Does It Matter What Device You Use Regarding Vein Wall Thickness?
Mark Whiteley

The Whiteley Clinic, Guildford, Bristol and London
mark@thewhiteleyclinic.co.uk

Disclosure
Speaker name: Mark S Whiteley
✓ I have the following potential conflicts of interest to report:
  ✓ Receipt of grants/research support
  ✓ Receipt of honoraria and travel support
  ✓ Participation in a company sponsored speakers' bureau
  ❏ Employment in industry
  ❏ Shareholder in a healthcare company
  ❏ Owner of a healthcare company
  ❏ I do not have any potential conflict of interest

"Ectomy"

Saphenectomy – Removal of Saphenous Vein

“Did you want the ectomy, or just the money?”

BUT – Veins: Connective Tissue NOT Organs

2004 – “Transmural Death” – RFA
Fibrosis not Thrombosis

A. Munasinghe, C. Smith, B. Kianifard, BA. Price, JM Holdstock, MS Whiteley
British Journal of Surgery 2007; 94: 840–3

Mark S Whiteley, Judy Holdstock
Vein Wall Thickness NOT Size of Vein

Vein Dilates = Wall Thinner
Vein Constricts = Wall Thicker

Same Vein changing diameter

Different Veins
Big Vein = Thick Wall
Small vein = Thin Wall

Vein Wall Thickness NOT Size of Vein

Tumescence

Mechanism of ablation: Direct cellular death and Apoptosis

p53
ICAM-1

Sclerotherapy

EVLA

Thermal spread from device (mm)

Sclerotherapy

RFITT

An in vitro study to optimise treatment of varicose veins with radiofrequency-induced thermo therapy.
Answer

Does It Matter What Device You Use Regarding Vein Wall Thickness?

- Yes – to an extent …
  - Veins with walls < 200–250 microns = Foam Sclerotherapy
  - Veins > 200–250 microns = EV Thermal Ablation, MOCA, T Glue
  - Recent work 1470 nm > 810 nm
  - Currently analyzing radial v. jacket tip
  - EVLA v. RFA

- More importantly …
  - How you use it:
    - Need to ensure transmural death (direct and delayed – apoptosis) and avoid intra-luminal thrombosis – recanalisation