

# COMPARATIVE STUDY OF THE EFFECTIVENESS OF 2940-NM, 1340-NM LASER AND IPL USE ON GLOBAL REJUVENATION OF HANDS

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## INTRODUCTION

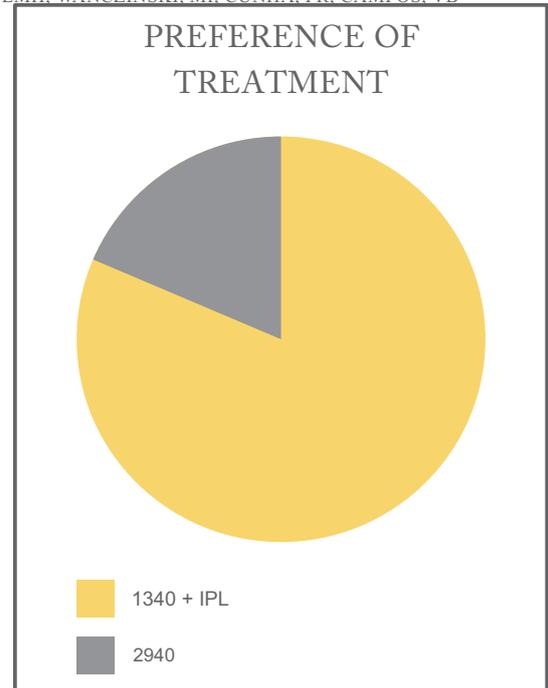
Hands are the most visible part of the body. Patients who acquire a more youthful appearance with facial rejuvenation treatments may present a discrepancy between a young face and aged hands. It thus makes the cosmetic treatment incomplete from a global point of view. The aging of the hands occurs by combining exposure to ultraviolet light and the intrinsic factors of aging. It may be characterized by seborrhic and actinic keratosis, flaccidity, melanosis, rhytides, dermal and subcutaneous atrophy, and bony prominences. The treatment must be performed with caution and planning, as this region presents few adnexal structures showing less capacity to replace the epidermis and, therefore, presents pigmentation and scars.

## DEVELOPMENT

The prospective study evaluated the effectiveness of using Er: YAG LASERS at 2940 nm (ETHEREA® DualMode®, INDUSTRA® Technologies, Brazil) and Nd: YAP at 1340 nm (ETHEREA® ProDeep®), and IPL (ETHEREA® IPL-Sq®), in the collagen regeneration, global skin improvement and depigmentation of the dorsum of the hands. The treatment was properly performed in 12 female patients, aged 47 to 71, with melanosis and sun damage, treatment virgins in the last 6 months, only using SPF photoprotection higher than 50. There were 2 sessions with monthly interval.



**CONTROL; 2940 nm**, 6 mm, 400 mtz/cm<sup>2</sup>, DualMode®, 5 mJ, 5 mtz, 300 us, 3 ms; **1340 nm**, 8 mm, 100 mtz/cm<sup>2</sup>, 80-60 mJ, 5 ms; **LIP** 540 nm, cooling V, 12-13 J/cm<sup>2</sup>, 15 ms



## CONCLUSION

Global rejuvenation was good to excellent in all treatments performed. Clinically, there was a better result in the medial dorsum of the left hand (1340 nm + LIP) in 92% (11/12 patients), with improvement of solar melanosis and neocollagenesis. In the evaluation of the patients 83.3% (10/12 patients) preferred the LASER at 1340 nm + IPL and 16.6% (2/12 patients) preferred the LASER result at 2940 nm.

Adverse effects at the time of application were pain and burning, especially at 1340 nm.

Late, there was texture change on the side of LASER Nd: YAP at 1340 nm + IPL in one patient. Possibly, by technical error due to multiple shots in the same place evolving satisfactorily.

Therefore, 1340 nm LASER associated with IPL was the best treatment seen in this study for hand rejuvenation, although this technique requires greater attention and care in the application. All treatments resulted in clinical improvement, but the association of 1340 nm with IPL generated greater satisfaction in patients, including in the patient who presented altered texture. In addition, greater stimulation of collagen was promoted, with better skin consistency and greater lesions depigmentation.

## COMPLICATIONS AND ADVERSE EFFECTS

	1340	1340 + LIP	2940
CRUST	1	0	3
BUBBLE	5	0	3
EDEMA	0	1	0

