# Treatment of Hypertrophic Burn and Wound scars using a Novel Cold Laser System

## Conclusions

A novel non-invasive high-intensity laser reduces the appearance of hypertrophic burn scars in accelerated time.

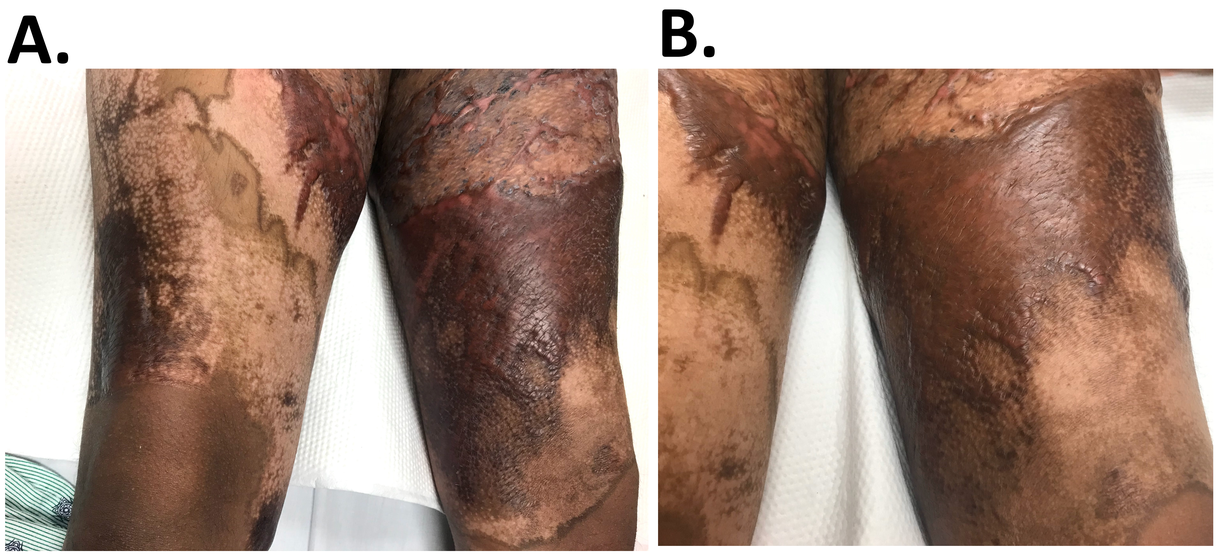


Figure 1: (A) no laser therapy, (B) after 4 treatments with **Phoenix Thera-Lase System ®**, (C) after 16 laser treatments

## Significance

Hypertrophic scars are seen in 70% of individuals after a burn. Management of such scars have been limited to invasive and non-invasive management. One innovative technology is a non-invasive high-intensity laser optimizing increased depth of penetration into the tissue utilizing photomechanical effects to biostimulate tissue to heal and regenerate.

## Methods

10 patients were enrolled with hypertrophic scarring secondary to deep partial or full thickness burns. Hypertrophic areas were identified and numerical pain scale, Vancouver Scar Scale and the World Health Organization Quality of Life score were recorded. The non-contact, high-intensity laser was passed over the hypertrophic scars, continuously moving the laser over the entirety of the scar. Each area of hypertrophic scar tissue was lasered for progressively longer sessions, reaching a therapeutic time of 10 min in each section.

## Results

Patients were previously utilizing known non-invasive therapies for scar reduction. In our series, 90% of the patients reported decrease in scar pain, inflammation, pigmentation and improved pliability by the second treatment. Decreased scar height was identified by the eighth session.

## Lessons Learned

- **High-intensity lasers** provides **non-invasive therapy** to decrease hypertrophic scar characteristics in an outpatient setting.
- Further studies is needed to see if this **non invasive therapy** can show improvements in the **reduction of appearance in other types of scars.**

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