



PIGMENTATION

EVALUATION OF SUBJECT RESPONSE FOLLOWING PIGMENTATION TREATMENT USING DIODE LASER

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Introduction: In recent years, the use of laser therapy in treating pigmented lesions has gained popularity.

Melanin, the target chromophore when dealing with pigmented lesions, absorbs laser energy and through “selective photothermolysis” leads to destruction of the melanocytes and keratinocytes cells enriched with those organelles.

Objective: To observe pigmented lesions treatment with a 805nm diode laser.

Materials and Methods: Subjects underwent treatment for pigmented lesions using LightSheer 805nm diode laser system, Lumenis Ltd. Each patient received at least three and up to five facial or hands treatments with 4-weeks interval and returned for follow-up assessments at one and three months after their final treatment.

At each treatment, subjects rated their pain scores by using a visual analogue scale and noted their downtime following treatment. Pigmentation clearance was assessed by the clinic expert using before and after treatment images, using an acceptable five-category grading: Excellent: 76–100% (4); Good: 51–75% (3); Fair: 26–50% (2); Poor: 1–25% (1); No response: 0% (0). Global assessment of improvement was conducted using the Pigment Improvement Score: No improvement; Mild improvement; Moderate improvement; Good improvement; Excellent improvement. In addition blinded evaluation was performed.

Results: At the interim analysis, a total of seven subjects, presenting an average of 9 lesions per subject (mean age 57.9 ± 2.9 , Fitzpatrick skin-type III-IV) were enrolled in the study. A statistically significant average clearance of 1.46 was observed at 1 month follow-up visit ($p < 0.002$). Most subjects experienced moderate to very good improvement at the first follow-up. The laser procedures were well tolerated with no side effects. Most of the subjects felt comfortable to go in public immediately post procedure.

Additional evaluations by blinded evaluators will be added following final analysis.

Conclusion: The results show that using diode 805nm laser is safe and effective for treatment of pigmented lesions.

