

The logo for LINC, featuring the letters 'LINC' in a white, sans-serif font. To the left of the text is a stylized graphic consisting of two overlapping, curved lines in red and orange, resembling a flame or a ribbon.

LINC

Dedicated woven nitinol stent for the common femoral vein:

Arnsberg–Zurich experience

Tim Sebastian
University Hospital Zürich

Disclosure

Speaker name:

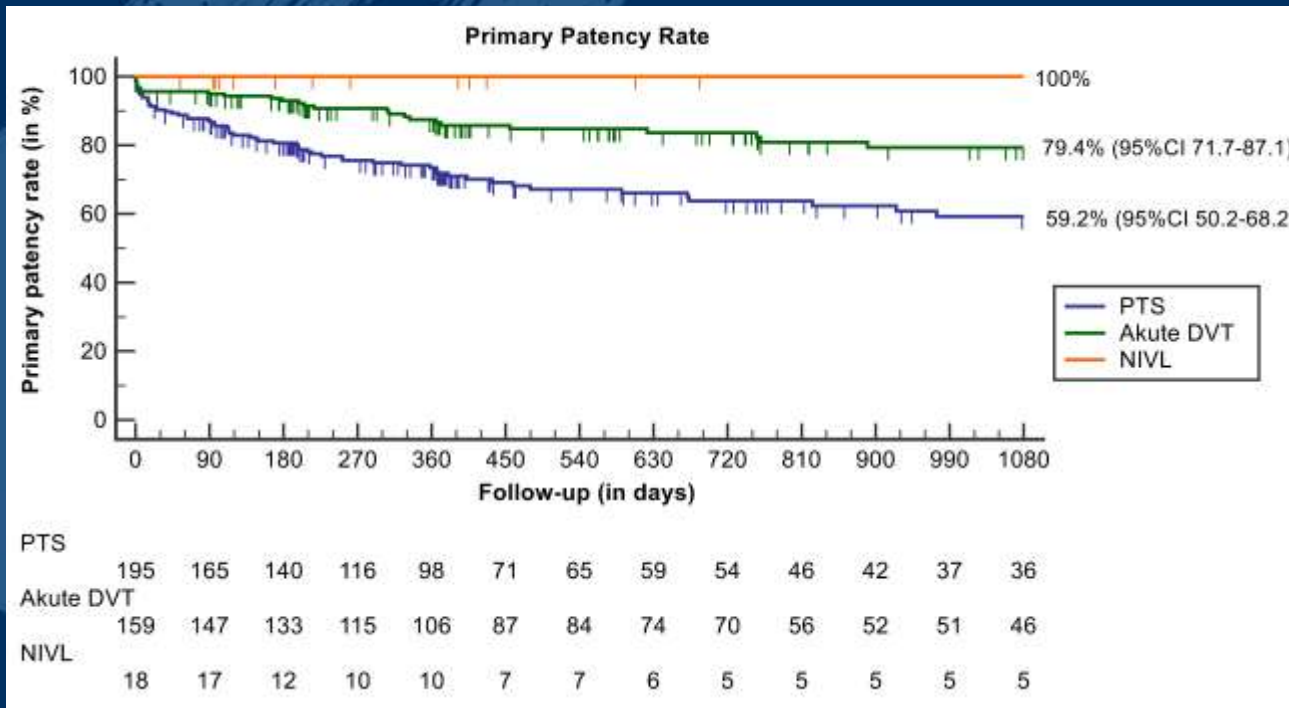
Tim Sebastian.....

I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

- I do not have any potential conflict of interest

PTS patients are the high-risk population among patients with venous stents



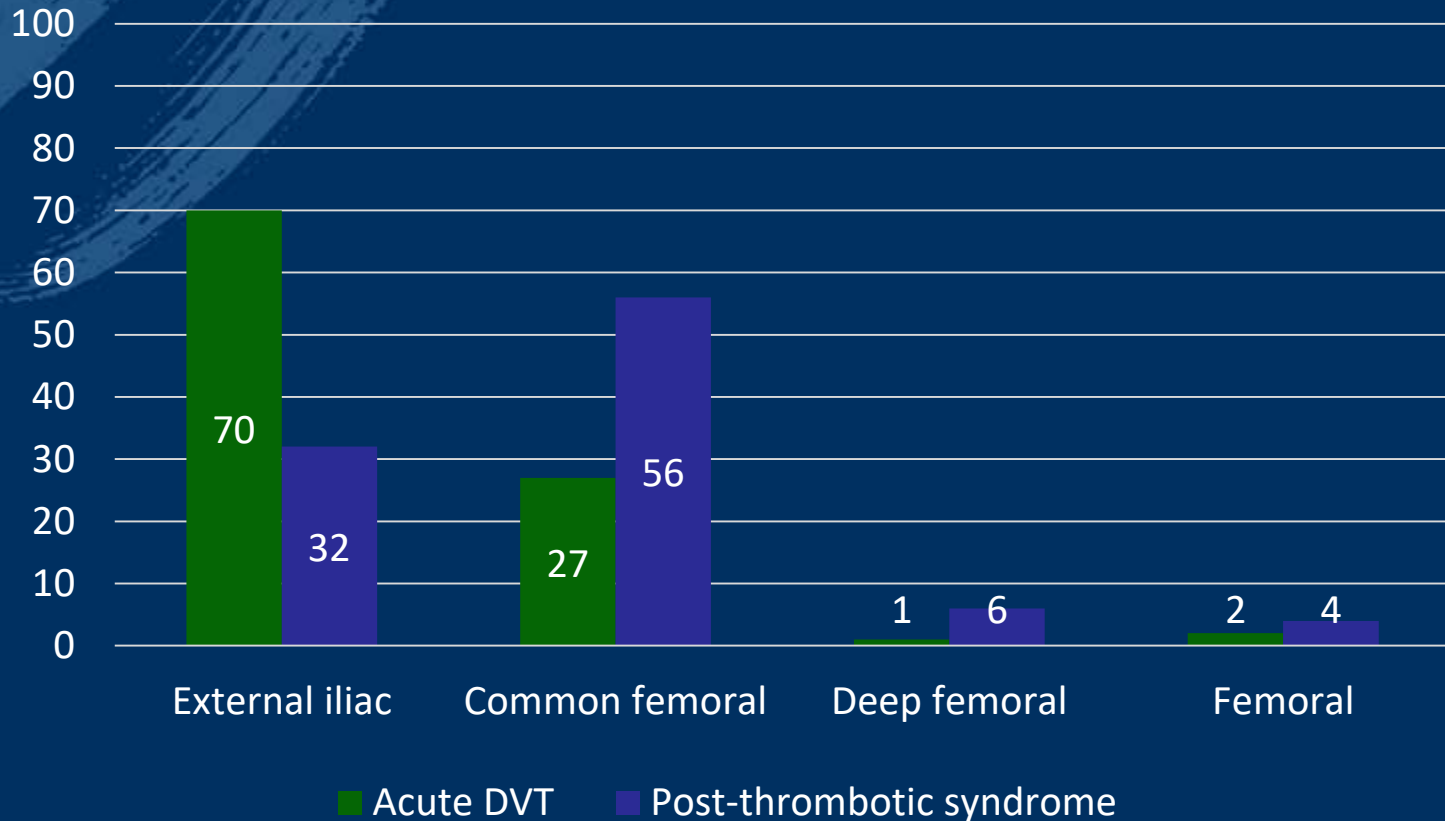
Hazard Ratio 2.5 (1.6-3.7)

If index diagnosis PTS

from the Swiss Venous Stent Registry
an analysis by Suvetha Gnanapiragasam

PTS patients have more advanced disease with impairment of femoral inflow veins

Distal Stent landing zones: DVT versus PTS



Stenting of the common femoral vein can be critical

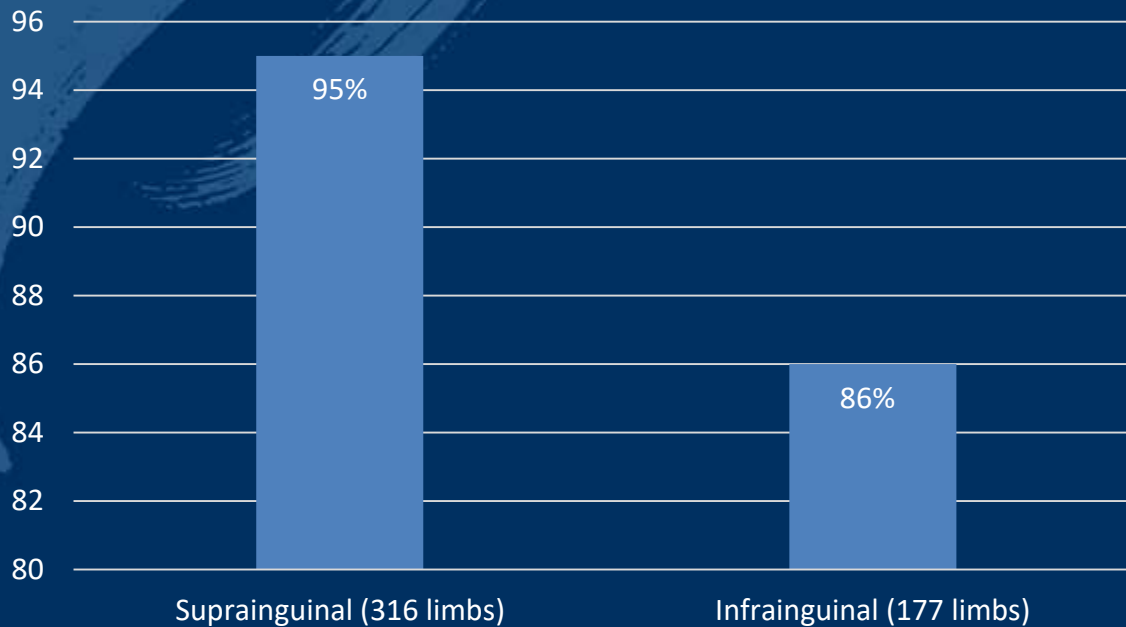
- Repetitive force to the stent during hip (joint) motion and stent exposure to
 - Axial compression and elongation
 - External compression (impingement)
 - Kinking or bending
- Stent deformation and fracturing can cause
 - Loss of patency
 - Patient discomfort

J Vasc Surg. 2008 Nov;48(5):1255-61. doi: 10.1016/j.jvs.2008.06.035. Epub 2008 Sep 4.

Venous stenting across the inguinal ligament.

Neglén P¹, Tackett TP Jr, Raju S.

Secondary Patency rate



➔ “None of the **braided** stainless steel stents were compressed or fractured”.

Virtus Trial Results (12/2019)

Circulation: Cardiovascular Interventions

ORIGINAL ARTICLE

Pivotal Study of Endovenous Stent Placement for Symptomatic Iliofemoral Venous Obstruction

Mahmood K. Razavi, MD; Stephen Black, MD; Paul Gagne, MD; Richard Chiacchierini, PhD; Philippe Nicolini, MD; William Marston, MD; on behalf of the VIRTUS Investigators

170 patients enrolled (127 PTS)

- **64 patients with CFV stents**

9/64 patients with CFV stents had fractures (xray) after 12 months (14%)

Vessel patency NOT affected

VERNACULAR TRIAL (12-m)

presented by Michal D. Dake at LINC 2019

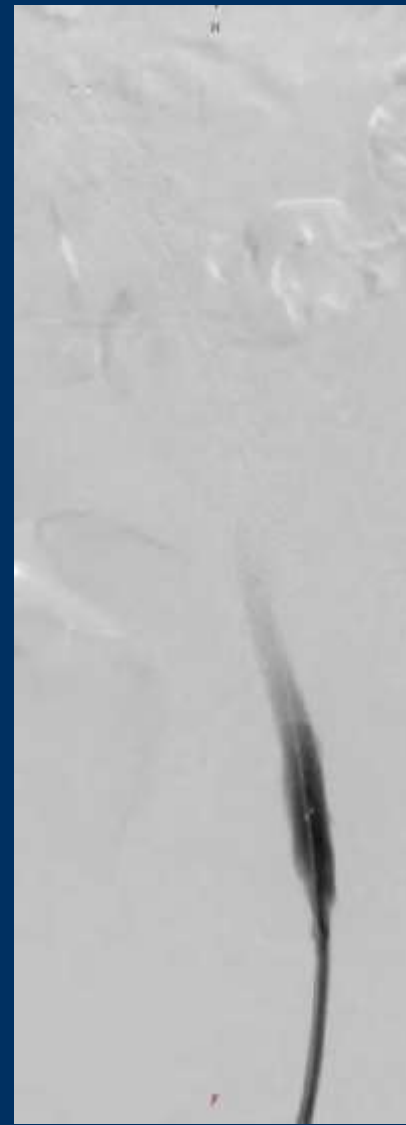
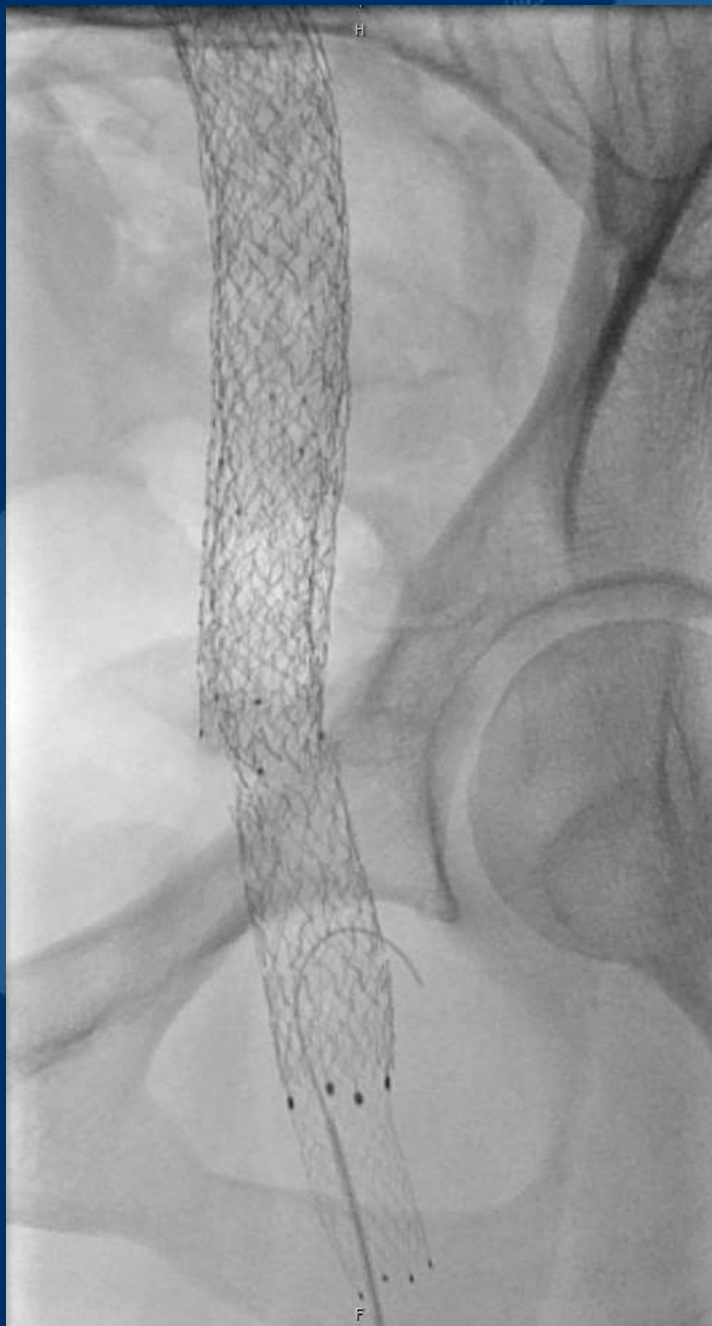
93 patients with PTS (only 15% common femoral vein lesions)

➔ No stent fractures seen after 12 months (investigated by x-ray)

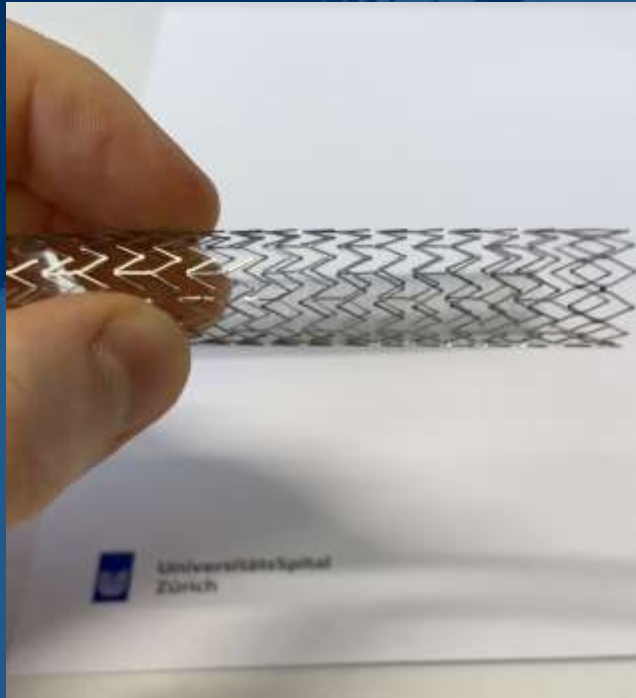
Type IV / IV fracture



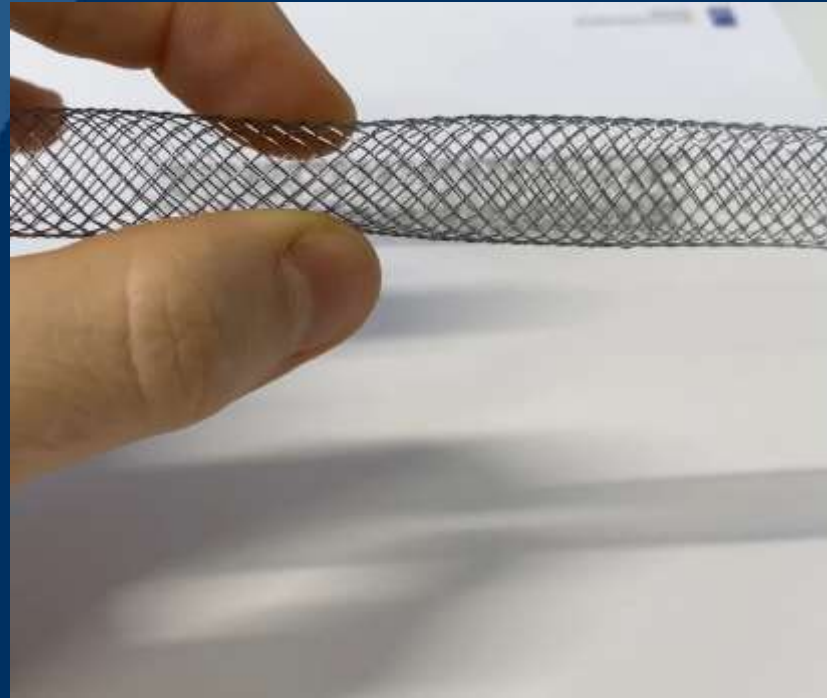
Female patient with recurrent stent occlusion due to external compression of the common femoral vein stent



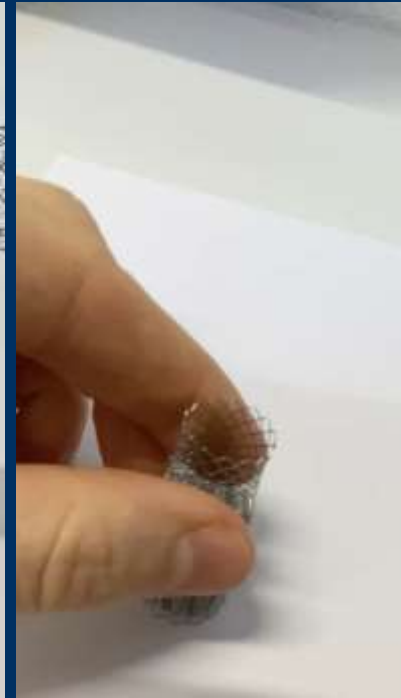
Self-expandable stent designs for dedicated venous stents



Laser-cut



Woven nitinol (blueflow stent)



Arnsberg-Zurich experience

Inclusion:

Post-thrombotic syndrome and stent extension into the common femoral vein

Method:

We calculated 12-m patency rates for

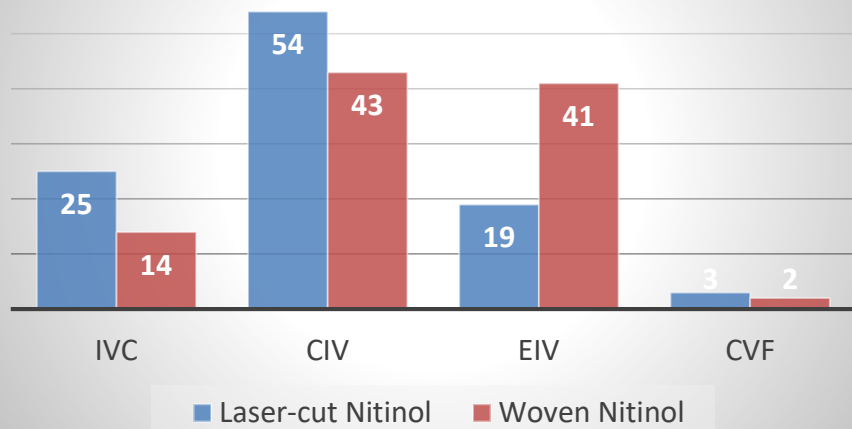
101 PTS patients with laser-cut nitinol

49 PTS patients with woven nitinol stents

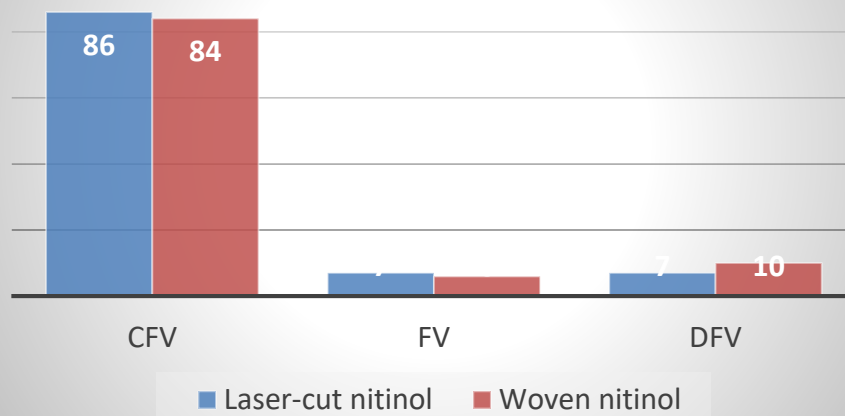
used to cross the inguinal ligament

Similar baseline characteristics (age, sex, comorbidities)

Proximal stent landing zone

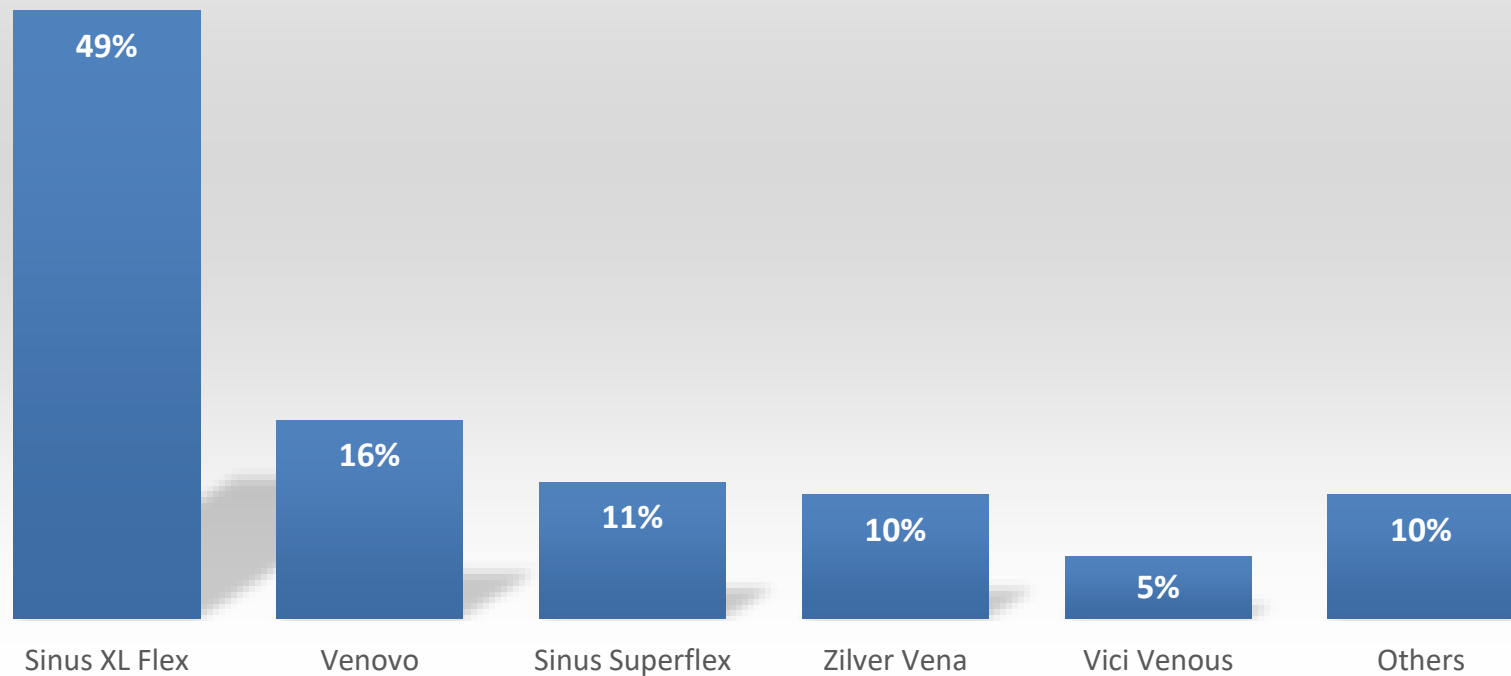


Distal stent landing zone

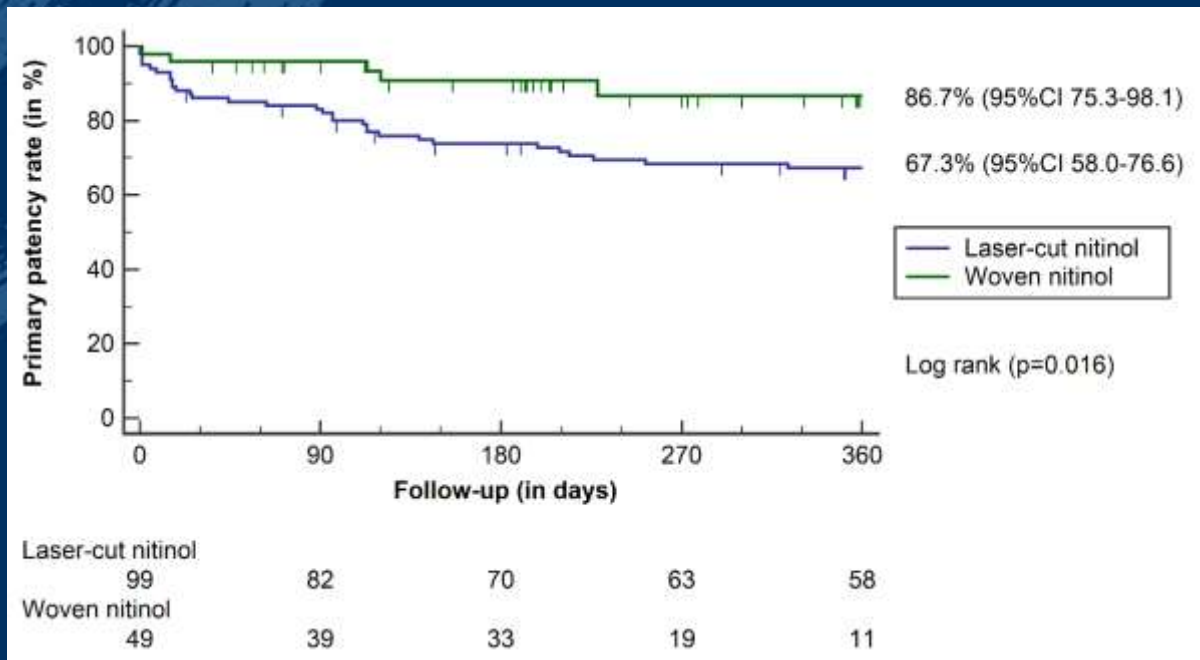


This study cannot be regarded as a head-to-head comparison!

Type of laser-cut nitinol stents used to cross the inguinal ligament



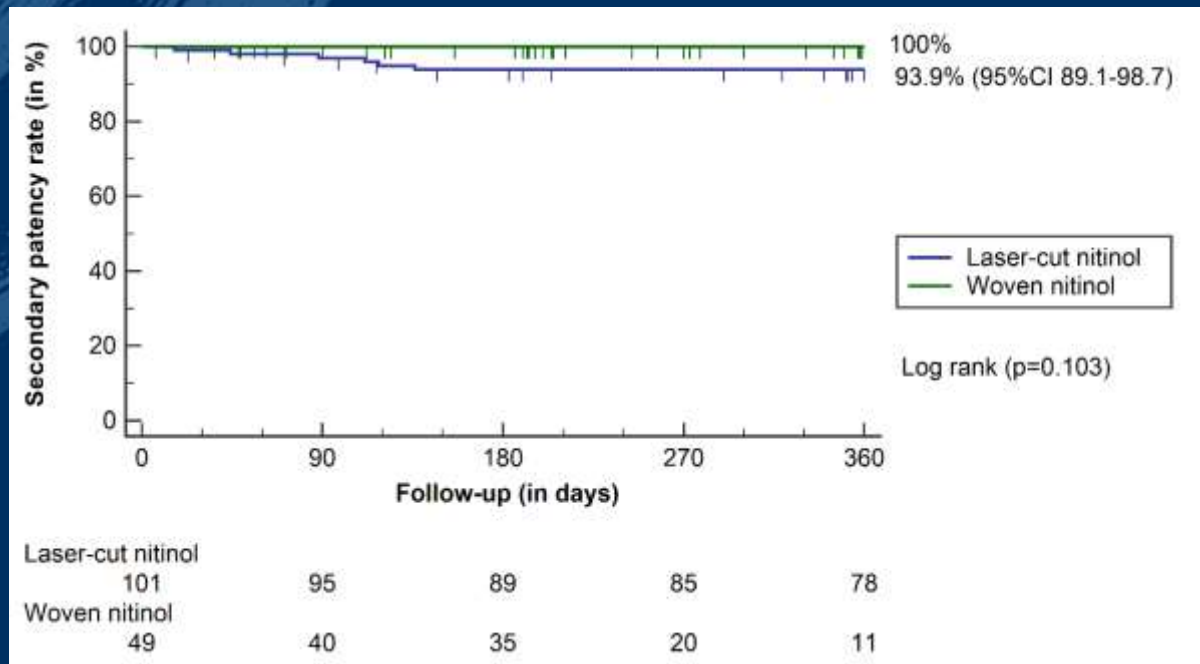
Primary patency rate at 12 months (overall) 73.0% (95%CI 65.5-80.5)



from the Swiss and Arnsberg Venous Stent Registry
an analysis by Laura Moeri

This study cannot be regarded as a head-to-head comparison!

Secondary patency rate at 12 months (overall) 95.7% (95%CI 92.3-99.1)



from the Swiss and Arnsberg Venous Stent Registry
an analysis by Laura Moeri

This study cannot be regarded as a head-to-head comparison!

Changes in Villalta Score from baseline to follow-up

Median improvement in Villalta score

4 (IQR 1-6) points

82 (55%) of patients free from signs and symptoms of PTS

Conclusion

- Laser-cut venous stents have revolutionized recanalization procedures for ilio-caval interventions
- Venous stents (woven vs. laser-cut; open- vs. closed-cell) have different biomechanical properties.
- Make the best out of these properties and choose depending on the segment / disease that you are treating.
- Availability of woven nitinol stents (blueflow stents) may improve outcomes in patients where stent extension into the common femoral vein is required

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