

IRIS 532nm laser for facial capillaries



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OVERVIEW

Facial capillaries are commonly encountered in fair-skinned individuals. Rosacea is one of the more common causes of facial telangiectases that can be prominent on the nose, cheeks and chin and be associated with symptoms of flushing and burning. Facial telangiectases can also result from sun-damage, surgical scars, post-radiation, connective tissue disease and certain genetic syndromes.

Treatment options for facial telangiectases include:

- Vascular laser (eg IRIS 532nm laser)
- Intense Pulsed Light (IPL)
- Radiofrequency hyfrecation
- Sclerotherapy

The 532nm laser is a classic vascular laser with proven efficacy and safety in the treatment of facial telangiectases. The IRIS vascular laser is engineered with an optical semiconductor diode for greater reliability and longevity. The IRIS has in-built sapphire plate cooling and has a standard tracing mode (variable spot size: 0.7 – 2mm) for treating discrete telangiectatic capillaries, as well as a fractional scanning mode (20x20mm) for treating facial erythema.

Case study 1

A 66 year old female with moderate facial telangiectases (Figure 1) was treated with a single session IRIS laser (1.2mm spot size, 10j/cm², 15ms, 5-10Hz, contact cooling 10°C, standard tracing mode). The repetition rate can be gradually increased with clinical experience: novice practitioners should start with a lower repetition rate (1-2 Hz), intermediate practitioners (up to 5 Hz) and advanced practitioners (up to 10 Hz). At this setting (1.2mm, 10j/cm², 10°C cooling) careful pulse stacking is permitted and can be more effective for larger, more resistant capillaries. The desired end-point is transient vessel clearance without any grey-white tissue change indicative of overheating. Cooling is useful to minimize overheating and it is safer to re-treat the same area after a short time interval to allow the tissue to adequately cool down. Additional treatment sessions can be scheduled for further vessel clearance. In this case, there was a significant improvement even after one treatment session



Figure 1
66 year old female:
after one treatment session
with the IRIS 532nm laser
in standard tracing mode
to the visible capillaries.

Case Study 2

A 67 year-old female with moderately severe telangiectatic and erythematous rosacea (Figure 2) was treated with 3 sessions of the IRIS vascular laser. The visible telangiectatic capillaries were carefully traced (1.2mm spot size, 10j/cm², 15ms, 5-10Hz, contact cooling 10°C, standard tracing mode) followed by field treatment of the cheeks, chin and nose with the fractional scanner (2cm diameter round field: 1.2mm spot, 60Hz, random, 70% coverage). It takes 4 seconds to deliver the pulses in random pattern over the 2cm diameter spot. Treating the lower face took approximately 3 minutes per pass (2 passes total). The first pass was performed with the scanner in '4-second random pattern' using the stamping technique and the second pass was performed with the scanner in 'continuous scatter pattern' using a moving technique. After 3 treatment sessions there was a very noticeable improvement in the appearance and symptoms of the rosacea.



Figure 2

67 year-old female with rosacea: after 3 treatment sessions with the IRIS 532nm laser on standard tracing mode and fractional scanning mode for discrete capillaries and erythema.



Case Study 3

A 57 year old female presented with moderately severe photodamage from chronic sun-exposure. She had broken capillaries, solar lentigines and multiple actinic dysplasias and keratoses (Figure 3). She underwent a single session combination treatment with the IRIS laser and IPL, in conjunction with amino-levulinic acid (ALA) photodynamic therapy. The skin was pre-treated with 20% topical ALA 60 minutes prior to the laser treatment. Topical lignocaine/tetracaine anaesthesia was also applied for increased patient comfort. The discrete capillaries were treated with the IRIS vascular laser on standard tracing mode (1.2mm spot size, 10j/cm², 15ms, 5-10Hz, contact cooling 10°C, standard tracing mode). This was followed with IPL field treatment to further activate the ALA photosensitizer. There was a significant improvement in the photodamage and overall appearance and texture of the skin with noticeable reduction in the telangiectases, lentigines and dysplastic lesions.



Figure 3

57 year-old female: after one treatment session with the IRIS532nm laser in conjunction with IPL and ALA photodynamic therapy for severe photo-damage.

Summary

The 532nm IRIS laser is extremely versatile and effective for facial telangiectases. Treatments can be performed in standard tracing mode for visible capillaries and/or fractional scanning mode for erythema. Contact cooling increases patient comfort and decreases side effects from tissue over-heating. The IRIS laser can be safely combined with other energy devices and can be used with ALA for photodynamic therapy. The procedure can also be performed with topical anaesthesia cover in sensitive patients. Some patients may experience a mild degree of post-treatment swelling and the occasional superficial crusting. However, the procedure is typically very well tolerated with an extremely low incidence of side effects and a high level of patient satisfaction.

