E-mail: info@conferre.gr, Website: <http://www.conferre.gr>



Αγγειοχειρουργική Κλινική Ιατρικής Σχολής
Πανεπιστημίου Αθηνών Π.Γ.Ν. "Αττικόν"

Dept. of Vascular Surgery - University of Athens