

Minimally Invasive treatment options for Venous Insufficiency

Do we have a new Gold Standard and a cure for Venous Leg Ulcers?

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Vascular and Endovascular Surgeon
Epworth Hospital

Patients with venous ulcers

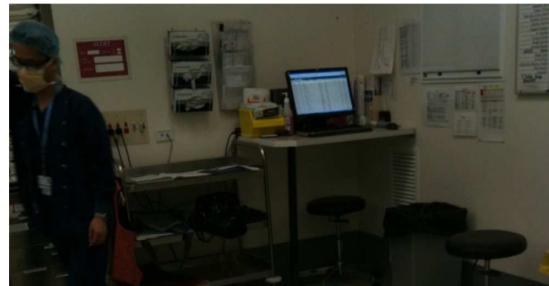
- 51% to 53% have isolated reflux in the superficial system
- 32% to 44% in both the deep and superficial system
- and in 5% to 15% of patients is confined to the deep system alone
 - (Barwell 2004).

Current Evidence

- Surgical intervention for venous insufficiency significantly reduces ulcer recurrence rate when compared with compression



- ESCHAR study Lancet. 2004 Jun 5;363(9424):1854-9



*Current **Guidelines** support Surgical Intervention for treatment of Venous Insufficiency for management of Leg Ulcers*

The care of patients with varicose veins and associated chronic venous diseases: Clinical practice guidelines of the Society for Vascular Surgery and the American Venous Forum

JOURNAL OF VASCULAR SURGERY
4S Gloviczki et al May Supplement 2011

| | | <i>GRADE of recommendation</i> | <i>Level of evidence</i> |
|------|---|--------------------------------|--|
| | | 1. Strong 2. Weak | A. High quality B. Moderate quality C. Low or very low quality |
| 10.4 | To decrease recurrence of venous ulcers, we recommend ablation of the incompetent superficial veins in addition to compression therapy. | 1 | A |
| --- | --- | - | - |

What we know

- Up to 20% of patients will refuse surgical intervention
- A large majority of patients are elderly and frail and not ideal surgical candidates (653 of 1418 patients in ESCHAR study excluded as deemed not suitable for surgery)
- *Surgery is no longer the Gold Standard treatment for venous insufficiency*
- *Endovenous techniques are safer, better tolerated and may be more efficacious*

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Guideline 10. Open venous surgery

| <i>Guideline No.</i> | <i>10. Open venous surgery</i> | <i>GRADE of recommendation</i> | <i>Level of evidence</i> |
|----------------------|---|--------------------------------|----------------------------|
| | | 1. Strong | A. High quality |
| | | 2. Weak | B. Moderate quality |
| | | | C. Low or very low quality |
| 10.1 | For treatment of the incompetent great saphenous vein, we suggest high ligation and inversion stripping of the saphenous vein to the level of the knee. | 2 | B |

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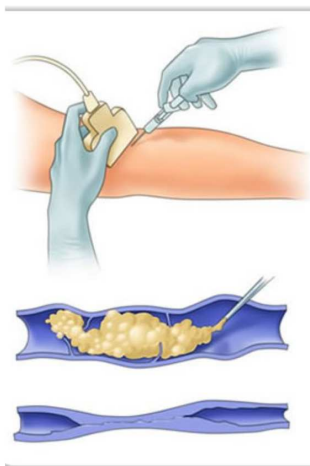
Guideline 11. Endovenous thermal ablation

| Guideline No. | 11. Endovenous thermal ablation | GRADE of recommendation | Level of evidence |
|---------------|---|-------------------------|----------------------------|
| | | 1. Strong | A. High quality |
| | | 2. Weak | B. Moderate quality |
| | | | C. Low or very low quality |
| 11.1 | Endovenous thermal ablations (laser and radiofrequency ablations) are safe and effective, and we recommend them for treatment of saphenous incompetence. | 1 | B |
| 11.2 | Because of reduced convalescence and less pain and morbidity, we recommend endovenous thermal ablation of the incompetent saphenous vein over open surgery. | 1 | B |

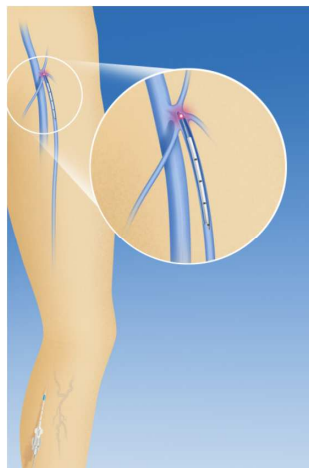
Endovenous therapies of lower extremity varicosities: A meta-analysis

Renate van den Bos, MD,^a Lidia Arends, PhD,^{b,c} Michael Kockaert, MD,^a
 Martino Neumann, MD, PhD,^a and Tamar Nijsten, MD, PhD,^a Rotterdam, The Netherlands

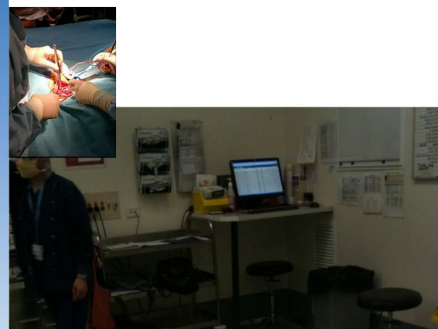
J Vasc Surg 2009;49:230-9



Sclerotherapy 77%



Endovenous Laser 94%



Surgery 78%



Endovenous Laser

80% of venous treatment - Endovenous Laser
USA and Europe


dr **claire** campbell

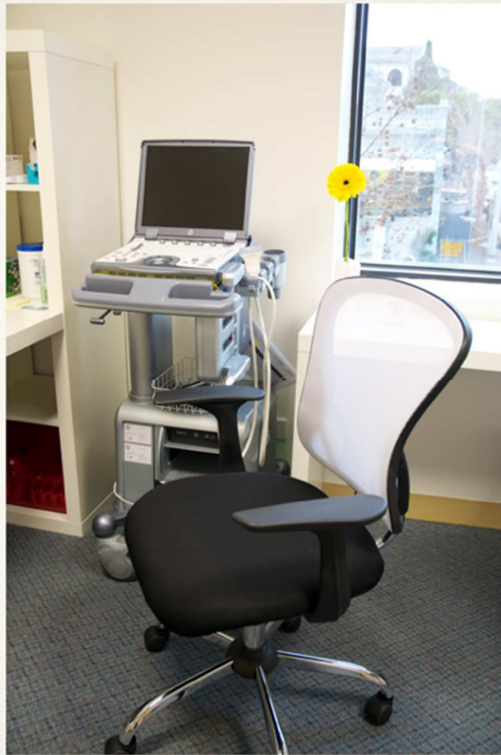
Significantly higher success rate
than surgery

Outpatient Procedure
Local Anaesthetic
Immediate Return to Work
Low complication rate

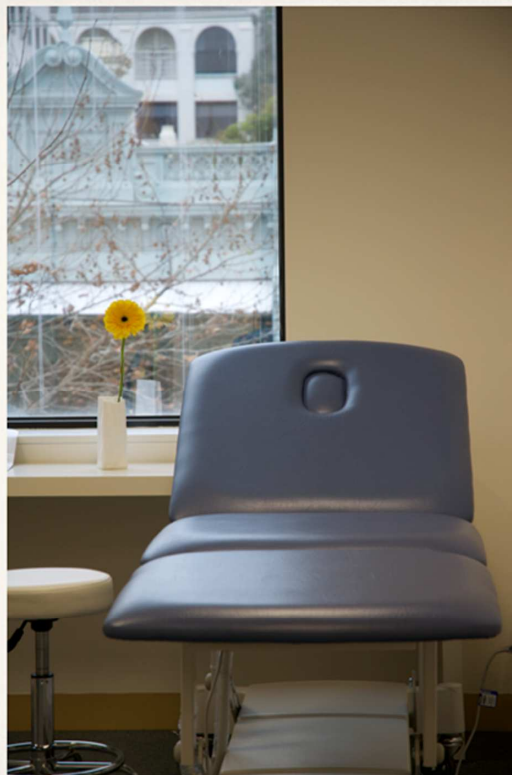


Endovenous Laser


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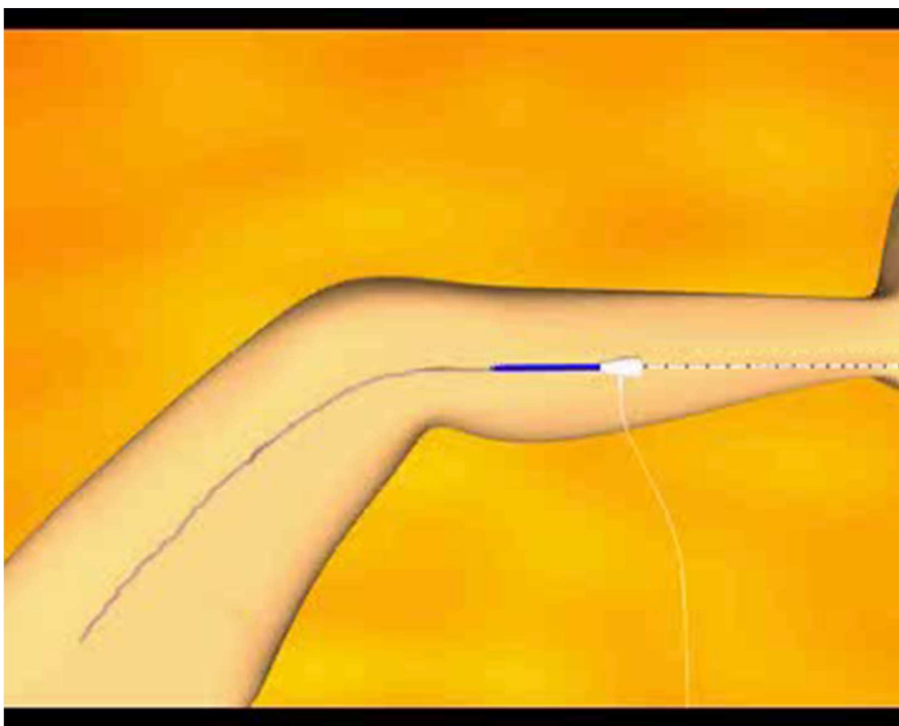


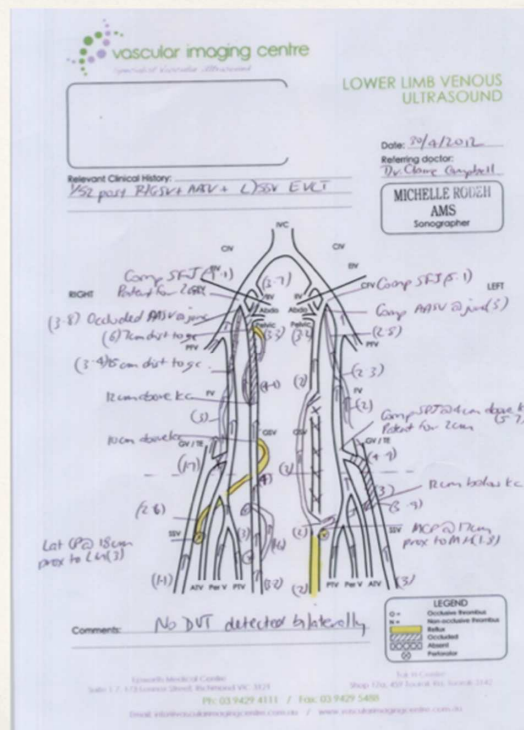
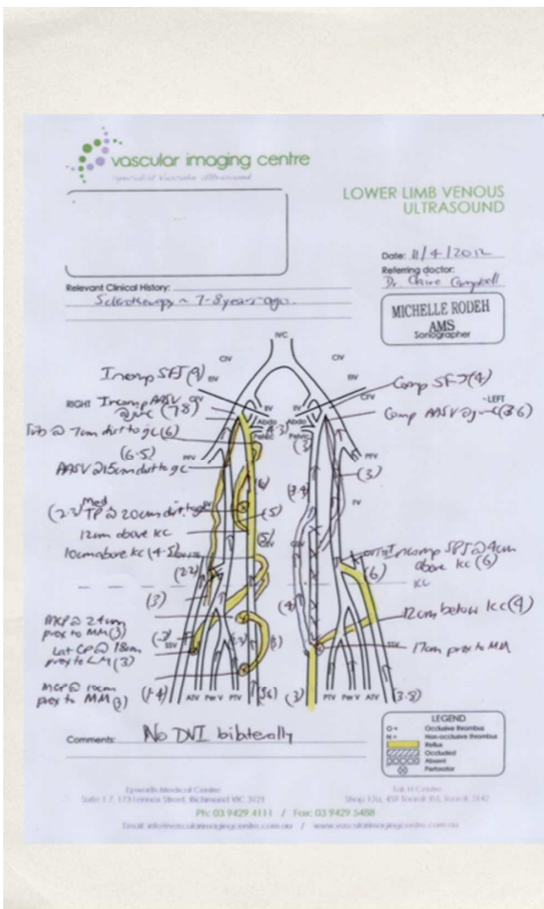
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Technique

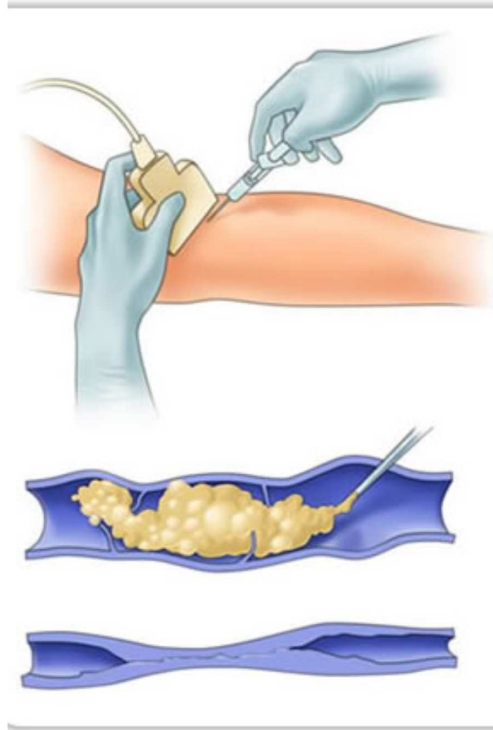
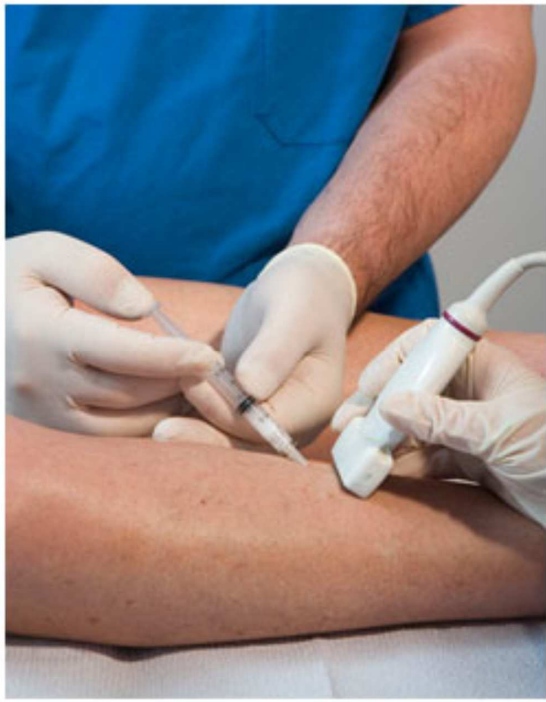


ELVeS Endovenous laser





Ultrasound Guided Foam Sclerotherapy



Pre-Laser

Post-Laser + UGS

4th February 2013



21st May 2013



VARICOSITIES WERE NOT directly treated

Pre-Laser

Post-Laser + UGS

4th February 2013



21st May 2013



VARICOSITIES WERE NOT directly treated

Ann Vasc Surg 2013; 27: 75–83
<http://dx.doi.org/10.1016/j.avsg.2012.06.002>
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Chronic Venous Ulcer: Minimally Invasive Treatment of Superficial Axial and Perforator Vein Reflux Speeds Healing and Reduces Recurrence

Peter B. Alden, Erin M. Lips, Kate P. Zimmerman, Ross F. Garberich, Adnan Z. Rizvi, Alexander S. Tretinyak, Jason Q. Alexander, Kathryn M. Dorr, Mark Hutchinson, and Sarah L. Isakson, Minneapolis, Minnesota

86 patients with chronic venous insufficiency

- 95 active ulcers
- Compression alone (“[compression group](#)”) versus compression and thermal ablation and ultrasound-guided foam sclerotherapy (UGFS) of incompetent perforating veins and varicosities (“[intervention group](#)”).
- Compared with the compression group, the [ulcers in the intervention group healed faster](#) (9.7% vs. 4.2% per week; $P = 0.001$) and [showed fewer recurrences at 1-year follow-up](#) ([27.1% vs. 48.9 %; \$P < 0.015\$](#)).

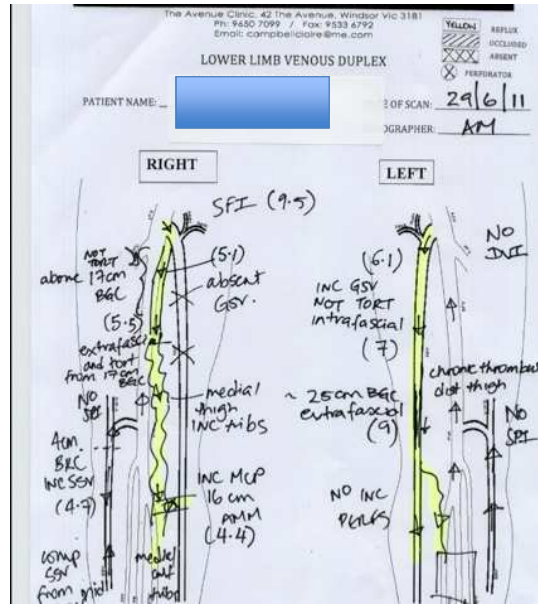
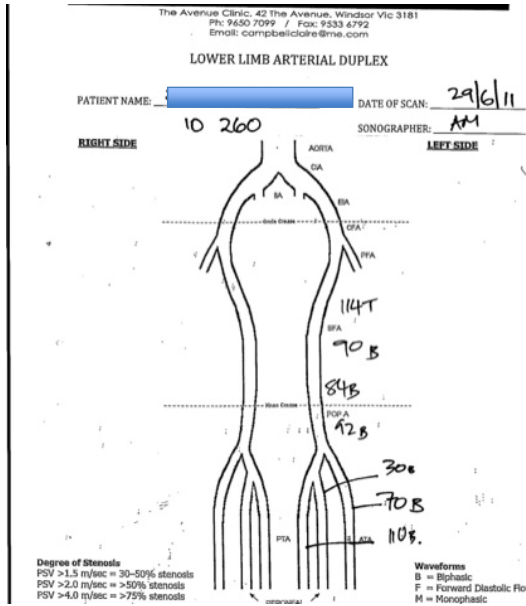
Patient 1



- 61 year old lady
- Obesity
- Type 2 Diabetes
- Hypertension
- Venous Ulcer
- 29th June 2011
- Present [for 3 years](#) post skin lesion excision by local GP

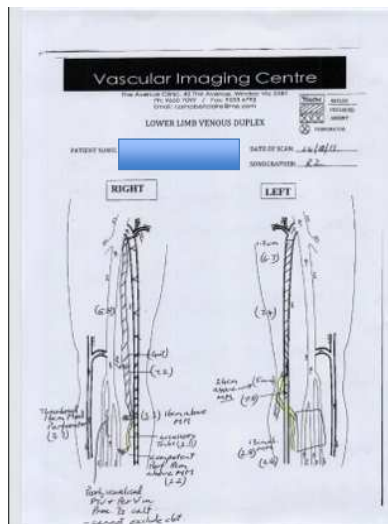
Left GSV Venous Insufficiency

No Peripheral Arterial Disease



EVLT 27th July 2011

20th August 2011



24th August 2011



Ulcer Healed 10 weeks

19th October 2011

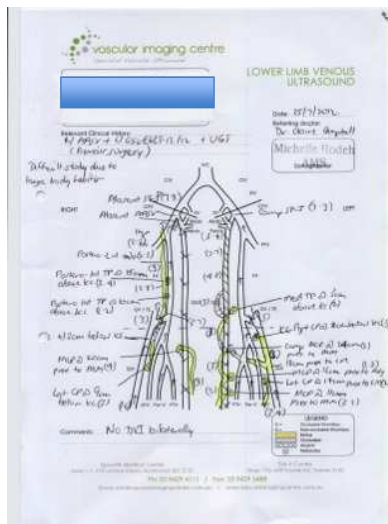


16th November 2011

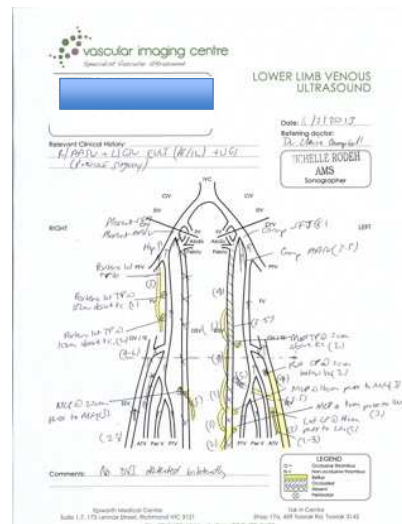


Surveillance is necessary
2 years later requires EVLT left SSV

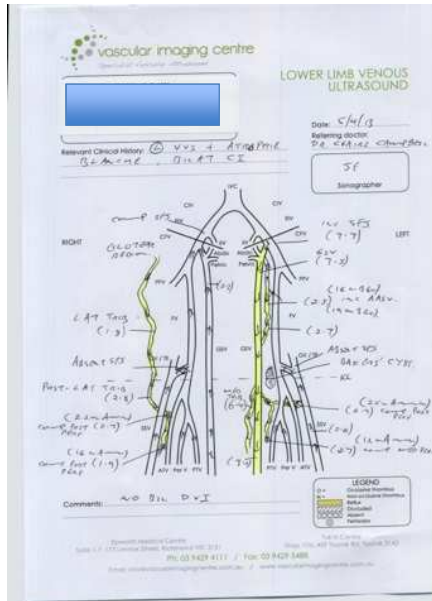
25th July 2012



6th March 2013



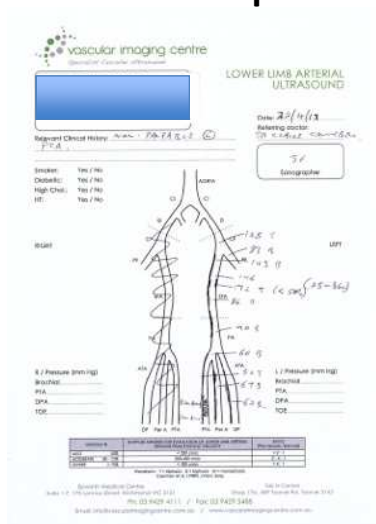
Patient 2



- 68 year old lady
- Atrophie Blanche
- Peripheral Arterial Disease
- Left GSV and calf perforator venous insufficiency

Grade I Compression 5 weeks
Atrophie Blanche broke down into ulcer

Arterial Duplex

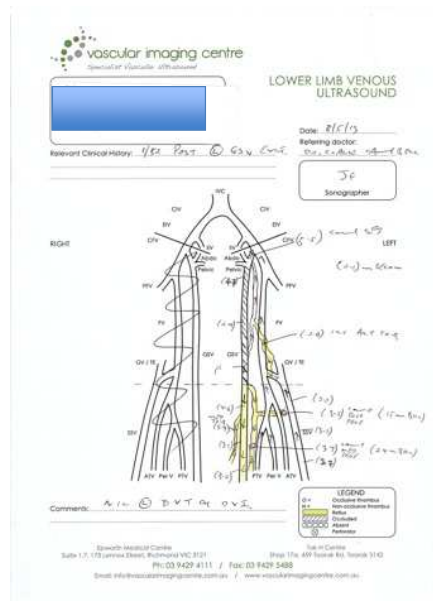


Arterio-venous ulcer



GSV Endovenous Laser Ablation

1st May 2013



2 Weeks ulcer granulating



- 20th May 2013

7 weeks post EVLT ulcer healed

29th May 2013

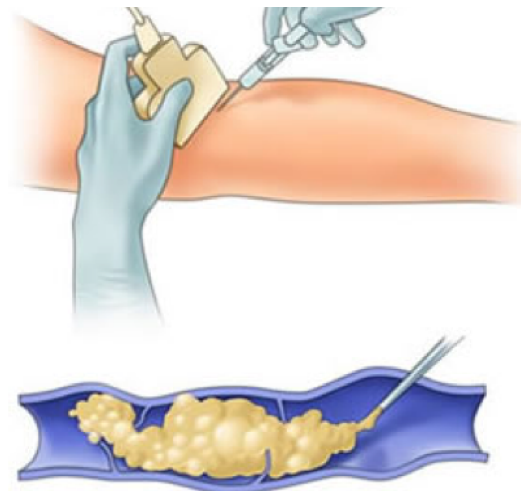
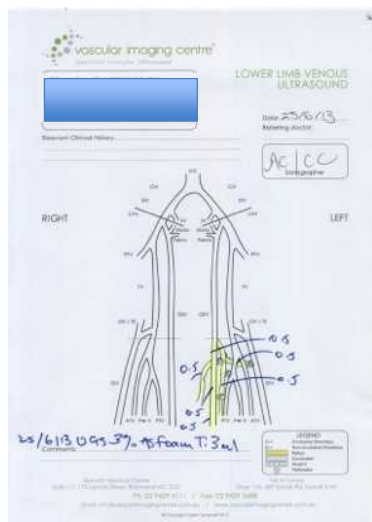


19th June 2013



Ultrasound Guided Foam Sclerotherapy

25th June 2013



Ulcer remains healed 3 months post EVLT

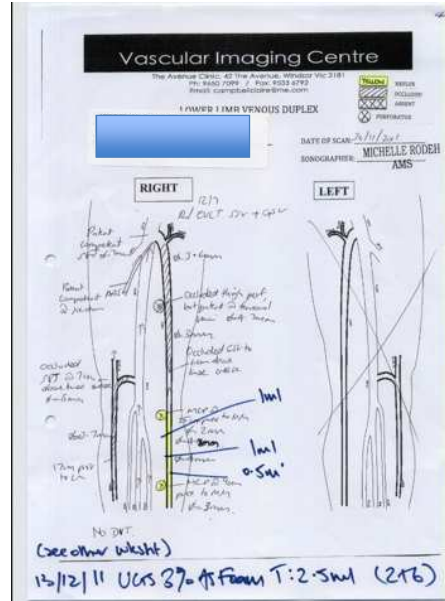
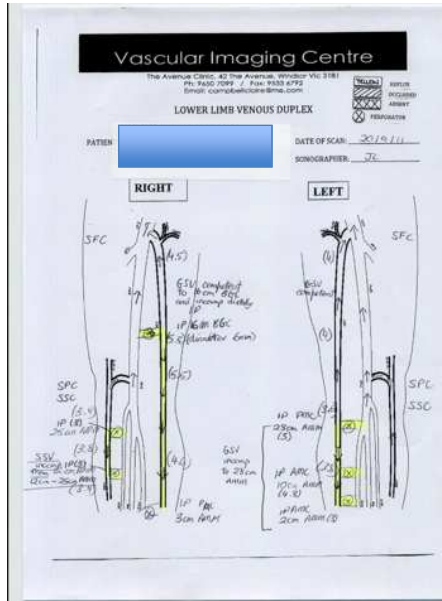


Patient 3

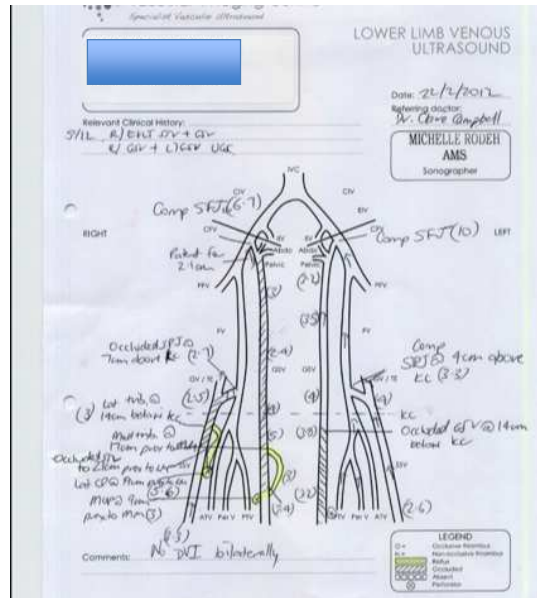
- 41 year old Cleaner
- Venous Eczema
- severe Atopic Dermatitis



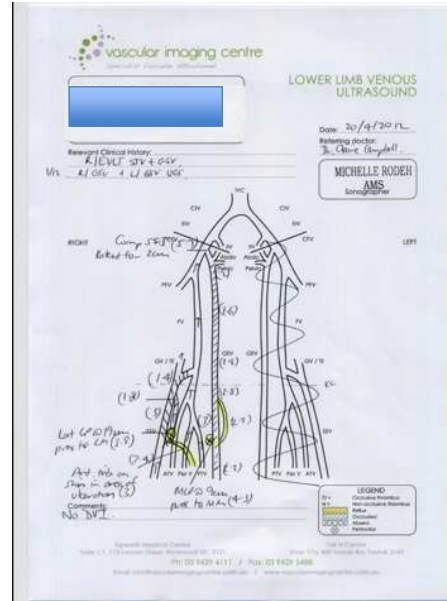
EVLT GSV and SSV November 2011



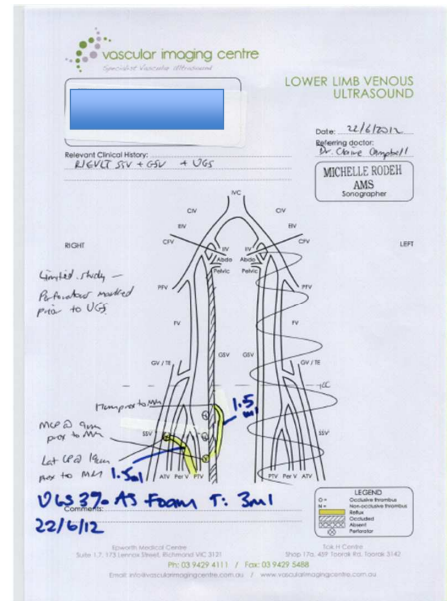
3 months post EVLT New Perforator incompetence treated conservatively



4 months later Eczema flare and cellulitis
Treated conservatively with compression and
antibiotics for one month



Repeat Ultrasound Guided Foam
Sclerotherapy



Should Endovenous Techniques be First line treatment for leg ulcers?

YES

- Allows correction of venous insufficiency in the acute phase of the ulcer
- Allows correction of all superficial and perforator venous insufficiency (and reversal of deep venous insufficiency in the non-post-thrombotic patient)
- Procedure has extremely low morbidity and high success and is suitable for the elderly and high risk patient (far more so than surgery)
- Safer than compression in patients with mixed arterio-venous ulcers

BUT

- Ongoing commitment to surveillance, I believe, is necessary
- A multi-disciplinary approach remains paramount, however, wound care becomes far more simple once you 'plug the dike'
- Funding must be made available as the procedure is currently not affordable for those most in need of these procedures

Do we have a new Gold Standard
and a Cure for Venous Leg Ulcers?

I believe we do
85% of the time

THANKYOU

