



NYU Langone Health



NOT ALL C2 DISEASE SHOULD BE TREATED: AN ALGORITHM TO PREDICT SEVERITY

Mikal Sadek, MD, FACS
Associate Professor of Surgery
Program Director, Vascular Surgery Residency and Fellowship
Director, NYU Langone Vein Center
Co-Director, NYU Langone Limb Salvage Center




Disclosures

- Boston Scientific – Consultant
- BD - Consultant
- enVeno – Investigator

NYU Langone Health

CEAP



? C2 Rx

NYU Langone Health

Dilemma with C2 patients

Eur J Vasc Endovasc Surg (2015) 49, 213–220

Management Strategies for Patients with Varicose Veins (C2–C6): Results of a Wo
Journal of Vascular Surgery: Venous and Lymphatic Disorders
Volume 6, Issue 3, May 2018, Pages 338-346.e1

S.K. van

Clinical research study
Superficial venous disease

A nation The European burden of primary varicose veins
Mengzi Zhang
MD, PhD

H M Moore, T R A Lane, A Thapar, I J Franklin and A H Davies
Academic Section of Vascular Surgery, Department of Surgery & Cancer, Imperial College School of Medicine, Charing Cross
Journal of Vascular Surgery: Venous and Lymphatic Disorders
Volume 6, Issue 3, May 2018, Pages 331-337.e1

Clinical research study
Superficial venous disease

The effect of commercial insurance policies on outcomes of venous ablation
Presented as a poster at the Thirty-first Annual Meeting of the Eastern Vascular Society, Savannah, GA, October 5-8, 2017.
Cassius Sval Ochoa Chavar MD, MS * P R, Aksha Anandina MBBS * Yawei Zhang MD * Fang Wang MPH * Jonathan Cardella MD * Kristine Orton MD * Basar Sampal MD, PhD * Tinar Garcia MD *

Appropriate Use Criteria

- Complex questions being raised for the treatment of CVI

Table V. Appropriateness criteria of great saphenous vein (GSV) ablation

	Asymptomatic			Symptomatic		
	C ₁	C ₂	C ₃	C ₄	C ₅	C ₆
GSV ablation (above knee only unless indicated)				Appropriate Median 7	Appropriate Median 8	Appropriate Median 9
† GSV axial reflux with SFJ reflux	Rarely appropriate Median 1	Rarely appropriate Median 1	Rarely appropriate Median 2	Appropriate Median 7	Appropriate Median 8	Appropriate Median 9

Editors' Choice
From the American Venous Forum

The 2020 appropriate use criteria for chronic lower extremity venous disease of the American Venous Forum, the Society for Vascular Surgery, the American Ven and Lymphatic Society, and the Society of Interventional Radiology

Elna Masuda MD¹, Kathleen O'Leary MD², John Vessler MD³, Karen Wiles MD⁴, Robert Kistner MD⁵, Fadi Louie MD⁶, Dan Hoshabani MD⁷, William Brown MD⁸, Neena Lalaprasada MD⁹, Michael Dalling MD¹⁰, Neil Kishorani MD¹¹, Thomas Wakefield MD¹², and Peter Ciolekli MD¹³.
¹Acronis, ²Hawaii, ³Alanya, ⁴Stony Brook and ⁵New York, ⁶Los Angeles and ⁷Seattle, ⁸Seattle, ⁹Bringham, ¹⁰Bringham and ¹¹Ann Arbor, ¹²Michigan, ¹³and ¹⁴Illinois, ¹⁵Minn.

NYU Langone Health

Guidelines

The 2022 Society for Vascular Surgery, American Venous Forum, and American Vein and Lymphatic Society clinical practice guidelines for the management of varicose veins of the lower extremities. Part 1. Duplex Scanning and Treatment of Superficial Truncal Reflux
Endorsed by the Society for Vascular Medicine and the International Union of Phlebology

Published October 11, 2022 • DOI: 10.1093/advances/knab001

2.1.1. For patients with symptomatic varicose veins and axial reflux in the great or small saphenous vein, who are candidates for intervention, we recommend superficial venous intervention over long-term compression stockings.
Level of recommendation: grade 1 (strong), quality of evidence: B (moderate)

3.1.1. For patients with symptomatic axial reflux of the great saphenous vein, we recommend both thermal and nonthermal ablation from the groin to below the knee, depending on the available expertise of the treating physician and the preference of the patient.
Level of recommendation: grade 1 (strong), quality of evidence: B (moderate)

NYU Langone Health

Outcomes after truncal ablation with or without concomitant phlebectomy for isolated symptomatic varicose veins (C2 disease)
Craig S. Brown MD MSc¹, Andrew T. Csisz MD², Jack L. Cronin MD³, Lowell Kabnick MD⁴, Thomas W. Kisheloff MD⁵, and Nicholas S. Okonko MD MSc⁶, American Vein Laboratory, NY and Baltimore, MD

Data

- VQI (VVR) *JVSVL 3/2021*
 – 3375 patients C2 disease
- AVF – JURY Study *JVSVL 11/2023*
 – 352 patients (C2/C3) with truncal reflux +/- junctional reflux

Effect of junctional reflux on the venous clinical severity score in patients with insufficiency of the great saphenous vein (JURY study)
Chanku Venugol MD¹, Kathleen D. Cilizza MD¹, Peter J. Nagoski MD¹, Mikel Sadek MD¹, Vinodh Pring MD¹, Andrew T. Csisz MD¹, Nicolas J. Mousaw MD MPH MBA¹, Yana Eskin MD¹, Antonia P. Casparis MD¹, Tara McDonald MD¹, Stefan Sabin MA¹, Seth D. Sorkin MD and Rogeeh K. Ali MD¹, and Aron M. Behrman MD¹, Baltimore, MD; Philadelphia, PA; and New York, NY

VCSS score

6.5 (24)	6.4 (21)	6.6 (27)	397
----------	----------	----------	-----

VCSS score means: VC3, high-reflexed junctional reflux; VC4, reflux clinical severity scores. Data are presented as number (n) or mean (standard deviation).

- **Problem:** No single tool provides a complete picture.
- **Result:** Inconsistent treatment algorithms
- **Goal:** Incorporate patient reported score

NYU Langone Health

The VVSymQ[®] instrument: Use of a new patient-reported outcome measure for assessment of varicose vein symptoms
Jean Paty¹, Diane M Turner-Bowker², Celeste A Elash³ and David Wright⁴

VVSymQ[®]

- Validated PRO instruments
 – AVVQ, CIVIQ, VEINES-QOL...
- Varicose Vein Symptom Questionnaire[®]
 – **HASTI (VQI)**
- VVSymQ[®] Electronic Daily Diary Score
- Duration scale 0–5 “How much of the time?”
- Total score 0–25, averaged over 7 days

HASTI™ Symptoms

- Heaviness
- Aching
- Swelling
- Throbbing
- Itching

NYU Langone Health

Purpose

- To simultaneously assess patient reported scores (VVSymQ[®]) and physician reported scores (VCSS) in order to improve stratification for disease severity in C2 patients.

> Phlebology. 2021 Dec;36(10):809-815. doi: 10.1177/02683555211023306. Epub 2021 Jun 14.

An algorithm combining VVSymQ[®] and VCSS scores may help to predict disease severity in C2 patients

Mikel Sadek¹, Matthew Pergamo¹, Jose J Almeida², Glenn R Jacobowitz¹, Lowell S Kabnick¹

NYU Langone Health

Methods

Treatment of Truncal Incompetence and Varicose Veins with a Single Administration of a New Polidocanol Endovenous Microfoam Preparation Improves Symptoms and Appearance^{1,2}
J.T. King¹, M. O’Byrne¹, M. Vaseque¹, D. Wright¹, for the VANISH-1 Investigator Group¹

- Consecutive patients with symptomatic varicose veins (C2)
 – Pooled from VANISH-1 / VANISH-2 cohorts (Varithena[®])
- VCSS was calculated for each patient
- Patients completed VVSymQ[®] per protocol
- Relationship between VCSS and VVSymQ[®] scores was evaluated using Pearson’s correlation
- Frequency distribution analysis was used to classify patients according to VCSS and VVSymQ[®]

Journal of Vascular Surgery
 From the American Venous Forum

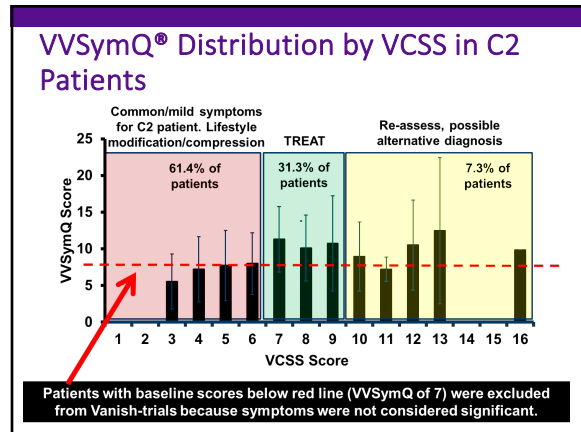
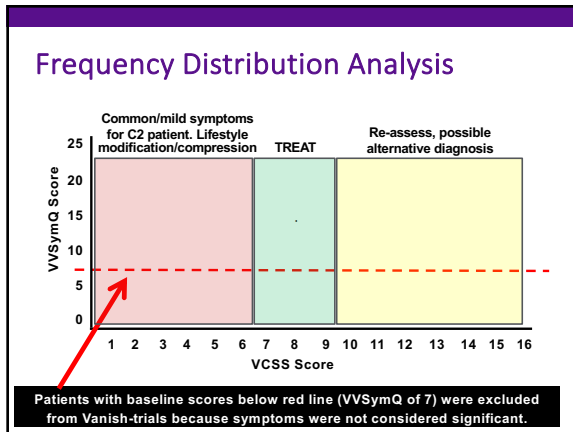
Durability of treatment effect with polidocanol endovenous microfoam on varicose vein symptoms and appearance (VANISH-2)
Romesh K. Toubi III, MD¹ and David L. Wright, MD² for the VANISH-2 Investigator Group, Dublin, Ireland and Philadelphia, PA

NYU Langone Health

Results: Demographics

- N = 210
- Female: 73%
- Mean age: 50 years
- Mean VCSS: **6.32** (range 3-16)
- Mean VVSymQ[®]: 8.72 (range 1.29-22.86)
- Weak correlation b/n VCSS and VVSymQ[®]
 –r=0.22, P=0.05

NYU Langone Health



Conclusions

- In patients with VCSS (> 6-9) and VVSymQ® (> 7-9) scores:
 - Supports moderate to severe disease severity
 - Treatment likely indicated
 - Already being done in large series
- **Symptomatic C2**
 - Consistent with appropriate use criteria
 - Consistent with guidelines
- **Individualize Rx to the patient**

