

## PIGMENTATION ABSTRACT FOR ASLMS

### PIGMENTATION: SELECTIVE PHOTOTHERMOLYSIS OR NON-SPECIFIC SKIN NECROSIS USING DIFFERENT IPL SYSTEMS?

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**Background and Objective:** Superficial benign pigmented lesions vary in colour, size and depth. Traditionally free-discharge IPL systems with sequences of short high energy sub-pulses separated by lengthy interpulse delays have been used to remove or fade pigmentation in one to three treatments. This study considers end-point tissue responses to determine whether a new “square pulse” IPL is more or less effective.

**Materials and Methods:** Following examination with a Woods lamp and dermascope, twenty subjects of Fitzpatrick Skin Types I-III, aged between 18 and 70 years presenting with various epidermal pigmented lesions on facial and extra-facial zones were treated 1-3 times with a free discharge and a partial discharge IPL according to pre-treatment clinical evaluation in respect of pulse duration and fluence. With both IPLs, cold coupling gel was applied to the skin before IPL treatment and firm pressure was applied during treatment to exclude blood from the treatment area. Immediate side effects (degree of erythema, crusting or ulceration), degree of discomfort, late emerging side effects and end results at thirty and sixty days were evaluated by professional observation, digital photography and a patient questionnaire.

**Results:** Both sets of IPL results showed >85% clearance over 1-3 treatments but the **free discharge IPL (*not iPulse*) demonstrated a significantly higher side effect profile with a higher incidence of ulceration, crusting and erythema.**

**Conclusions:** The **square pulse (*iPulse*), partial discharge IPL system provided the operator with greater control over the coagulation of pigment and was the more efficient device for effective pigment lightening with fewer side effects.**