



UV and Cross Polarized Image Evaluation of a Novel Bipolar and Monopolar Radiofrequency Microneedling Device for Skin Texture

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BACKGROUND

- Delivery of radiofrequency (RF) energy through micro-needle arrays allows treatment targeted to specific depths without excess damage to surrounding tissue.
- This study evaluates the use of a novel RF bipolar and monopolar microneedling device for skin textural improvement.

METHODS

- 25 subjects were enrolled for showing advanced signs of aging and scarring and received up to 5 treatments at 3-4 week intervals with a RF microneedle device with monopolar and bipolar settings. Subjects returned for 1 and 3 month follow up visits.
- Photographic evaluation, including cross polarized and UV imaging, at baseline and follow up were analyzed for texture, wrinkles, blemishes and pores as well as global improvement. Subject and physician questionnaires and adverse events were assessed.

RESULTS

- 19 of the 25 subjects returned for their final follow-up, which was delayed up to 4 months due to the COVID-19 pandemic.
- The majority (89%) of subjects rated that they were satisfied with their treatment results (Figure 1).
- Physician rating of global outcome indicated 89% of subjects showed some textural improvement.
- Blinded evaluators were able to correctly identify the post-treatment image with 90% accuracy.
- Multi-spectral imaging digital analysis showed measurable reduction of visible wrinkles, blemish spots and pores in 84% of subjects.
- No unexpected adverse events were recorded. Transient erythema was recorded for up to 24 hours.

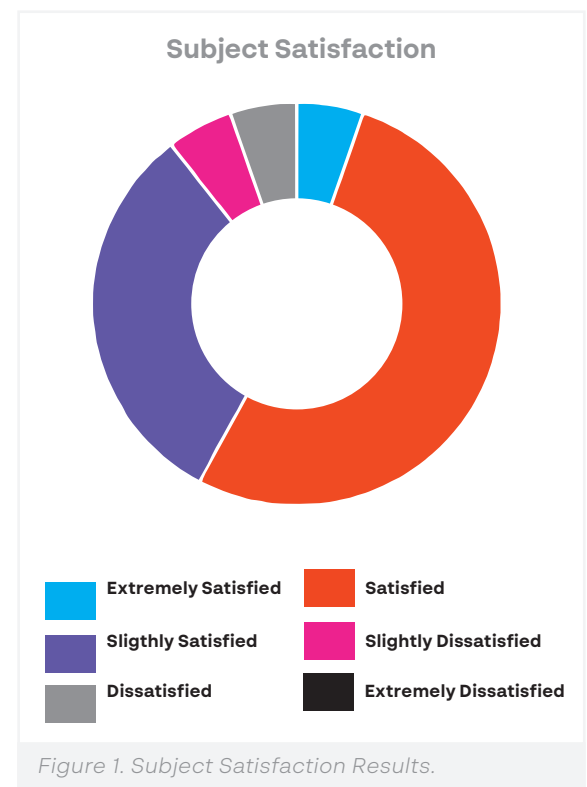


Figure 1. Subject Satisfaction Results.

Figure 2. Clinical improvement in texture at 1 month post 3 treatments.



Figure 3. Clinical improvement in texture at 1 month post 3 treatments.



CONCLUSION

- Physician and subject assessment, digital analysis and blinded evaluation support the efficacy of a novel RF bipolar and monopolar microneedle device for improvement of skin texture. Treatment was associated with a high level of patient satisfaction and was well tolerated in all subjects.

Figure 4. Clinical improvement in texture at 2-month post 4 treatments.

