

EVALUATION OF A NOVEL, VARIABLE SEQUENCED, PULSED 532NM/1064nm LASER WITH CRYOGEN COOLING FOR VASCULAR AND PIGMENTED LESIONS

Background: A novel laser device has been developed which features new pulse sequences combined with novel cooling delivery for common signs of photoaging including vascular and pigment changes associated with photoaging.

Objective: The purpose of this study was to evaluate the safety and effectiveness of this novel laser system and to optimize treatment parameters with novel laser sub-pulse structures and associated dynamic cooling.

Methods: Thirty five subjects (33 female/2 male), were enrolled in the study from 3 sites. So far 23 subjects completed up to 6 treatments with mean age of 53 years (range 25 to 65) and Fitzpatrick Skin Types from II to IV. Subjects presented with either facial redness, other vascular lesions, pigmentation, rhytids, or dyschromia on the face or décolleté. A new variable sequenced pulsed 532nm laser system with variable cryogen cooling was utilized for up to 6 treatments with 3-5 week intervals. Standardized photographs were taken at baseline and each follow-up. Average discomfort scores were recorded. Efficacy was evaluated by blinded, randomized MD grading of images using Clinician Global Aesthetic Improvement Scales (CGAIS). Patient satisfaction questionnaires were completed at 30 day follow up.

Results: The average pain score following treatment was 2.6 (0 - 10). No AEs were reported. ETEs such as redness and edema were reported as mild and resolved within 24 hours. A panel of blinded MDs properly identified the treated images at a rate of 90% . Blinded expert photographic evaluation of before and after images noted improvement of CGAIS in 80%. Over half the subjects reported improvement in redness, pigment, texture and skin tone. 86% of subjects reported they would recommend the treatment to a friend.

Conclusion: Results indicate that this novel variable pulsed 532nm laser system with novel cryogen cooling represents a safe and effective treatment for signs of photoaging. Expanded studies with greater numbers of patients are necessary to better define treatment parameters maximizing novel laser pulse sub structures with this new device.