

Investigating the effect of non-ablative laser treatment using the DermaLab Ultrasound Probe

A collaboration between Cortex Technology and Dr. Pablo Naranjo from Elite Laser Clinic

Introduction

This paper aimed to evaluate collagen stimulation in 10 patients before and after ADVATx non-ablative fractional laser treatment using the DermaLab Ultrasound Probe.

Non-ablative lasers apply controlled thermal energy to the dermis, thus preserving the epidermis. This localized heating triggers the skin's natural healing processes, leading to stimulation of new collagen production. The purpose is to improve skin texture and firmness while reducing the appearance of wrinkles, scars, and other imperfections (2; 3).

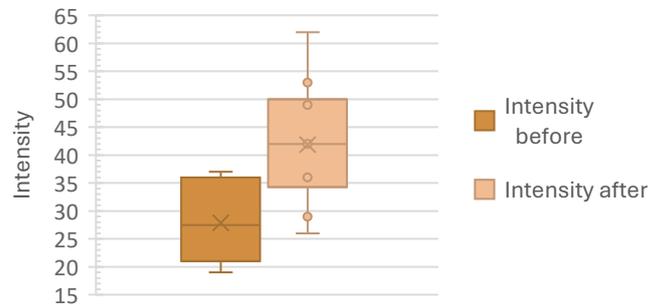
Methods

Ten participants aged 31 to 56 years were enrolled and received treatment with the ADVATx non-ablative laser. Ultrasound measurements were performed in the temporal area using the DermaLab Ultrasound Probe both before and approximately 12 weeks after the treatment.

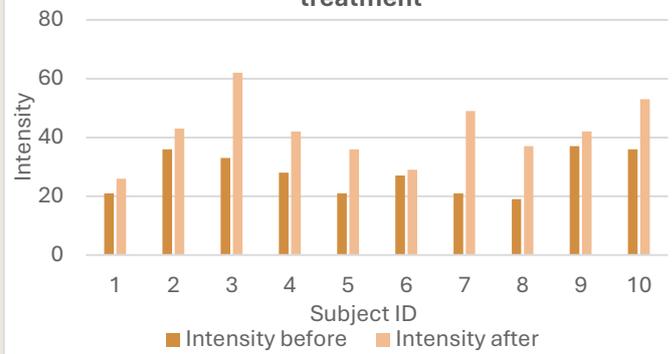


Picture lent from APAX Medical & Aesthetics Clinic at <https://apaxmedical.com/advatx-laser/>

Ultrasound intensity before/after treatment



Individual ultrasound intensity before/after treatment



Results and discussion

Ultrasound measurements show an increase in ultrasound intensity in all participants following treatment, suggesting an increase in collagen deposition of the skin. A statistically significant difference was observed between pre-treatment and post-treatment groups (paired T-test, $p = 0.001$).

Conclusion

The results demonstrate that the Cortex Ultrasound Probe effectively can visualize and quantify stimulation of collagen. Furthermore, the results suggest a consistent collagen stimulating effect of ADVATx laser treatment.

The DermaLab Combo

Is highly customizable and provides advanced measurements. Choose between 12 probes and combine up to 9 skin parameters in one device.

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