

SYNCHRONIZED RF & HIFEM: HUMAN FAT HISTOLOGY & TEMPERATURE MEASUREMENT

ADIPOCYTE APOPTOSIS INDUCED BY SYNCHRONIZED RADIOFREQUENCY WITH HIFEM PROCEDURE: HUMAN HISTOLOGICAL STUDY

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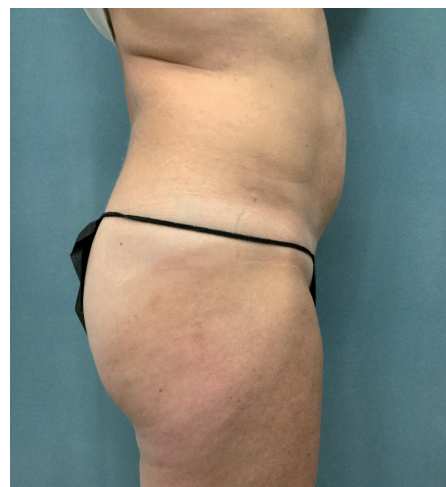
HIGHLIGHTS

- Documented **disrupted** adipocytes due to **elevated apoptosis**.
- **Elimination** of adipocytes and **significant reduction in size** of fat cells resulting in **overall reduction** of fat tissue.
- **Effective temperature** needed for apoptotic processes was reached in **4 minutes**.
- **Waist circumference decreased** on average by **2.2 cm (maximum of 5.4 cm)**.
- Procedure was **safe and comfortable** with high satisfaction.

BASELINE



1 MONTH AFTER



A 57-year old female at baseline and 1 month post-treatment showing prominent aesthetic improvement.

STUDY DESIGN

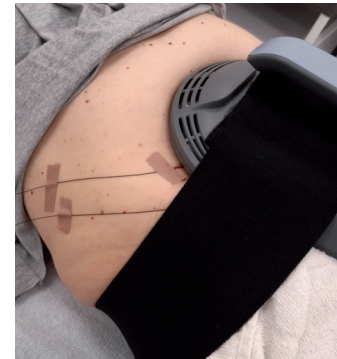
- Four treated subjects, fifth received sham treatments and served as a control.
- Three 30-minute treatments on abdomen.
- Collected biopsy specimens were histologically examined.
- Evaluation was performed at baseline, 1 week and 1 month post-treatment.



Punch biopsies (\varnothing 6mm) were taken from the treated area, sectioned to 5-10 μm thick slices and stained by H&E.

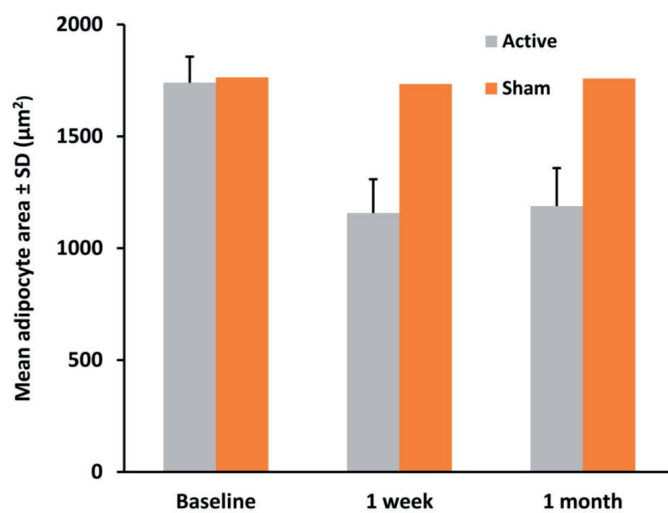


Optical probes were inserted into the subcutaneous layer under ultrasound guidance for in-vivo monitoring of temperature during the 30-minute.

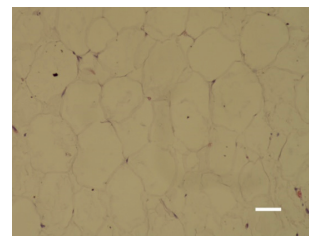


RESULTS

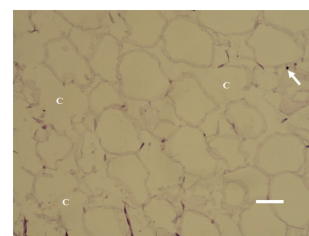
- Adipocyte size was reduced by up to **33.5% at 1 week post-treatment**.
- **Baseline and control (sham) samples did not show any changes in fat tissue.**



Adipocyte size measurement



Baseline histology, bar = 40 μm



1 month, bar = 40 μm ;
Apoptotic nuclei (arrow) and cystic spaces due to the membrane rupture (C).