VEIN PROCEDURES:
to stage or not to stage

Sergio Gianesini, MD, PhD FACS
University of Ferrara – ITALY
USUHS Bethesda - USA

Università degli Studi di Ferrara

COI

Italian Ministry of Health grant winner

Scientific Thermal Research foundation grant winner

Speaker fee: alfasigma, medi, servier

Scientific consultant: aivarix, alfasigma, i-vasc, servier

Vasquez MA.

The utility of the Venous Clinical Severity Score in 682 limbs treated by radiofrequency saphenous vein ablation.

J Vasc Surg. 2007 May;45(5):1008-1014

EXTENSIVE VARICOSITIES

from 80.8% to 6.6%, $P < .0001$

GSV 83%

AASV 14%

SSV 3%

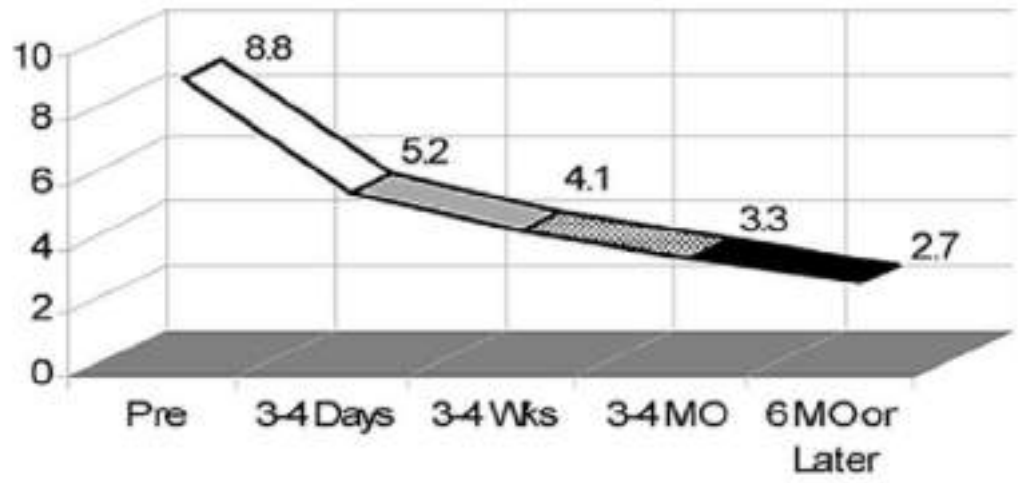

Fig 4. Mean venous clinical severity score *(VCSS)* throughout the study.

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Vasquez MA.

The utility of the Venous Clinical Severity Score in 682 limbs treated by radiofrequency saphenous vein ablation.

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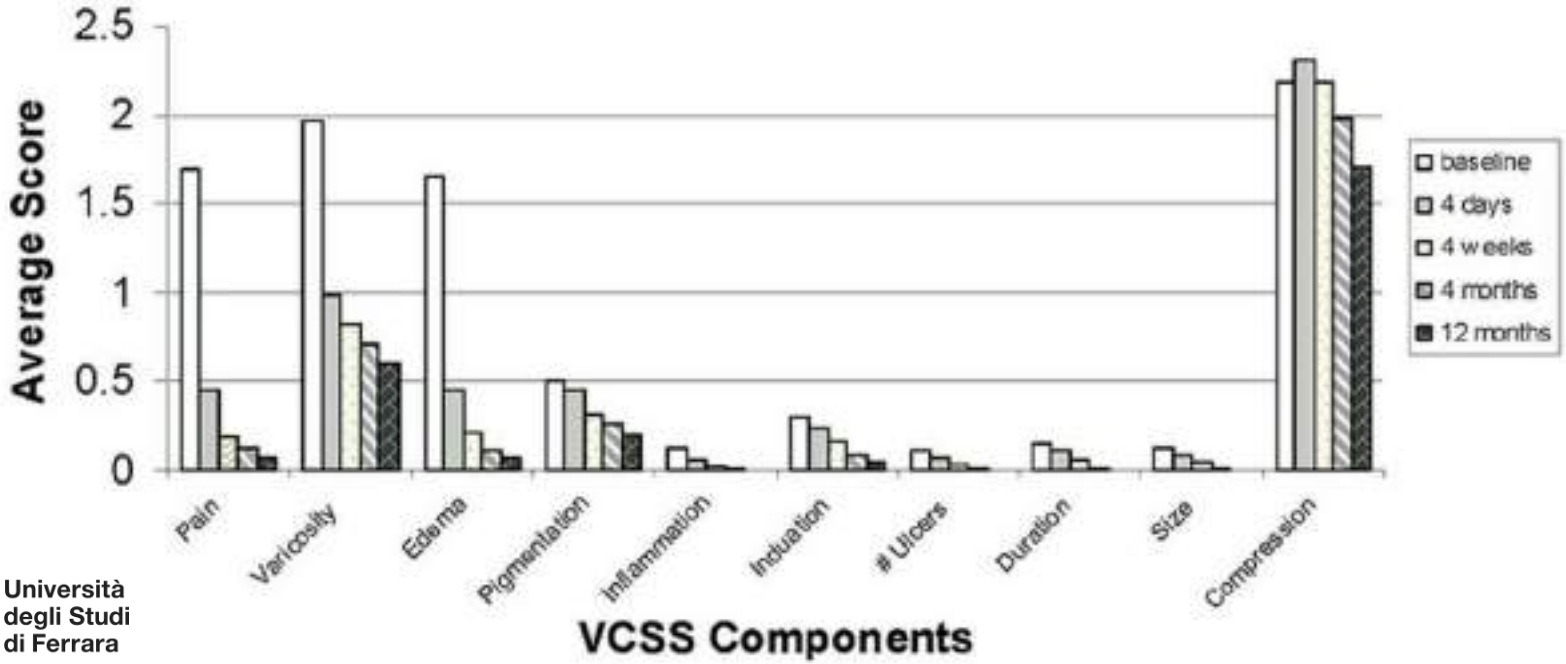

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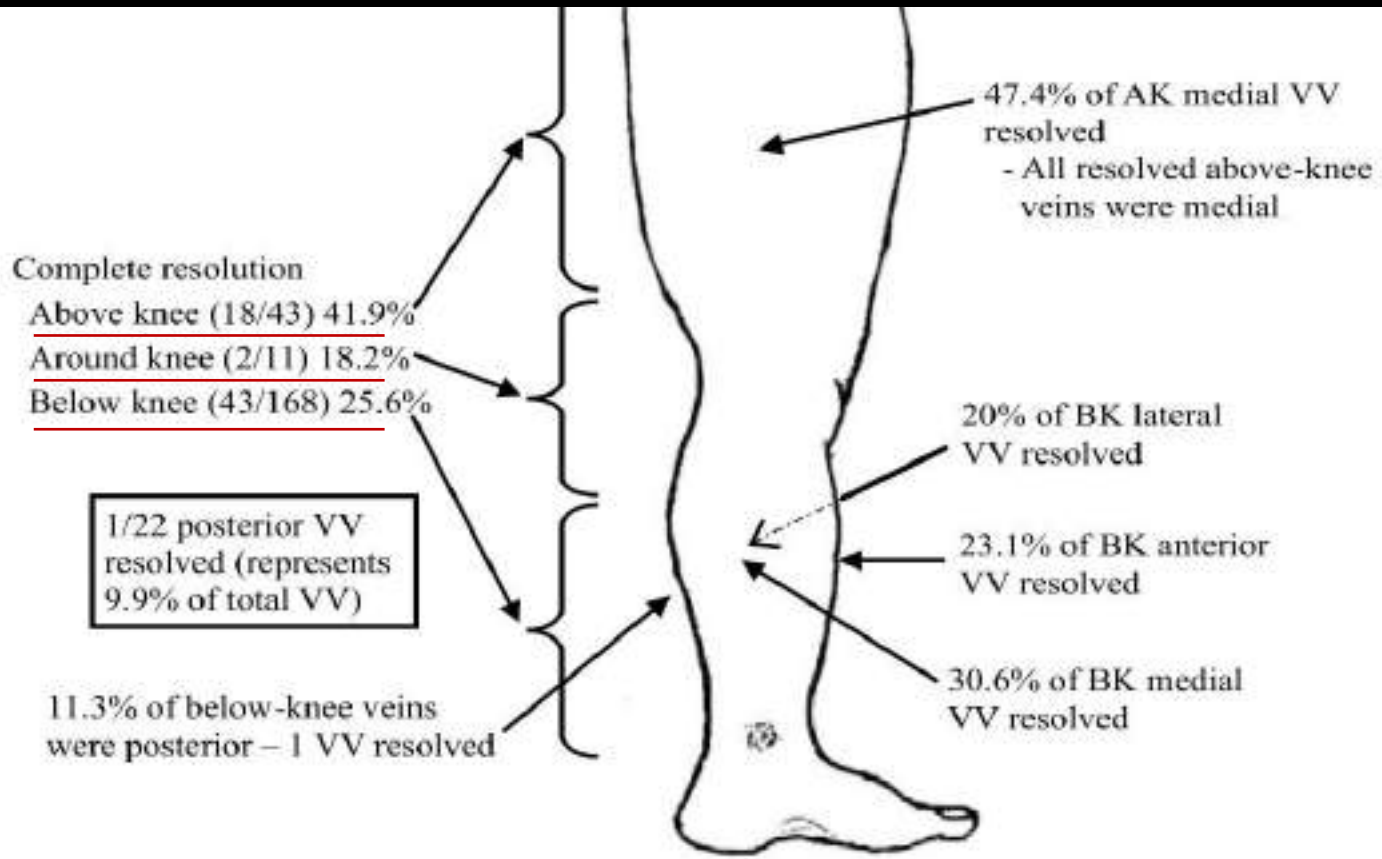
Vasquez MA.

The utility of the Venous Clinical Severity Score in 682 limbs treated by radiofrequency saphenous vein ablation.

J Vasc Surg. 2007 May;45(5):1008-1014

SITE MATTERS



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Phlebology. 2019 Sep;34(1 Suppl):4-66.

Global guidelines trends & controversies in lower limb venous and lympahtic disease

Gianesini S et al.

Sergio Gianesini, MD, PhD, FACS
University of Ferrara (ITALY)
UCES University (ARGENTINA)
USUHS University, Bethesda (USA)

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v-WIN foundation, ONLUS

2011 AVF/SVS

staging is not making a difference,
unless general anesthesia is used (1B)

NICE National Institute for Health and Care Excellence

2013 NICE
ESVS 2015 (IIB)
ECP 2020 (IA)

perform the tributary treatment
at the same time

Other guidelines are not specifying

ESVS 2022: The optimal timing of tributary treatment remains UNCLEAR

2011 AVF/SVS

staging is not making a difference,
unless general anesthesia is used (1B)

NICE National Institute for Health and Care Excellence

2013 NICE
ESVS 2015 (IIB)
ECP 2020 (IA)

perform the tributary treatment
at the same time

Thomas M. Aherne

Concomitant vs. Staged Treatment of Varicose Tributaries as an Adjunct to Endovenous Ablation: A Systematic Review and Meta-Analysis .

Eur J Vasc Endovasc Surg (2020) 60, 430e442

Other guidelines are not specifying

Aherne TM, Ryan ÉJ, Boland MR, et al.

Concomitant vs. Staged Treatment of Varicose Tributaries as an Adjunct to Endovenous Ablation: A Systematic Review and Meta-Analysis.

Eur J Vasc Endovasc Surg. 2020 Sep;60(3):430-442

15 studies

Re-intervention significantly lower in the concomitant group (6.3% vs. 36.1%)

Complications & DVT: NS

VCSS & AVVQ better in concomitant

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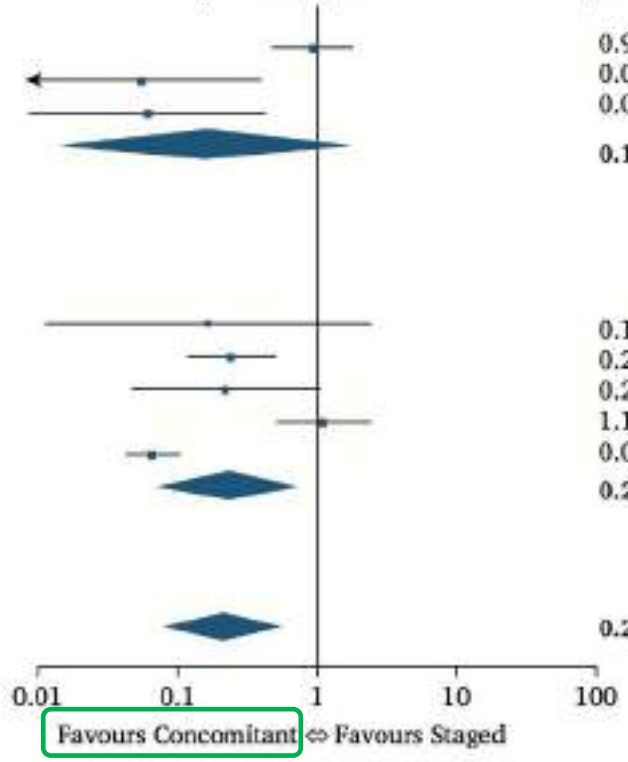
Aherne TM, Ryan ÉJ, Boland MR, et al.

Concomitant vs. Staged Treatment of Varicose Tributaries as an Adjunct to Endovenous Ablation: A Systematic Review and Meta-Analysis.

Eur J Vasc Endovasc Surg. 2020 Sep;60(3):430-442

ALL TOGETHER

Study or Subgroup	Concomitant Events	Concomitant Total	Staged Events	Staged Total	Risk Ratio M-H, Random, 95% CI	Weight
RCT						
Thievacumar 2008[20]	8	22	18	46	0.93 [0.48, 1.80]	15.0%
Lane 2015[12]	1	51	18	50	0.05 [0.01, 0.39]	10.2%
El-Sheikha 2014[14]	1	25	16	24	0.06 [0.01, 0.42]	10.3%
Total (95% CI)	**10**	**98**	**52**	**120**	**0.16 [0.01, 2.17]**	**35.5%**
Heterogeneity: Tau² = 4.61; *Chi²* = 17.90, df = 2 (*p* < .001); *I²* = 89%						
Test for overall effect: Z = 1.37 (*p* = .17)						
Observational						
Welch 2006[21]	0	7	67	177	0.16 [0.01, 2.43]	7.8%
Wang 2018[24]	8	163	52	255	0.24 [0.12, 0.49]	14.8%
Mohamed 2019[10]	2	50	6	33	0.22 [0.05, 1.02]	11.9%
Kim 2008[18]	12	132	11	133	1.10 [0.50, 2.40]	14.6%
Harlander-Locke 2013[15]	19	355	126	152	0.06 [0.04, 0.10]	15.5%
Total (95% CI)	**41**	**707**	**262**	**750**	**0.23 [0.07, 0.83]**	**64.5%**
Heterogeneity: Tau² = 1.68; *Chi²* = 40.73, df = 4 (*p* < .001); *I²* = 90%						
Test for overall effect: Z = 2.25 (*p* = .02)						
Total (95% CI)	**51**	**805**	**314**	**870**	**0.21 [0.07, 0.62]**	**100.0%**
Heterogeneity: Tau² = 1.82; *Chi²* = 69.15, df = 7 (*p* < .001); *I²* = 90%						
Test for overall effect: Z = 2.86 (*p* = .004)						
Test for subgroup differences: *Chi²* = 0.06, df = 1 (*p* = .80), *I²* = 0%						



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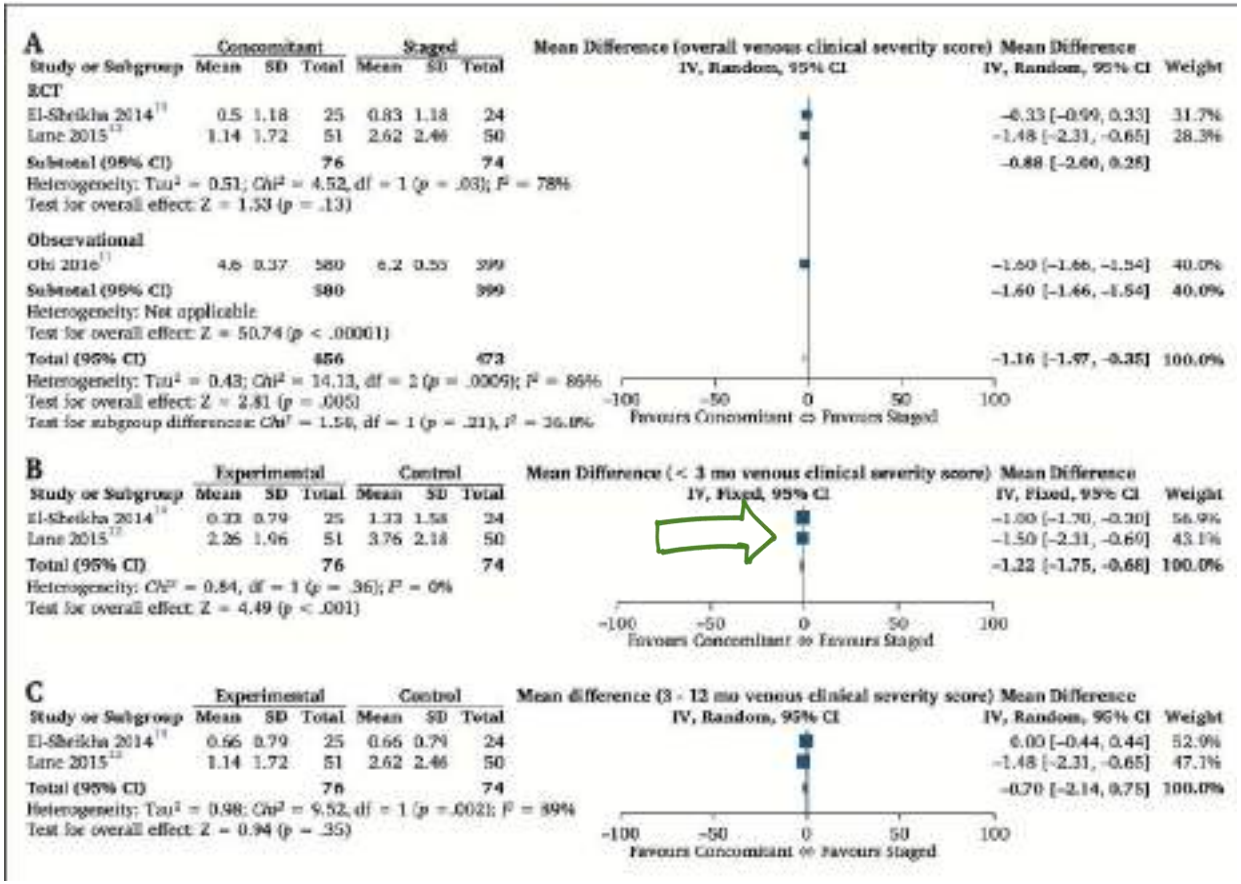
Concomitant vs. Staged Treatment of Varicose Tributaries as an Adjunct to Endovenous Ablation: A Systematic Review and Meta-Analysis.
Eur J Vasc Endovasc Surg. 2020 Sep;60(3):430-442

3 RCT

ALL NS apart

VCSS **< 3 months**



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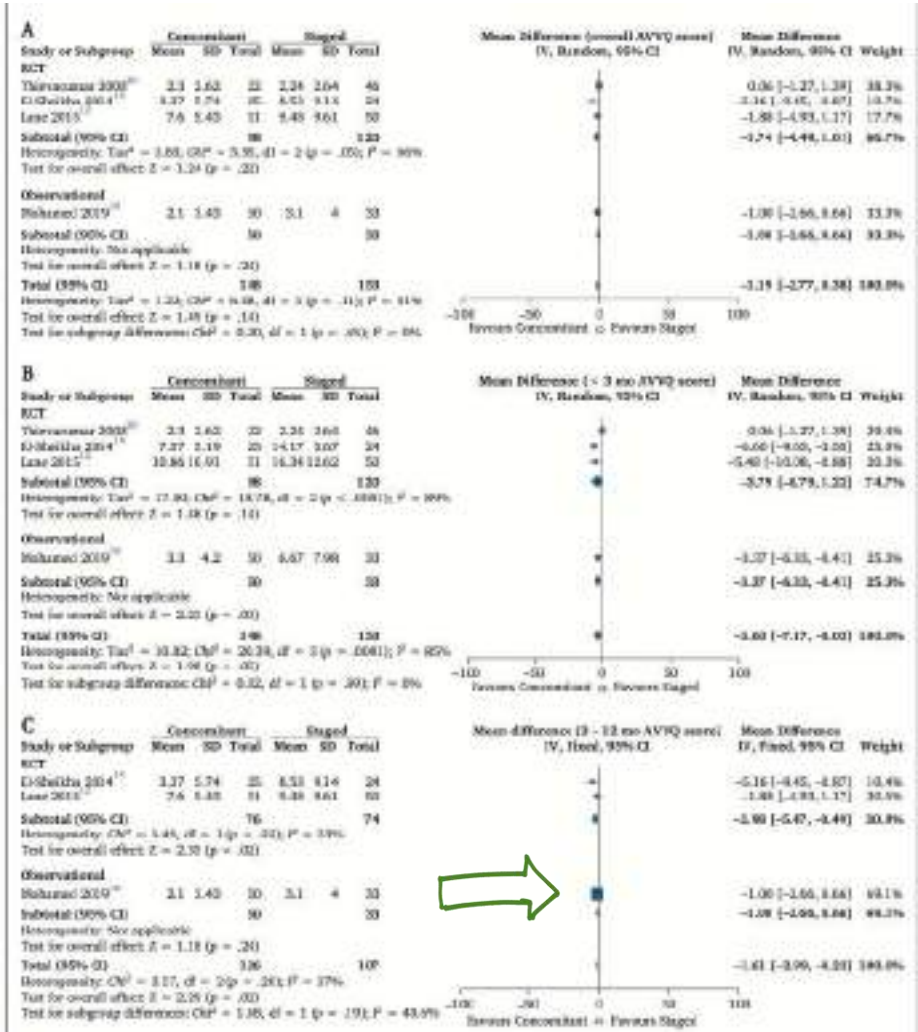
Aherne TM, Ryan ÉJ, Boland MR, et al.
Concomitant vs. Staged Treatment of Varicose Tributaries as an Adjunct to Endovenous Ablation: A Systematic Review and Meta-Analysis.
Eur J Vasc Endovasc Surg. 2020 Sep;60(3):430-442

3 RCT

ALL NS apart

AVVQ scores **3-12 months** significantly favoured concomitant treatment.



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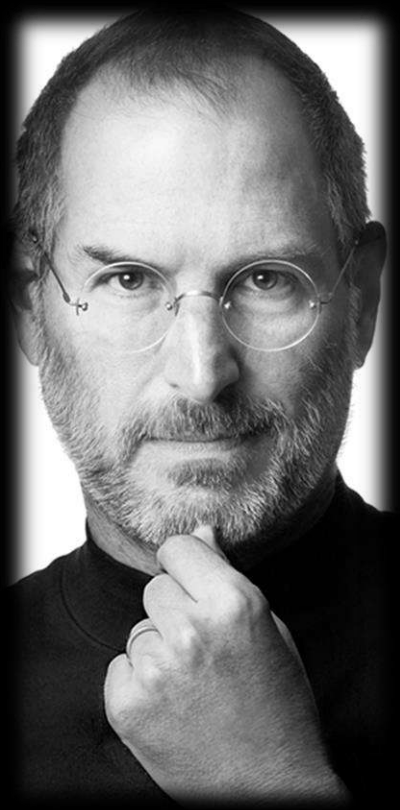
Kim Y.
Defining the human and health care costs of chronic venous insufficiency.
Semin Vasc Surg. 2021 Mar;34(1):59-64.

2% healthcare budget



THINK

different

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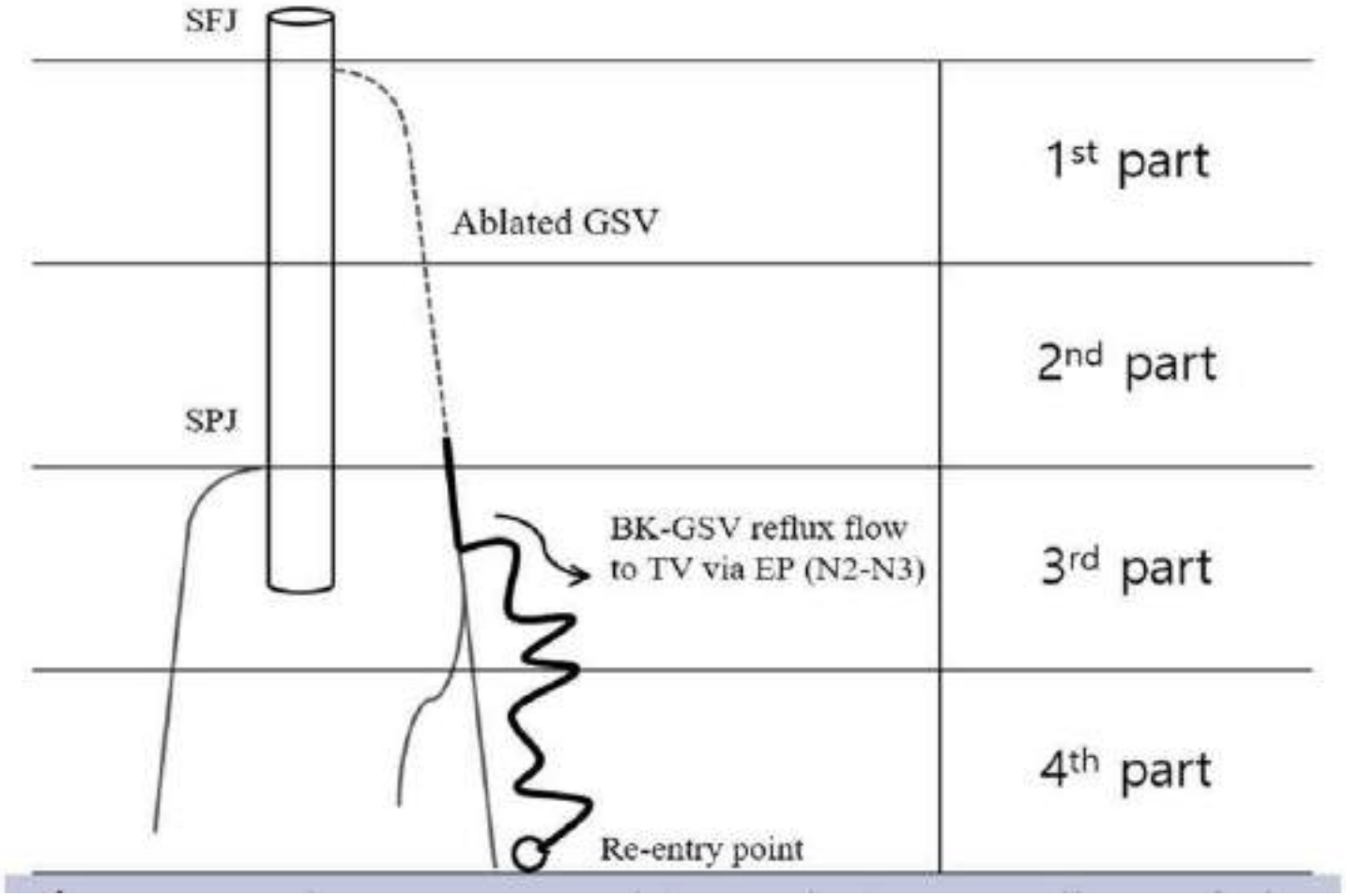
Ultrasound-based topographic analysis of tributary vein connection with the saphenous vein during ambulatory conservative hemodynamic correction of chronic venous insufficiency.
Yun S. J Vasc Surg Venous Lymphat Disord. 2019;7(3):356-363

82,3%

ESCAPE POINTS below the knee



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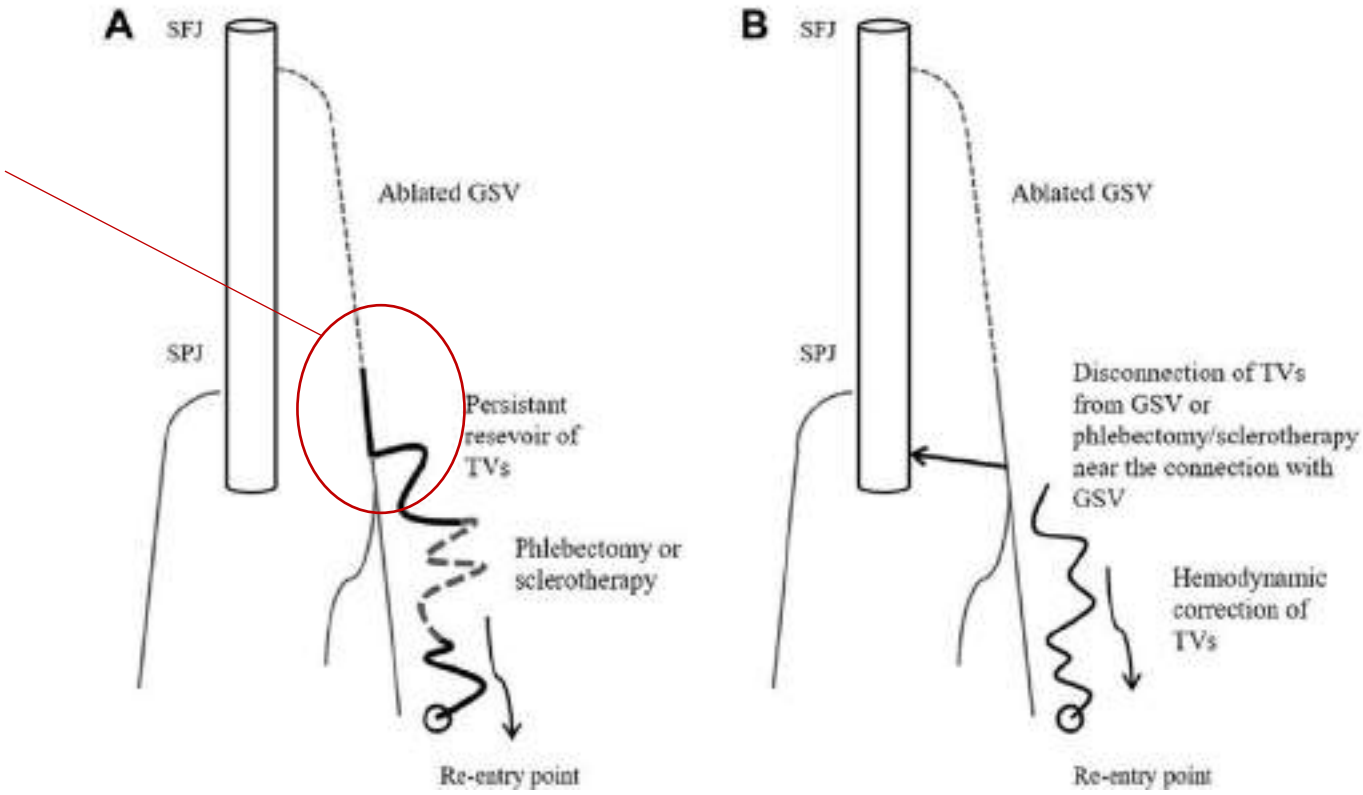
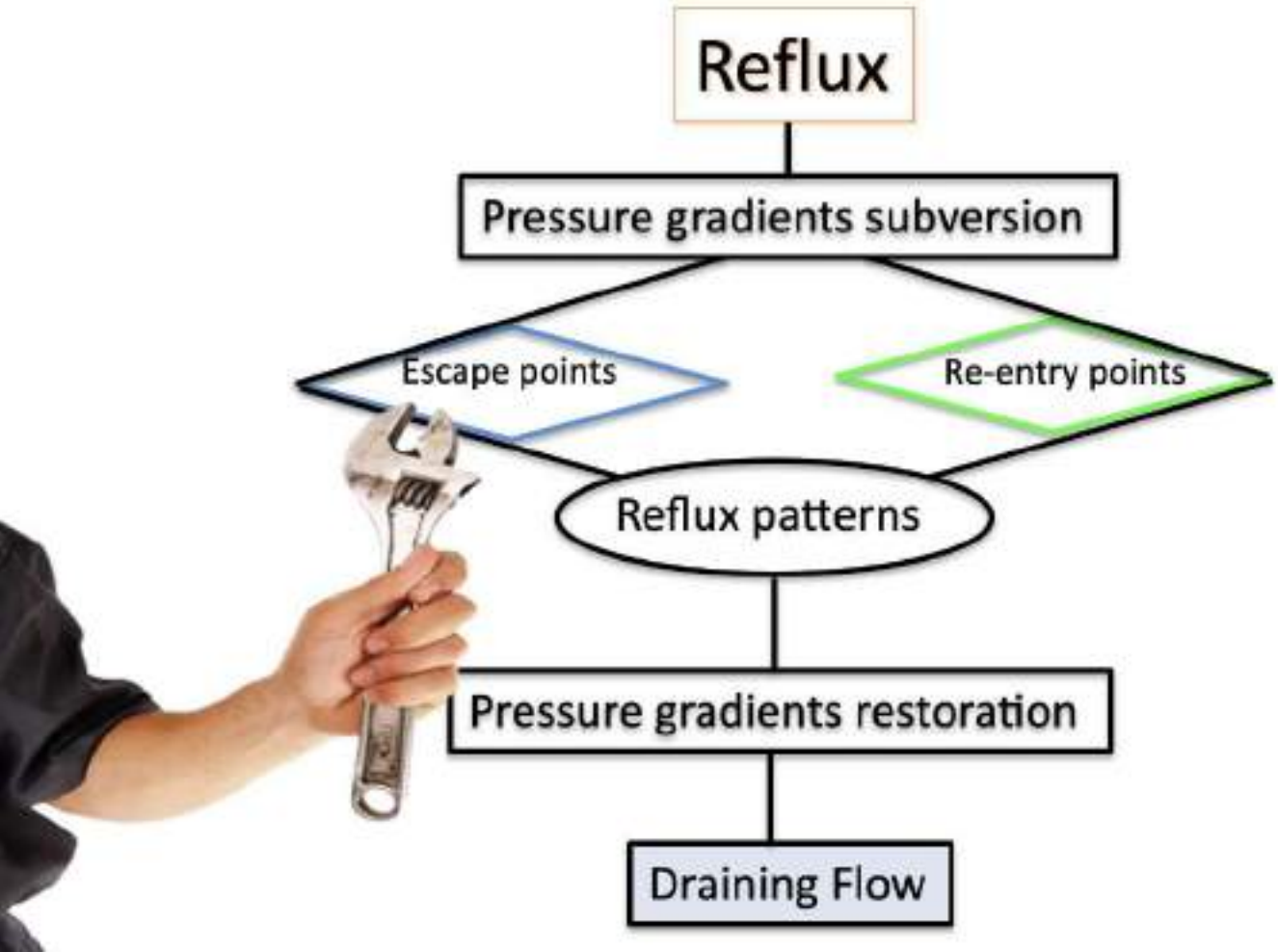
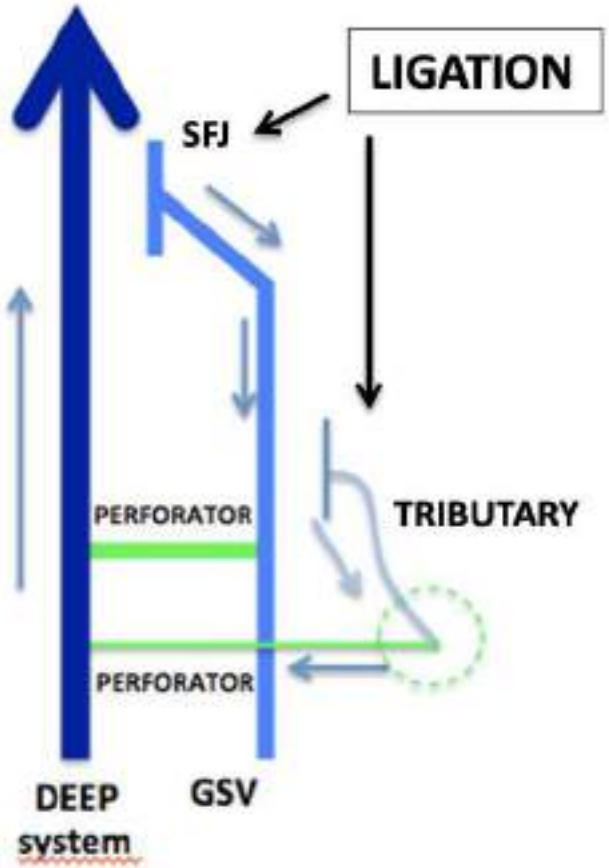
Ultrasound-based topographic analysis of tributary vein connection with the saphenous vein during ambulatory conservative hemodynamic correction of chronic venous insufficiency.
Yun S. J Vasc Surg Venous Lymphat Disord. 2019;7(3):356-363

Potential recurrence

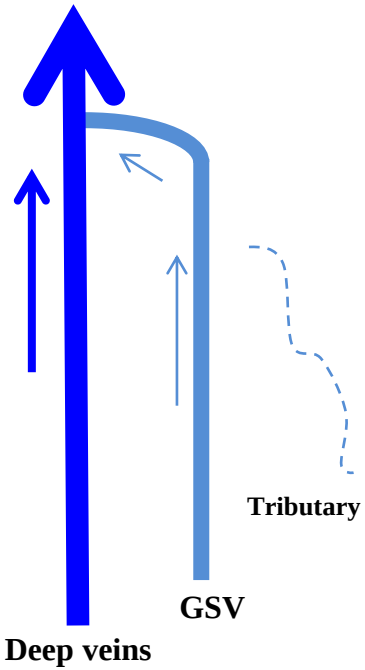


Gianesini S, et al. CHIVA strategy in chronic venous disease treatment: instructions for users.
Phlebology. 2015 Apr;30(3):157-71.





ASVAL



Ten-Year Outcomes of Treatment of Varicose Veins by Ambulatory Selective Ablation of Varices Under Local Anesthesia (ASVAL)
J Vasc Surg VL 2018

Freedom from REFLUX

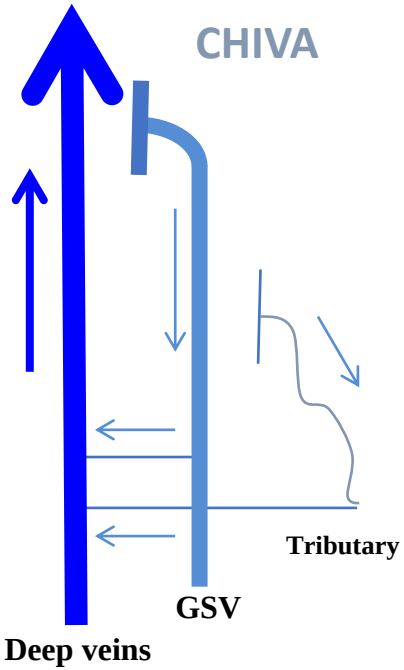
64.4%

Varicose vein stripping vs haemodynamic correction (CHIVA): a long term randomised trial.
EJVES 2008

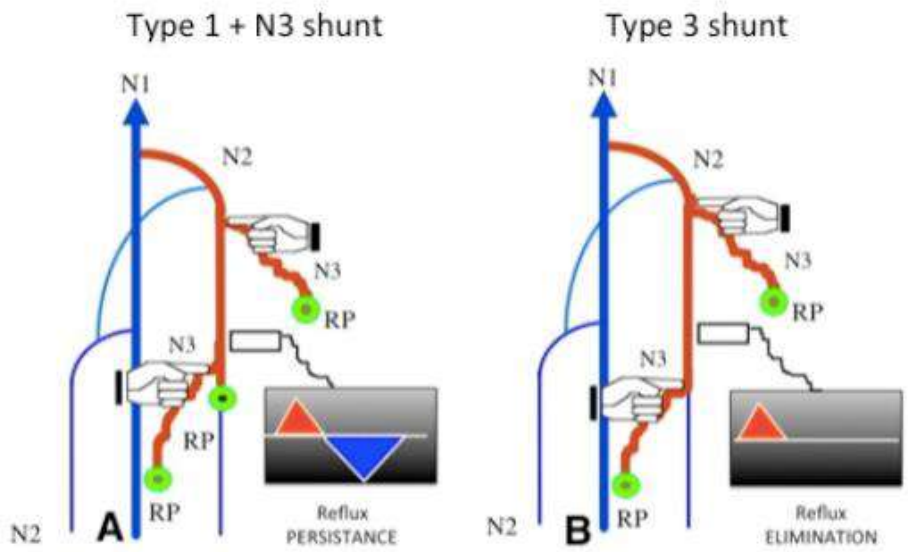
Freedom from VARICOSE VEINS

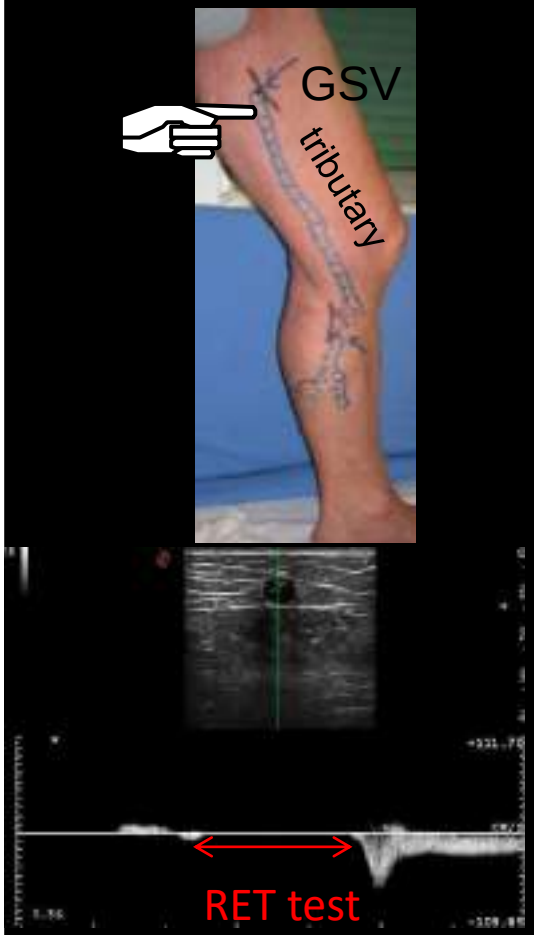
81%

CHIVA



Reflux Elimination Test





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Road to v-WINter DUBAI foundation, ONLUS

Gianesini S

CHIVA strategy in chronic venous disease treatment

Phlebology 2014

Gianesini S.
CHIVA strategy in chronic venous disease treatment: instructions for users.
Phlebology. 2015 Apr;30(3):157-71.

Who’s the culprit ?

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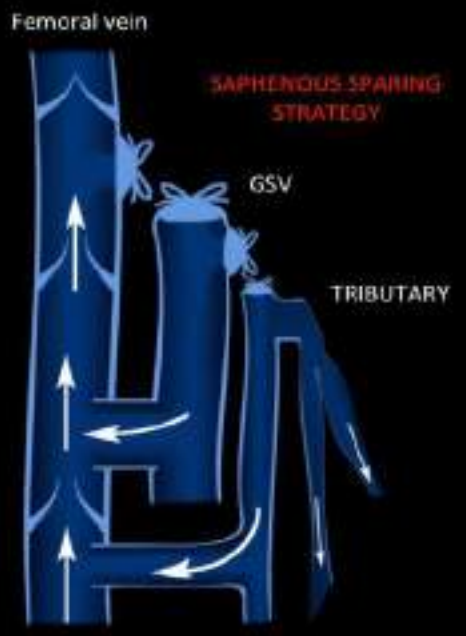
BACKGROUND

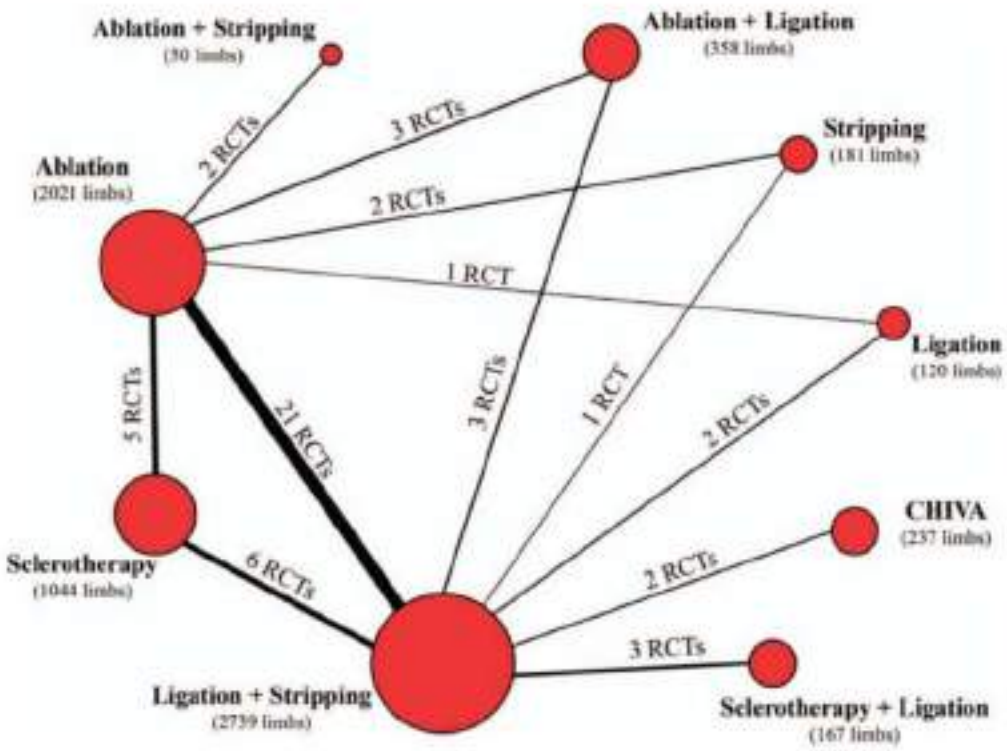


Authors' conclusions:

*"**Saphenous sparing** method **reduces recurrence** of varicose veins and produces **fewer side effects** than stripping. New RCTs are needed"*

Bellmunt-Montoya et al.
Chiva method for the treatment of varicose veins
Cochrane Database of Systematic Reviews 2015

Gianesini S
Chiva strategy in CVD treatment: instructions for users
Phlebology 2014



Long term efficacy of different procedures for treatment of varicose veins: a network meta-analysis

2019 Feb; 98(7):e14495.

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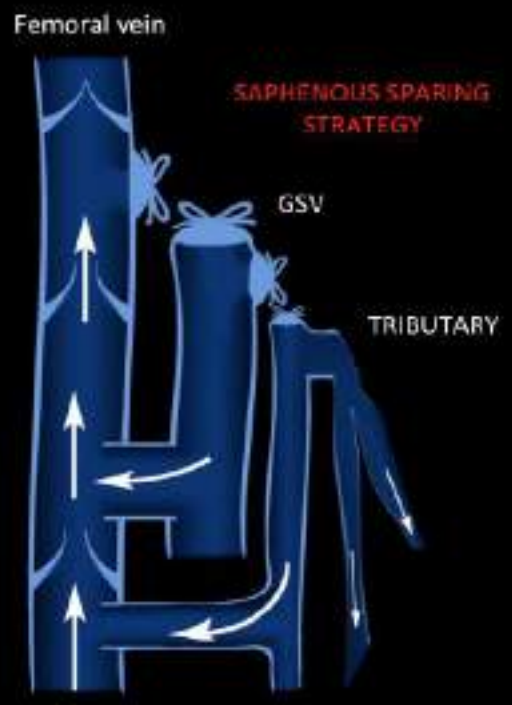
BACKGROUND



Bias risk HIGH

Bellmunt-Montoya S. CHIVA method for the treatment of chronic venous insufficiency.
Cochrane Database Syst Rev. 2021 Sep 30;9(9):CD009648.

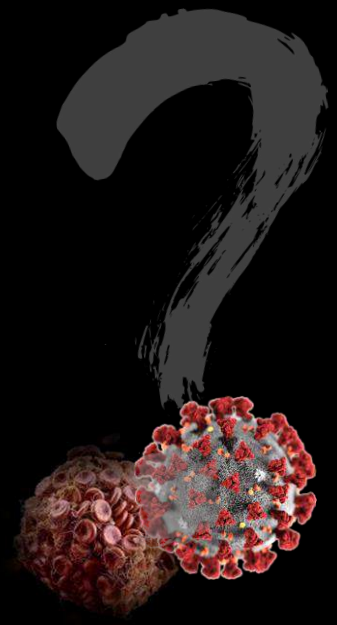
Ambulatory conservative hemodynamic treatment of venous incompetence (Cure Conservatrice et Hémodymalique de l'Insuffisance Veineuse en Ambulatoire, CHIVA) may be considered in patients with chronic venous disease, if performed by physicians exclusively performing CHIVA.	IIb	B

Eur J Vasc Endovasc Surg 2015-2022

J Vasc Surg 2011

We suggest preservation of the saphenous vein using the ambulatory conservative hemodynamic treatment of varicose veins (CHIVA) technique only selectively in patients with varicose veins, when performed by trained venous interventionists.	2	B

THROMBO-PROPHYLAXIS…in COVID Time



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Boyle E. Thromboprophylaxis for varicose vein procedures - A national survey. Phlebology. 2019 Oct;34(9):598-603.

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Irish THROMBO-PROPHYLAXIS SURVEY

- ✓ Always 73.3%
- ✓ Enoxaparin and tinzaparin most used (20-40 mg / 3500-4500 IU)
- ✓ Single dose 71.4%
- ✓ already ongoing anticoagulation is kept in 46.7%

Boyle E. Thromboprophylaxis for varicose vein procedures - A national survey. Phlebology. 2019 Oct;34(9):598-603.

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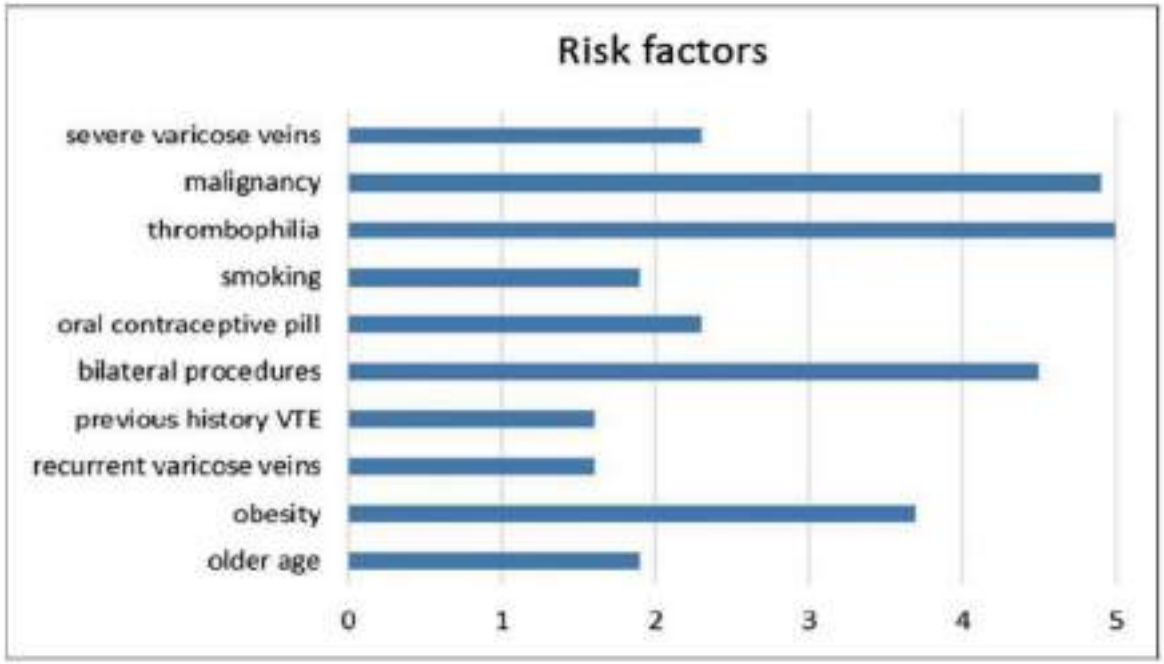
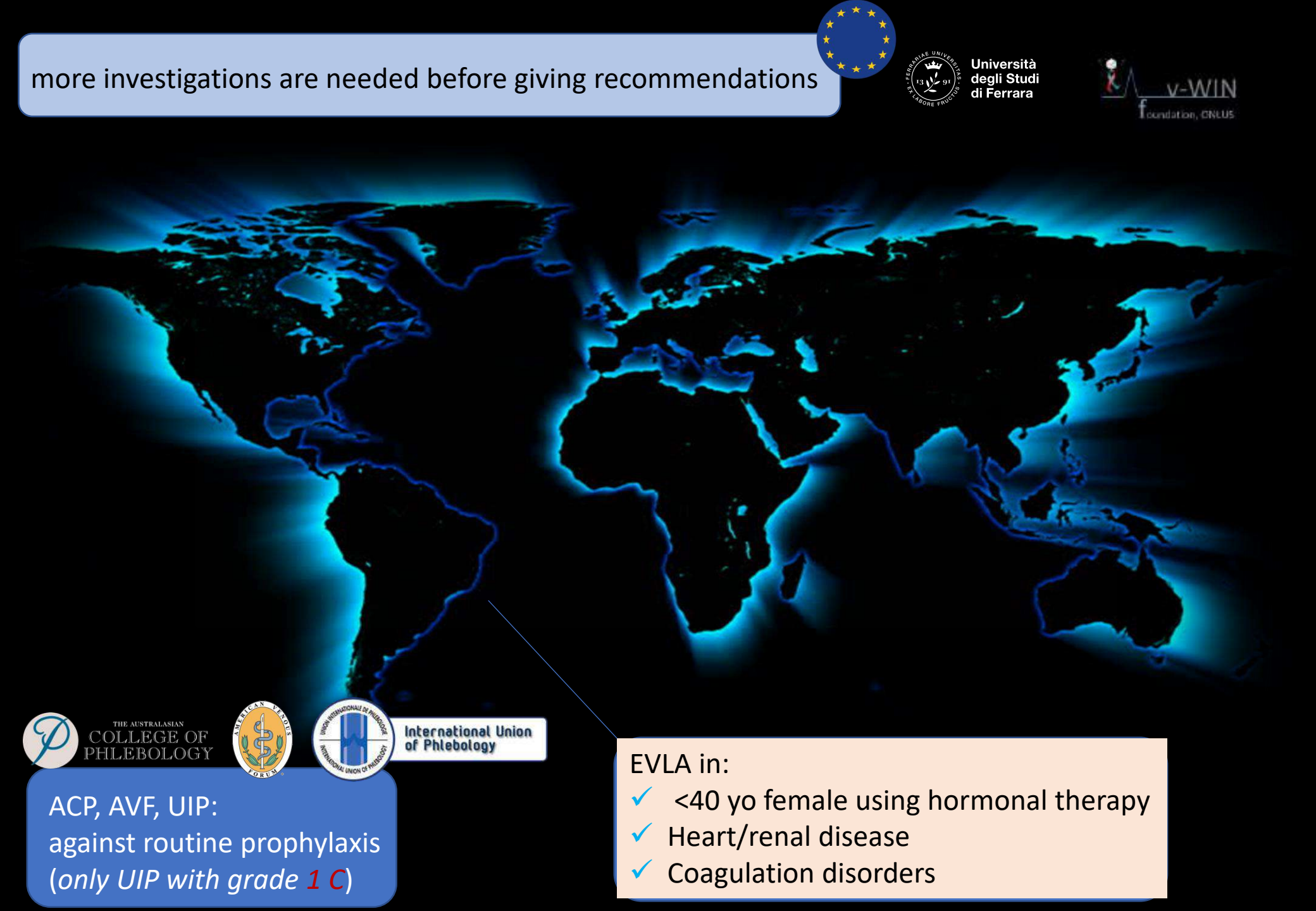


Figure 2. Importance of various thromboembolic risk factors as rated by survey respondents where 1 = not important and 5 = very important.

more investigations are needed before giving recommendations



ACP, AVF, UIP:
against routine prophylaxis
(*only UIP with grade 1 C*)

EVLA in:

- ✓ <40 yo female using hormonal therapy
- ✓ Heart/renal disease
- ✓ Coagulation disorders

Sweetland S
Million Women Study collaborators. Duration and magnitude of the postopera- tive risk of venous thromboembolism in middle aged women: prospective cohort study.
BMJ 2009; 339: b4583

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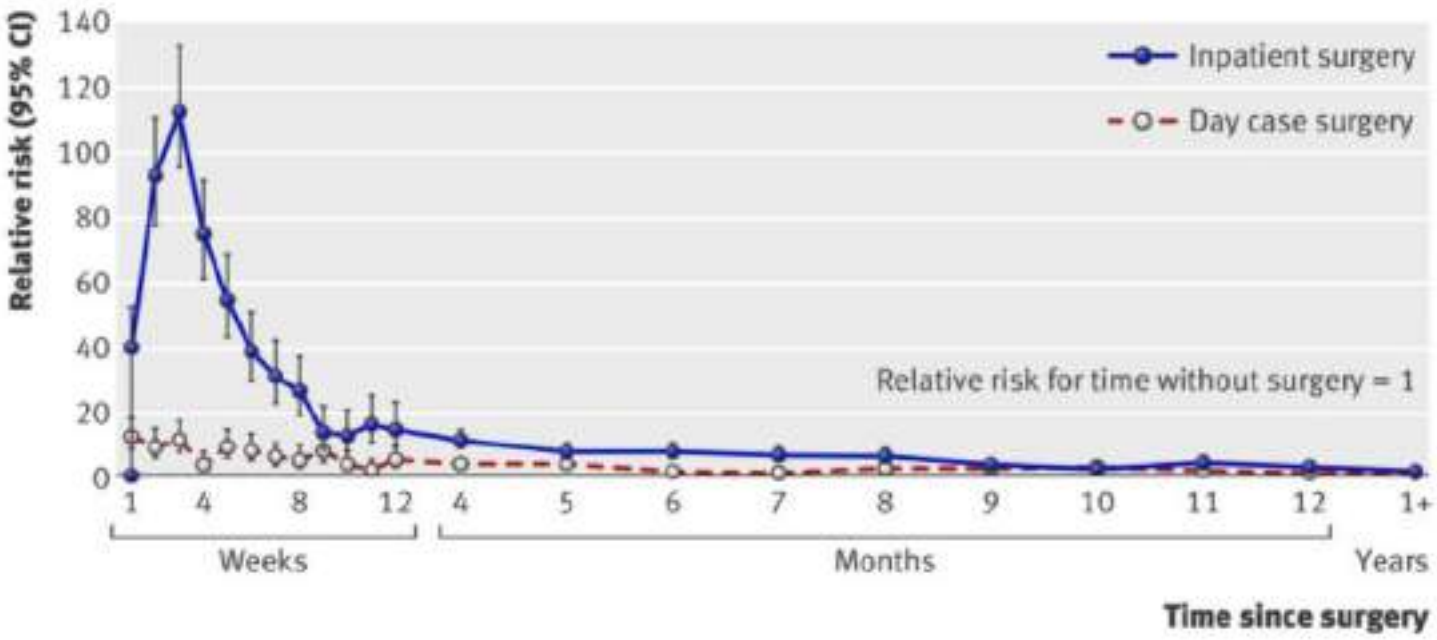
risk of DVT risk within 6 weeks of day-surgery is approximately 10 times higher



Sufian S. **Incidence, progression, and risk factors for endovenous heat- induced thrombosis after radiofrequency ablation.** J Vasc Surg Venous Lymphat Disord 2013;1:159–164.

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..in 6707 patients

- ✓ EHIT 3%
- ✓ Non fatal PE 0.03%

- ✓ EHIT resolution in 2-4 w in most patients,
- ✓ worsening in 4.5% (all resolved <4w)

- ✓ 68% EHIT had concomitant phlebectomy

vs

- ✓ 39.4% no concomitant phlebectomy (p<.0001)

INTERESTING DATA

SMALL SAPHENOUS VEIN ?

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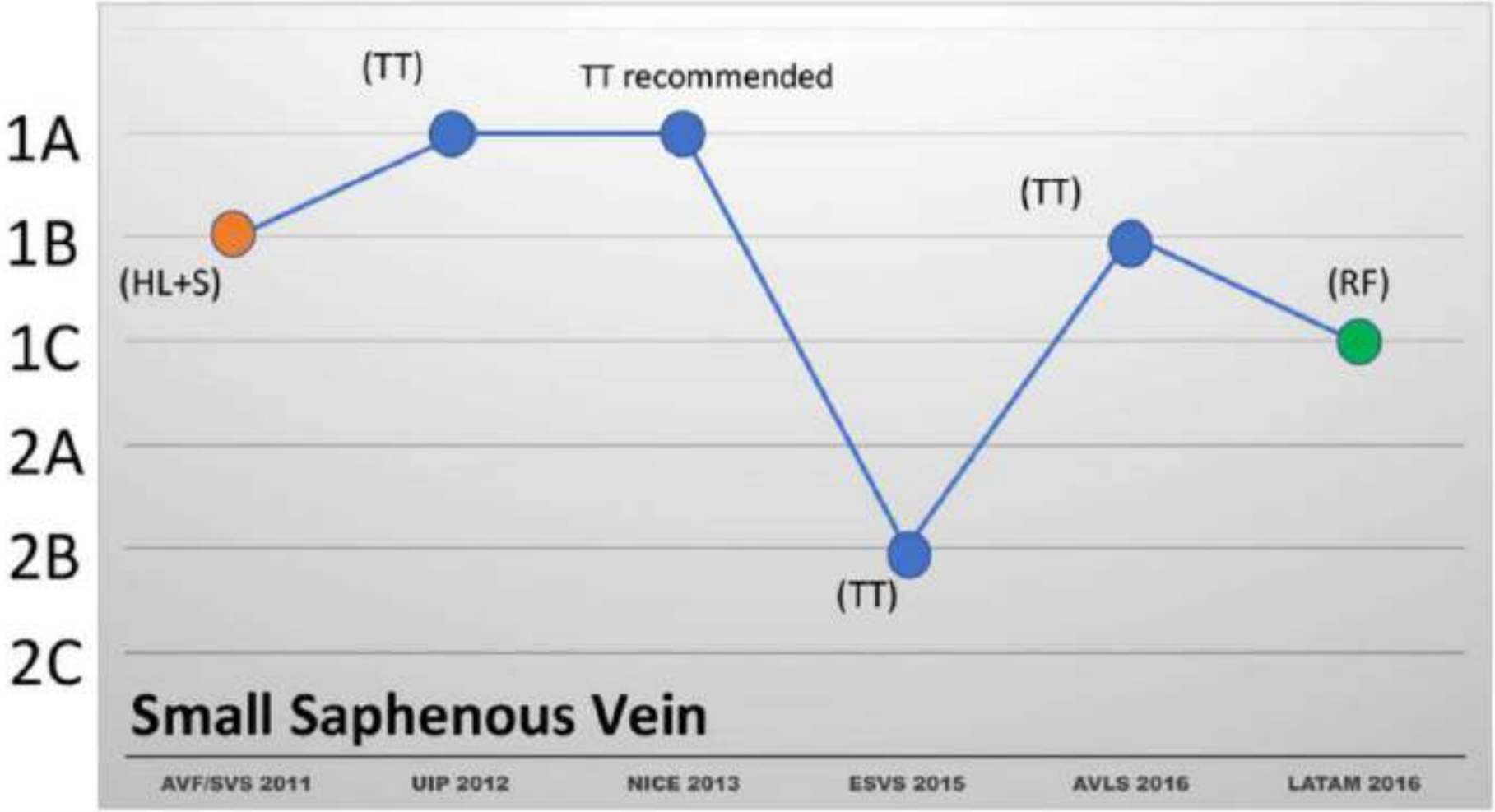
di Ferrara

Phlebology. 2019 Sep;34(1 Suppl):4-66.

Global guidelines trends & controversies in lower limb venous and lympahtic disease

Gianesini S et al.



Kim H.
Endovenous lasering versus ambulatory phlebectomy of varicose tributaries in conjunction with endovenous laser treatment of the great or small saphenous vein.
Ann Vasc Surg 2009;23:207e11.

SMALL ⇨

SAPHENOUS VEIN

Table III. Risk factor analysis for retreatment

	Univariate	Multivariate		
	p	Odds ratio	*p*	95% CI
Gender	0.537	1.299	0.557	0.540-3.106
Age	0.643	1.009	0.686	0.97-1.06
Group	0.813	1.801	0.216	0.71-4.57
SPR	0.341	1.586	0.326	0.63-3.98
Perforating reflux	0.066	3.938	0.042	1.05-14.78

CI, confidence interval; SPR, saphenopopliteal reflux.

ONE size DOES NOT fit all

NOT-modifible

1. advanced age
2. family history of VV (1.85 OR)
3. DVT history (4.10 OR)
4. Venous reflux (SSV+deep in particular)
5. Symptoms of swelling with varicose veins

Modifible

1. high BMI (1.85 OR)
2. Venous reflux (SSV+deep in particular)
3. Symptoms of swelling with varicose veins

Lee AJ, et al. Progression of varicose veins and chronic venous insufficiency in the general population in the Edinburgh Vein Study. *JVS VL* 2015;3(1):18-26. 18–26

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Sanders JO.

Clinical practice guidelines: their use, misuse, and future directions

J Am Acad Orthop Surg. 2014 Mar;22(3):135-44.

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foundation, ONLUS

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CONNECTING the EXPERTS, INFORMING the PATIENTS

international consensus document
&
communication campaign for

FAKE NEWS FREE patient information

in conjunction with

10th International Interuniversity meeting in Phlebology, Lymphology & Aesthetics

TECHNICAL NOTES

FAKE NEWS

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Connecting the Experts, Informing the Patients

40% of the top shared healthcare web links contains "**FAKE NEWS**"

&

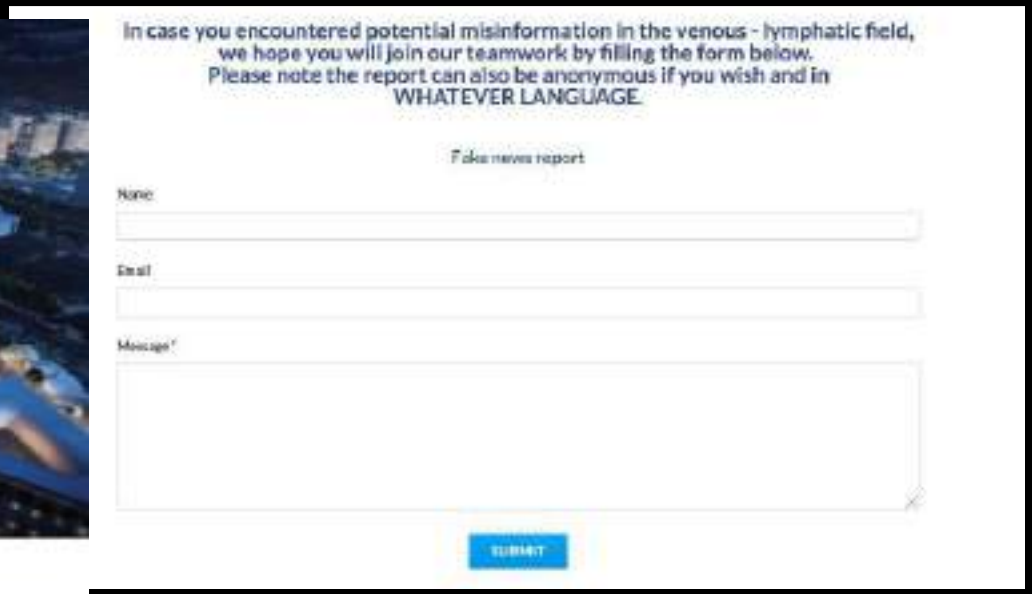
they are shared more than

450.000 times

The spread of medical fake news in social media
Health Pol Tech 2018;7(2):115-18.

YOU CAN REPORT eventually encountered venous-lymphatic Fake News

www.vwinfoundation.com/fake-news-free-project/



FAKE NEWS FREE

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www.vwinfoundation.com/fake-news-free-project/

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1. Consensus Document to be published on **INTERNATIONAL ANGIOLOGY JOURNAL (IF 2,789)**

2. **Multi-lingual BOOKLET for the PUBLIC**

3. Open access **WEBSITE including evidence based information**

v-WINter DUBAI mission

Experts Consensus document

Multi-lingual awareness booklet

Interactive Educational website

CONGRATS &
see you at

V – italy '23

MAY 25-27


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INTERNATIONAL UNION OF PHLEBOLOGY
TURKISH SOCIETY of PHLEBOLOGY 1998