

A CASE SERIES TO EVALUATE THE USE OF FRACTIONAL NON-ABLATIVE LASER TREATMENT IN ALOPECIA AREATA

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INTRODUCTION:

Alopecia areata is an autoimmune disease characterized by common, inflammatory, nonscarring hair loss^[1], manifests as localized hair loss in focal regions. This condition occurs when the immune system mistakenly attacks hair follicles, leading to hair loss.

The goal of this research was to evaluate the safety and performance of Lumenis non-ablative fractional laser (NAFL) in treatment of hair loss conditions.

CONCLUSIONS:

This case series suggests that Lumenis NAFL is a potential treatment for improvement in scalp hair appearance with minimal discomfort and no side effects, in patients with alopecia areata. Additional randomized control trials are needed to further establish the benefit of this type of treatment in patients with alopecia areata.

ALOPECIA
AREATA

has a global prevalence

[2]

1 in 1,000 people

1 in 1,000 people

lifetime incidence rate of



< 30

affects people under the age of 30

20%

of cases affects people aged 40 and above

METHODS:

As part of a broader study to evaluate the safety and efficacy of NAFL (Lumenis) for the treatment of hair loss, the presented research focused on a small sub-group of seven female patients aged 20 to 32, with Alopecia areata-related hair loss. All the subjects were females of Fitzpatrick skin types I-II with brown or black hair. The patients were treated with ten NAFL sessions at two-week intervals. Hair growth improvement was evaluated by comparing micro-images of the treatment area that were captured both at baseline and three months after the final treatment and performing manual hair counts in both for comparative analysis.

RESULTS:

Hair Growth

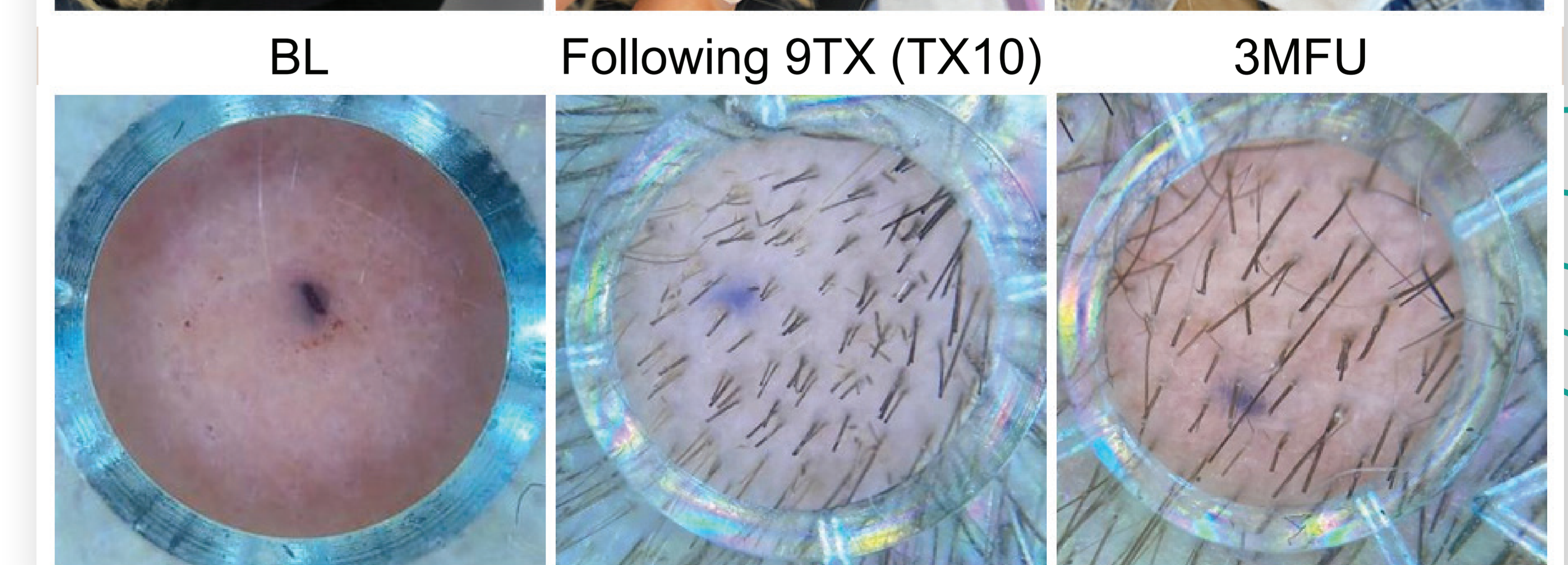
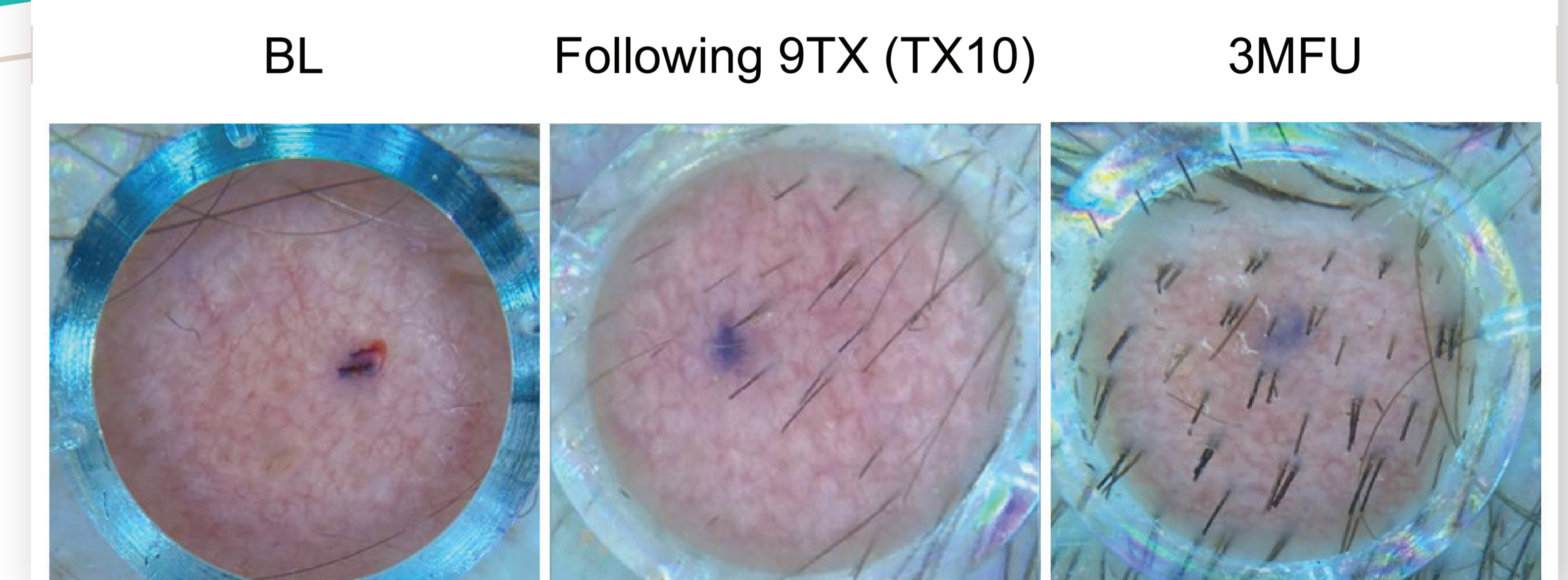
- All patients exhibited a significant increase in hair growth, with an average of 137.6 ± 39.4 new hairs observed at the 3-month post-treatment compared to baseline.
- A two-tailed T-test was conducted comparing the two groups showing high significance ($\alpha = 0.05$, P-value < 0.0001).

Improvement In Hair Appearance

- All subjects perceived either "Good"(2) or "Very good"(5) enhancement in hair appearance at the 3-month follow-up, on a 5-point scale, ranging from "None (0%)" to "Very good (over 94%)".
- The investigator rated the improvement of patients as "Good" or "Very good" in 6 out of 7 of the patients, using the same scale as the patients.

Patients Satisfaction

- All subjects reported either "Satisfied" (2 subjects) or "Very satisfied"(5) on a 5-point scale, ranging from "not satisfied" to "very satisfied".
- Subjects have reported slight pain sensation using the VAS analogical scale with mean pain levels ranging between 1.97 and 2.33 out of 10.



Courtesy of Dr. Olga Snitsar

¹Lauren C. Strazzulla, BA, Eddy Hsi Chun Wang, PhD, Lorena Avila, MD, Kristen Lo Sicco, MD, Nooshin Brinster, MD, Angela M. Christiano, PhD, and Jerry Shapiro, MD.

"Alopecia areata: Disease characteristics, clinical evaluation, and new perspectives on pathogenesis." *Journal of American Academy of Dermatology* (2018) 78(1), 1-12. ² A.

Sterkens, J. Lambert, and A. Bervoets. "Alopecia areata: a review on diagnosis, immunological etiopathogenesis and treatment options." *Clinical and Experimental Medicine*

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