

The logo for LINC (Lumbar Iliac Nerve Compression) features the letters 'LINC' in a white, sans-serif font. To the left of the text is a stylized graphic consisting of three overlapping, curved shapes in shades of blue, red, and yellow, resembling a flame or a dynamic motion.

# Well-recognized venographic signs of significant iliac vein compression in asymptomatic young volunteers

R. de Graaf, MD PhD  
Interventional Radiologist  
Clinic of Friedrichshafen

## Disclosure

Speaker name:

.....

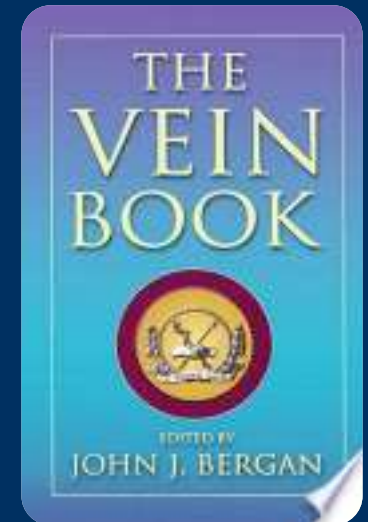
I have the following potential conflicts of interest to report:

- Consulting: Cook medical; Optimed GmbH; Bard; Volcano/Philips; Straub; Bentley; Vesper Medical;
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)
  
- I do not have any potential conflict of interest

# May-Thurner/NIVL/Venous Compression

LINC

- 50% stenosis on venography
  - Multiple angulations
- 50% stenosis on IVUS
  - Fibrotic spurs
- Angiographic signs
  - Collaterals
  - Pancaking
  - Translucency/impression of the common iliac artery



# Debate

The logo for LINC (Lipid and Inflammation in Coronary Arteries) is located in the top left corner. It features a stylized graphic of a red and yellow flame or ribbon shape above the letters "LINC" in a white, sans-serif font.

LINC

- “False-positives” on CT well-known
  - Arbitrary thresholds on angio and IVUS
  - No relation with hemodynamics
  - No causality between lesion and clinic
  - Position of patient influences lesion severity
- 
- Thus: potential overtreatment due to angiographic and IVUS findings?

# Study design

L I N C

Eur J Vasc Endovasc Surg (2018) 56, 874–879

## Illusory Angiographic Signs of Significant Iliac Vein Compression in Healthy Volunteers

Timme M.A.J. van Vuuren <sup>a,b,\*</sup>, Ralph L.M. Kurstjens <sup>a,b,c</sup>, Cees H.A. Wittens <sup>a,b,d</sup>, Jorinde H.H. van Laanen <sup>a</sup>, Rick de Graaf <sup>e</sup>

- 20 healthy subjects (asymptomatic for venous)
- Exclusion CEAP  $\geq$ C2/VCSS  $\geq$ 2
- Left groin access, 6F
- AP and lateral angiography 10/5
- Angiographic signs scored
  - Collaterals, CIV compression, lumen deformity, translucency due to CIA

# Results

LINC

**Table 1.** Demographics of included subjects.

Age, years (Median, IQR)	21 (20–22)
Gender	
Females, <i>N</i> (%)	16 (80)
Males, <i>N</i> , %	4 (20)
Venous history, <i>N</i> ,%	0 (0)
Smoking, <i>N</i> ,%	0 (0)
Abdominal wall collateral, <i>N</i> ,%	0 (0)
CEAP	
C0, <i>N</i> , %	16 (80)
C1, <i>N</i> , %	4 (20)
> C2, <i>N</i> , %	0 (0)
VCSS	
0–1, <i>N</i> , %	20 (100)
≥2, <i>N</i> , %	0 (0)

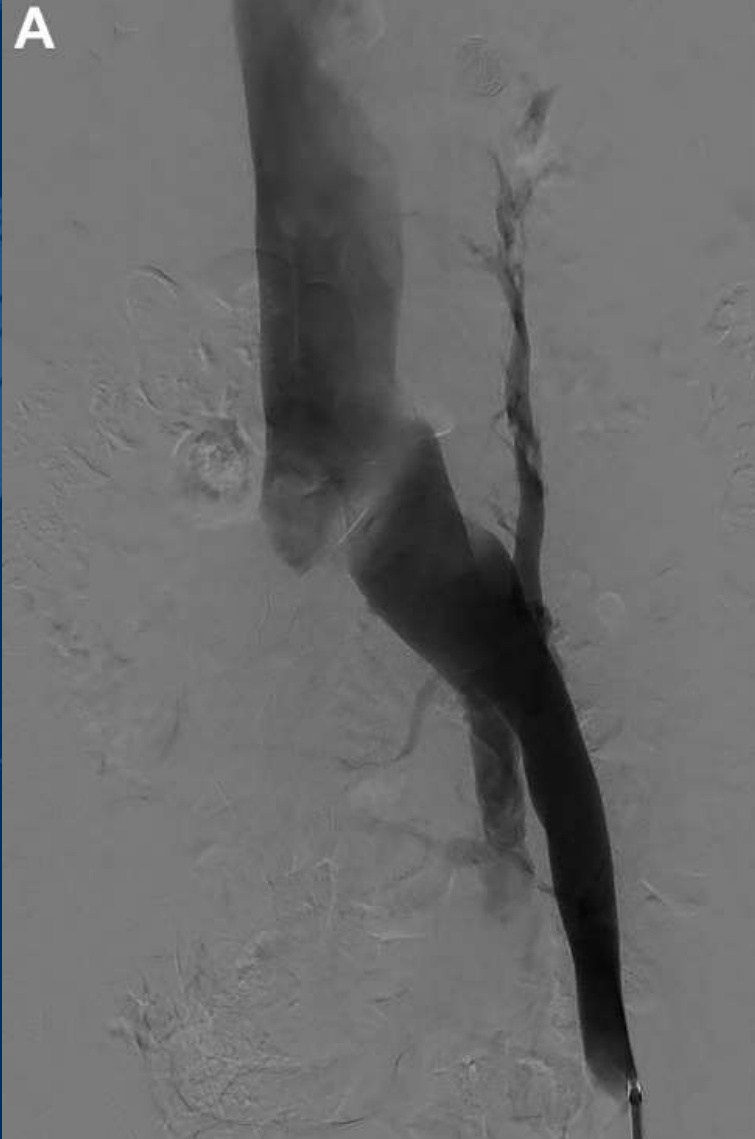
*N* = number; CEAP = Clinical; aetiological; anatomic; and pathophysiological; VCSS = Venous Clinical Severity Score.



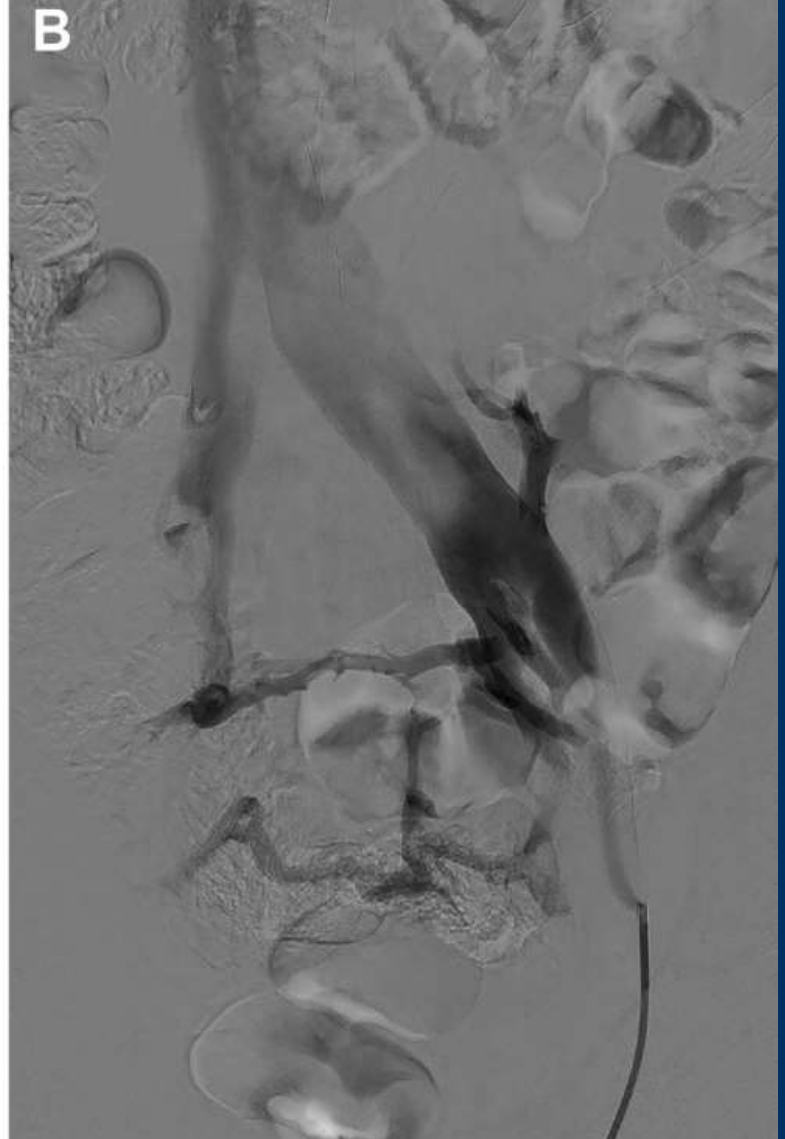
# Results

LINC

A



B



# Results

The logo for LINC (Lung Imaging and Navigation Consortium) features a stylized, colorful graphic of a lung or airway structure in shades of red, orange, and yellow, set against a dark blue background. The letters "LINC" are positioned to the right of the graphic.

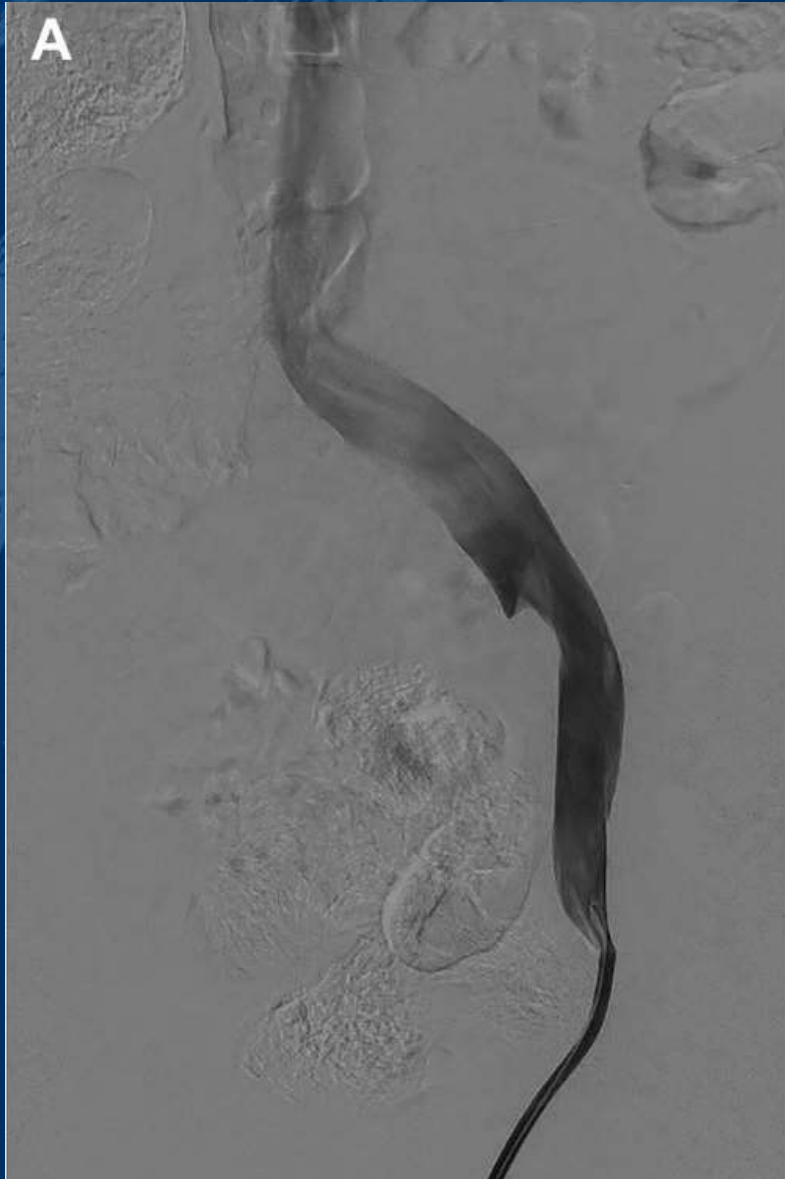
LINC

- 16 (80%) showed at least two signs indicative of May-Thurner compression
- In the remaining subjects, three (15%) had narrowing of the CIV without collaterals
- One (5%) had no obstructive signs.



# Results

LINC



# Significance

- Patients with varicosities
  - 78% have reflux only
  - 8% have obstruction only
  - 14% have both

(Cesarone, Angiology, 2012)
- Overtreatment in about 60%



# Well-recognized venographic signs of significant iliac vein compression in asymptomatic young volunteers

R. de Graaf, MD PhD  
Interventional Radiologist  
Clinic of Friedrichshafen