

Ultrasound Findings in Fat Following a 1060nm Non-invasive Diode Laser – Correlation with Anatomic Findings

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Study Design:

- Validate an ultrasound method for measuring fat thickness using a unique, hands-free 12 MHz ultrasound transducer cradle designed to apply consistent pressure on the skin to minimize user error.
- To observe changes in fat thickness following a single treatment.

Evaluation:

- Forty patients were enrolled to observe changes in the reduction of flank and/or abdominal fat.
- Ultrasound measurements were recorded at baseline and 12 weeks post treatment.

Results:

- The linear correlation coefficient was $R^2=0.842$, well within accuracy necessary to validate ultrasound as a reliable measurement for fat reduction.
- Ultrasound measurements were reproducible with minimal error ($\pm 3\%$).
- Statistically significant changes ($p > .005$) in ultrasound measured fat thickness were observed at the 12 week follow up visit.
- More than 82% of subjects had a reduction in the fat layer after treatment.

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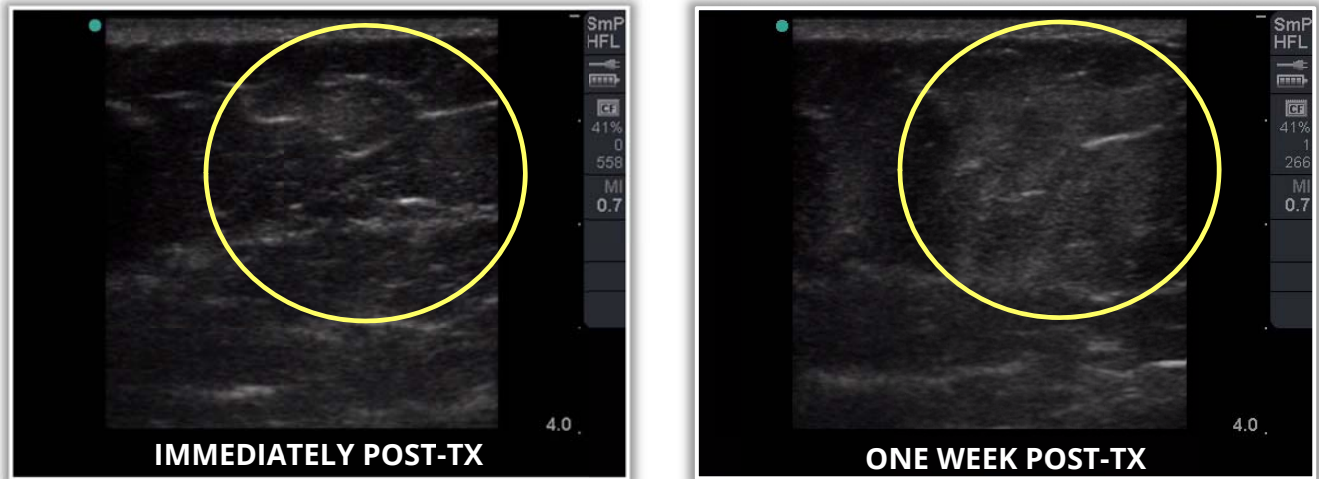
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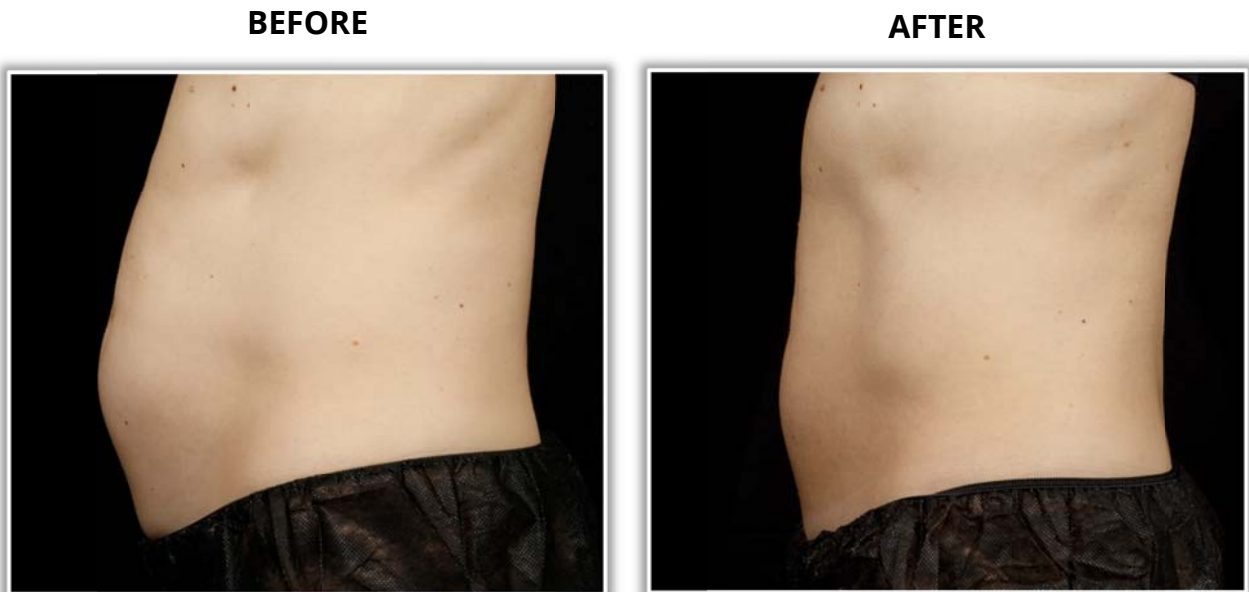
Results (continued):

- An unexpected finding was a change in fat layer signals showing significant changes in echogenicity of treated fat compared to baseline images in 90% of patients:



Conclusion:

- Ultrasound imaging proved to be a reliable measurement of fat reduction when a validated technique is used.
- Treatment with a non-invasive 1060nm diode laser reduced the thickness of fat after a single treatment in the vast majority of patients.



14 weeks post 2 Tx

Courtesy of Dr. Sean Doherty