

# THERMiRF<sup>TM</sup>

Temperature Controlled  
Injectable Radio Frequency

by THERMiAesthetics<sup>TM</sup>



# THERMiRF™



## In the News



THERMiAesthetics™



**AS FEATURED IN THE MAY  
ISSUE OF ALLURE MAGAZINE**

[READ MORE](#)[FAQs](#)[Photo  
Gallery](#)[Find a  
Doctor](#)[What is ThermiTight?](#)[How Does it Work?](#)[What's the Downtime?](#)[How Long Does it Last?](#)

ThermiTight is the first aesthetic procedure, which delivers controlled thermal energy under the skin to reverse the effects of aging. ThermiTight is ideal for patients who want more results than non-invasive procedures can deliver and DO NOT want surgery. It's great for problem areas of the face, neck, tummy and thighs.

[read more](#)

# CLINICAL ADVISORY COUNCIL



- ✓ Unique-Peer to Peer Scientific Exchange Panel
- ✓ Major input by the Clinical Advisory Council Members
- ✓ CAC members are experienced with diverse clinical/technical expertise



**THERMiAesthetics™**

# CLINICAL ADVISORY COUNCIL

## Brian Kinney, MD – Chairman



- Board Certified in Plastic Surgery
- Member, Board of Directors, American Society of Plastic Surgeons (ASPS)
- Past Chairman, Board of Trustees, ASPS
- Past President, Plastic Surgery Educational Foundation (PSEF)
- Past Member, Board of Directors, American Society for Aesthetic Plastic Surgery (ASAPS)
- Deputy Secretary General, Member, Board of Directors, International Confederation of Plastic, Reconstructive and Aesthetic Plastic Surgeons (IPRAS)
- Specialty Editor, Aesthetic Plastic Surgery Journal
- Past Chairman of the Board of Directors, National Endowment for Plastic Surgery



**\$1,100,000**

Younger (25-40)	\$20,000
In-between (40-60)	\$30,000
Older (60-80)	<u>\$50,000</u>
	<b>\$100,000</b>

#### Referrals

Younger (10)	\$200,000
In-between (10)	\$300,000
Older (10)	<u>\$500,000</u>
	<b>\$1,000,000</b>



**Lifetime Value of  
Cosmetic Patient**

- ✓ Non-invasive treatments don't work for me!
- ✓ I don't want surgery!
- ✓ I want faster and longer lasting results!
- ✓ I want to look natural!



## Patient concerns. . .

**Problem Solved:** Every time you hear these concerns, you can earn **\$3,000-6,000?**

**THERMi**Aesthetics™

Non-invasive < **THERMiRF**<sup>TM</sup> > Surgery



**Single Treatment Results  
Without surgery**

- ✓ Great Results
- ✓ Easy to Perform
- ✓ More Revenue

**THERMi**Aesthetics™



# THERMiRF™

## The First Injectable RF

Thermistor regulated radio frequency

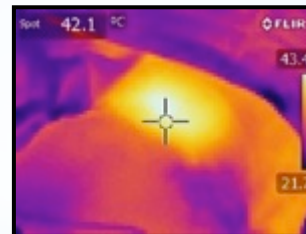
- ✓ Thermal Image Guidance for improved safety and predictable outcomes
- ✓ Temperature as endpoint

### Patient Benefits

- ✓ Micro-invasive
- ✓ Local anesthesia
- ✓ Fast recovery
- ✓ Long lasting results



Surface Temperature



Tissue Temperature



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# THERMiRF<sup>TM</sup>

User-selected, **temperature-specific** clinical endpoints to safely treat...



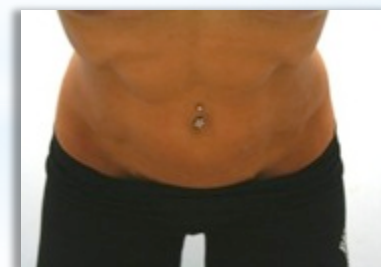
Frown Lines 85°C



Submental Laxity 55°C



Arm Laxity 60°C



Abdominal Laxity 65°C

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# THERMiRF™

## Aesthetic Applications

### Injectable RF

**THERMiTight™**

skin laxity  
and sculpting

**THERMiRase™**

toxin-free glabella  
relaxation

**THERMiDry™**

axillary hyperhidrosis

### Non-invasive

**THERMiSmooth™**

Skin laxity  
& smoothing

**THERMiVa™**

vaginal laxity

ThermiRF is cleared by the FDA for dermatologic and general surgical electrocoagulation and hemostasis, and for creation of lesions in nerve tissue.

**THERMiAesthetics™**



# TEMPERATURE CONTROLLED RADIO FREQUENCY

“The Science of Heat”  
Use temperature as an endpoint

- ✓ Smooth skin @ 42C
- ✓ Shrink fibrous septae @ 55-65C
- ✓ Melt fat @ 70C
- ✓ Disable nerves @ 85C

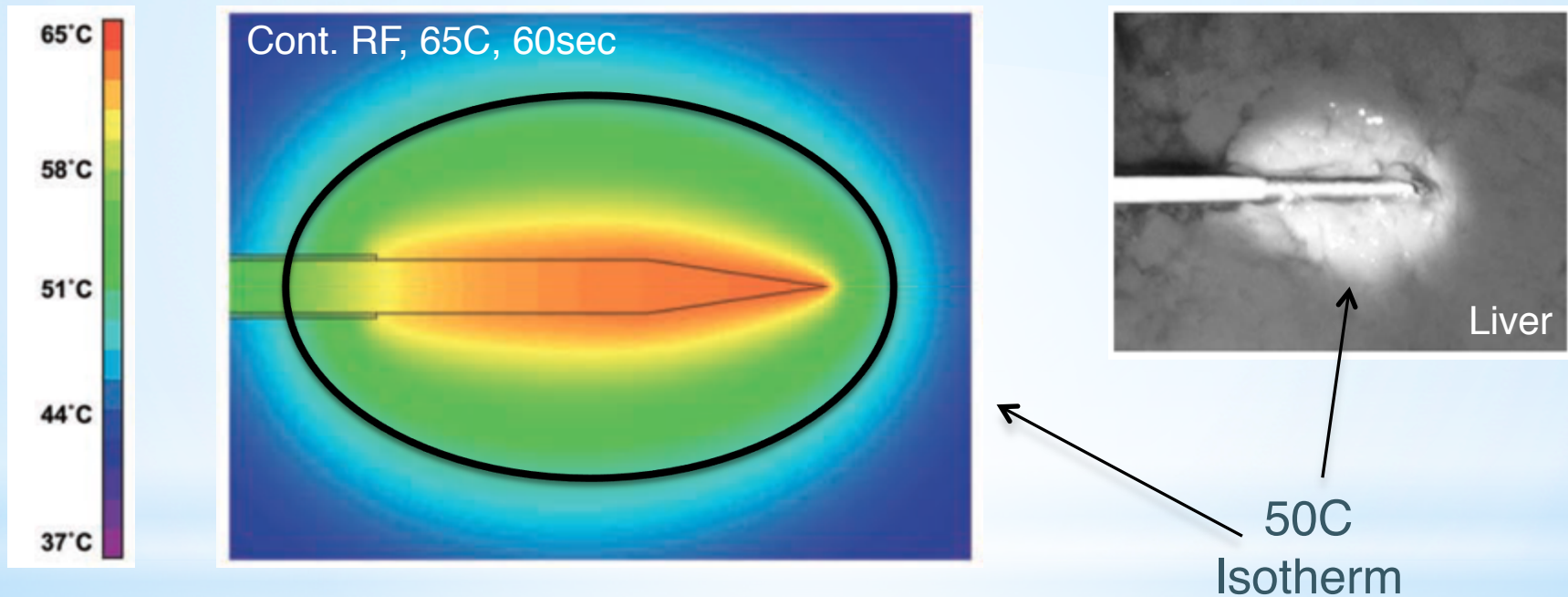
# THERMiRF™



## How it Works

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# How THERMiRF<sup>TM</sup> Works



## The Thermal and Electrical Effects on Tissue in CRFL Applications

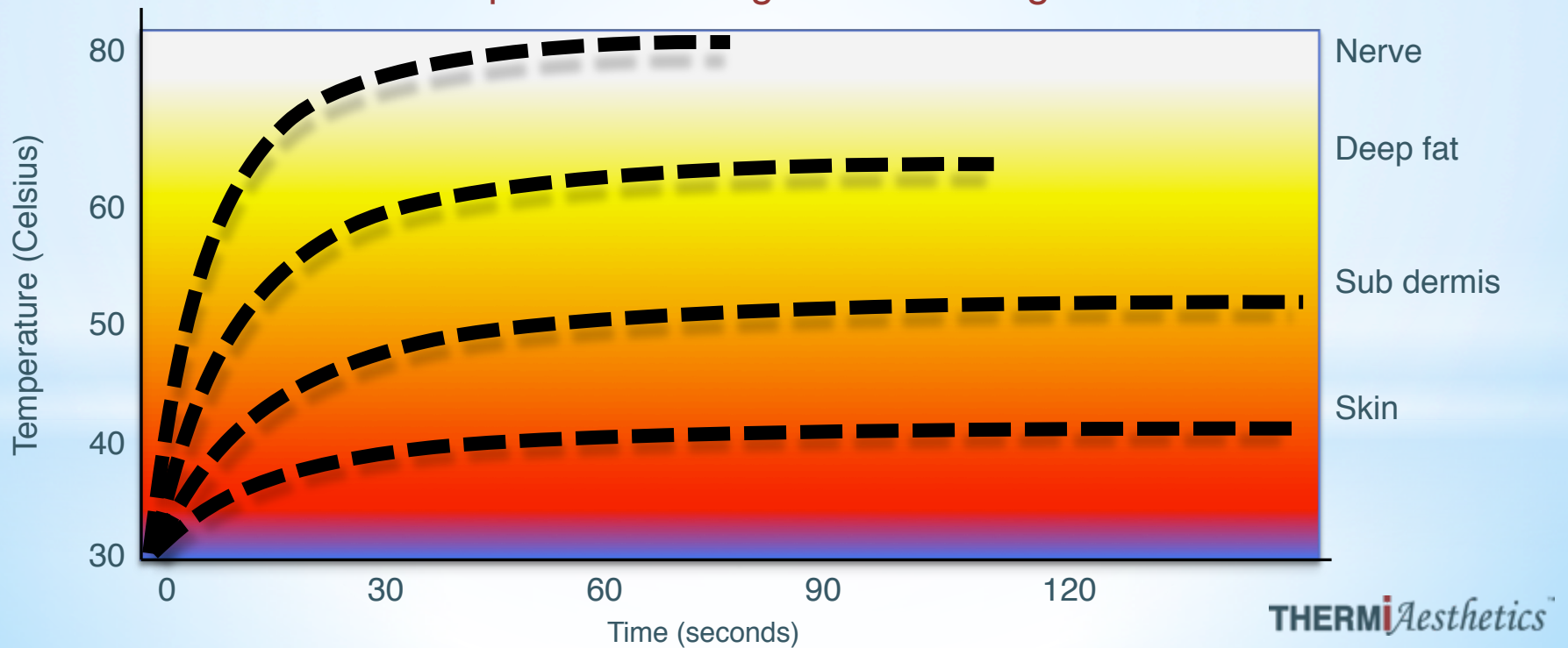
It is generally agreed that raising tissue temperature above the "lethal temperature range" of  $T \geq 45-50^{\circ}\text{C}$  for 20 seconds or more will destroy cell structures and bio-molecules. Thus, it is useful to know in the CRFL case the expected dimensions of the 45–50°C isotherm volume

Cosman, *Electric and Thermal Field Effects in Tissue Around Radiofrequency Electrodes* Pain Medicine Vol. 6, No. 6, 2005

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# How THERMiRF™ Works

Energy emission is user controlled to regulate maximum temperature during a timed dosage





**THERMi***Tight*<sup>TM</sup>

Injectable *RF*  
skin laxity and sculpting

**THERMi***Aesthetics*<sup>™</sup>



# Comprehensive Thermoregulation for the Purpose of Skin Tightening Using a Novel Radiofrequency Treatment Device: A Preliminary Report

Douglas J. Key MD

Key Laser Institute for Cosmetic Regenerative Medicine, Portland, OR

## ABSTRACT

**Background:** Radiofrequency-induced heating of dermal and subdermal tissue promotes skin contracture; however, the temperature threshold for inducing an epidermal burn is lower than the therapeutic temperature thresholds required for collagen remodeling, and therefore, there is the possibility of epidermal burn. Herein, we evaluate a radiofrequency treatment that provides novel real-time subdermal and epidermal temperature monitoring.

**Methods:** A retrospective chart review of 18 subjects undergoing thermistor-controlled subdermal skin tightening via percutaneous radiofrequency was conducted. During the treatment, epidermal temperature was concurrently monitored by a handheld infrared laser thermometer and a forward looking infrared camera system and peak temperatures readings were reported and evaluated.

**Results:** Mean temperatures of 43.6 and 38.2°C were reported for the infrared camera and infrared thermometer. The Bland-Altman plot analysis reported a bias of 5.38°C and 95% limits of agreement between 0.60 and 10.15°C. Additionally, the mean difference or bias of 5.38°C was statistically significant ( $P < 0.0001$ ).

**Conclusion:** Our preliminary data supports a superior form of thermoregulation for the purposes of skin tightening that integrates continuous subsurface and epidermal temperature monitoring.

*J Drugs Dermatol.* 2014;13(2):185-189.

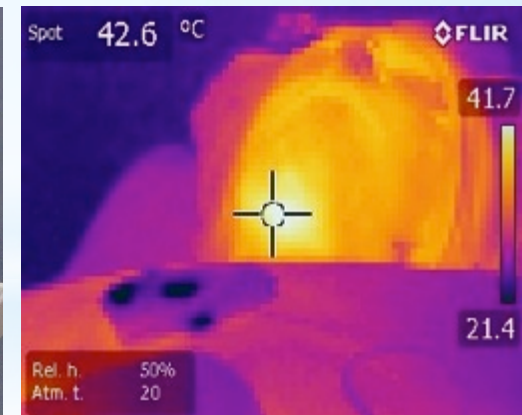
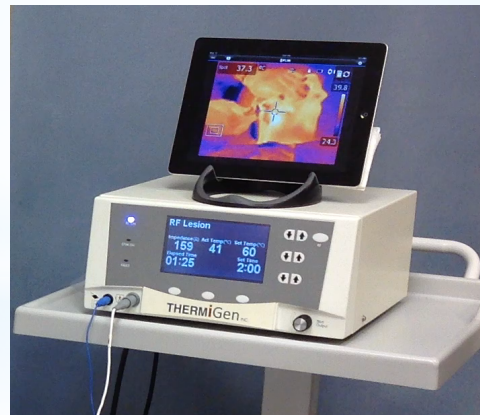
esthetics™

# CHALLENGES IN SKIN TIGHTENING

Can you apply extreme temperatures to sub dermal tissues to effect tightening while preserving integrity of epidermal tissue?

50-70°C – sub dermis

41-43°C - epidermis

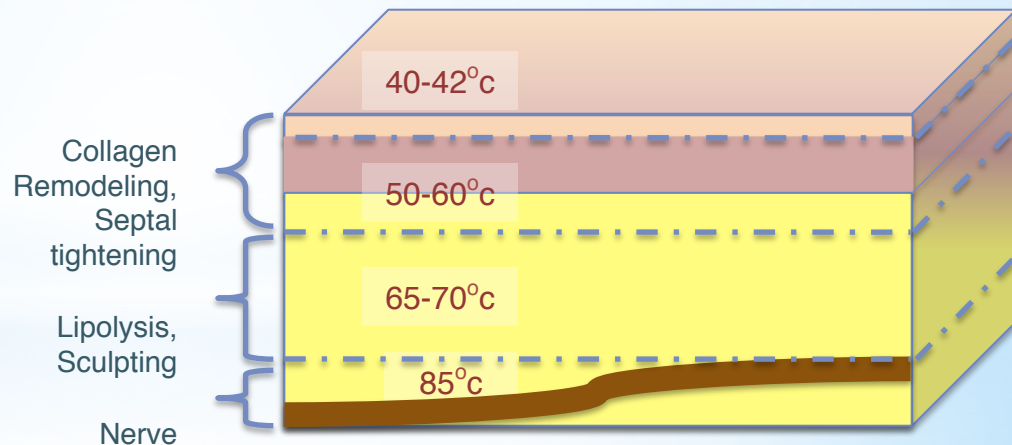


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# CHALLENGES IN SKIN TIGHTENING

How to best focus **delivered energy** on the **targeted depth** of desired tightening?

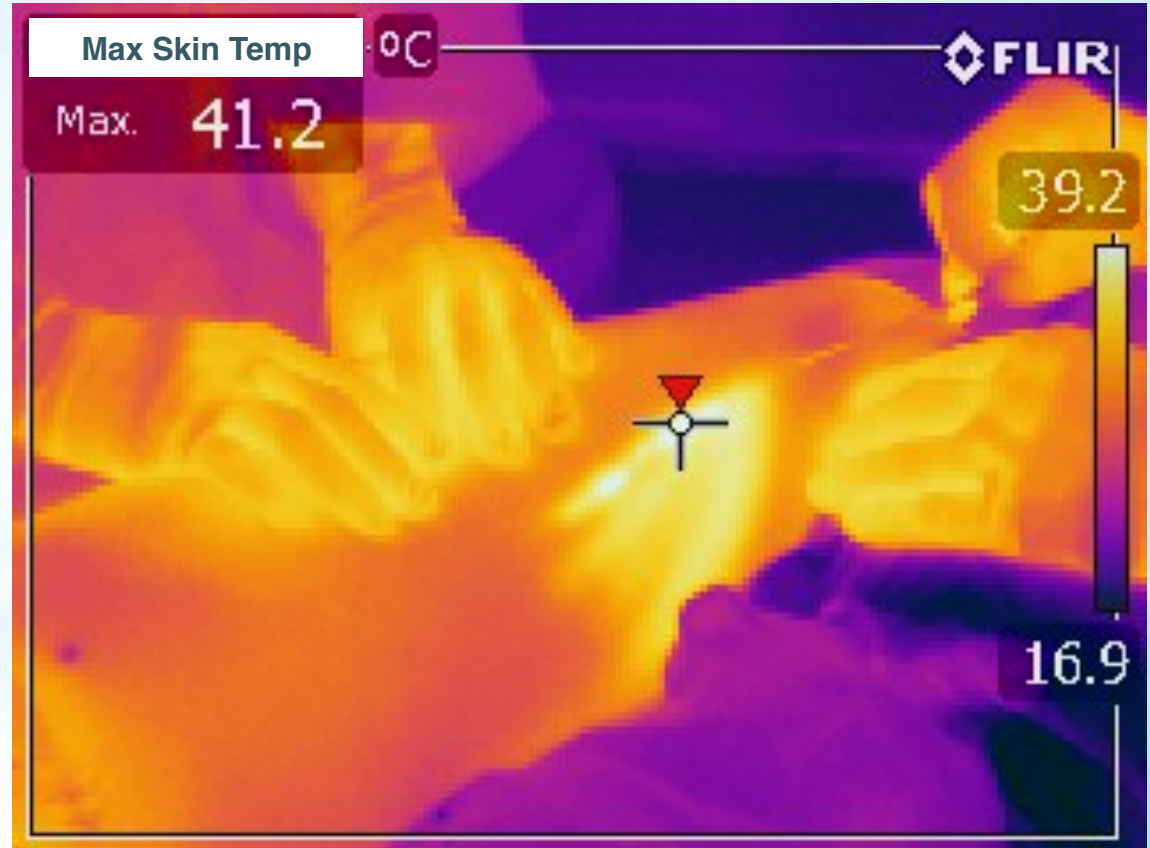
- ✓ skin dermal collagen?
- ✓ septal collagen?
- ✓ fat?
- ✓ or more deeply, for structural lift  
fascial collagen?



# How THERMiTight™ Works



Subdermal Temp **60°C**



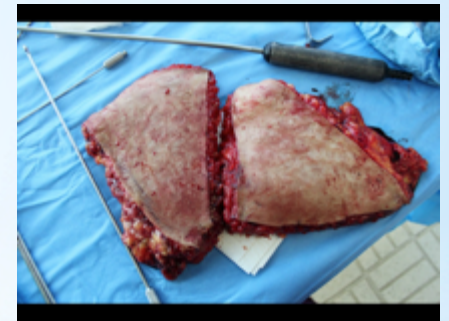
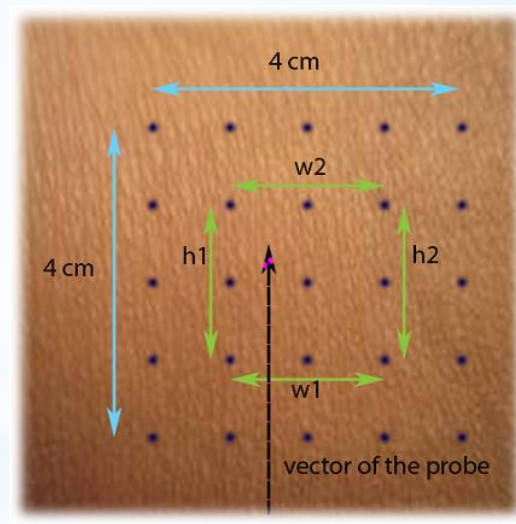


# Tissue Tightening Study

John Ferguson, MD  
Honolulu, Hawaii

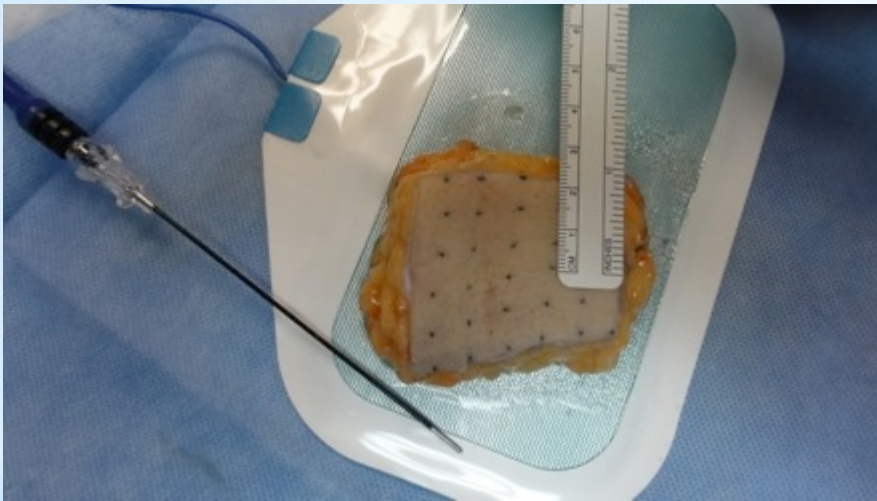
## 48 Tissue Samples

- ✓ 4cm x 4cm grid
- ✓ Each treated 1 pass @ 51C internal, 41C external
- ✓ Avg. Surface Reduction of 23% from  $4\text{cm}^2$  to  $3.08\text{cm}^2$
- ✓ 2<sup>nd</sup> pass only yielded 2-3% additional reduction (n=27)



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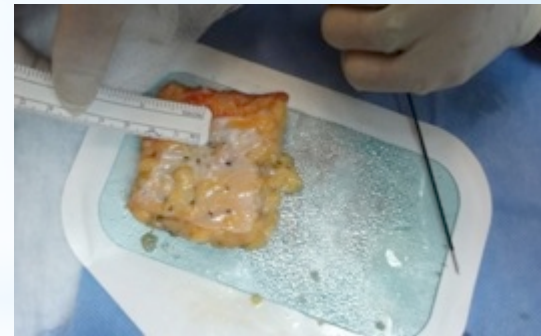
# How **THERMi***Tight*<sup>TM</sup> Works



Effect on skin-  
30% surface area reduction

Diane Duncan, MD

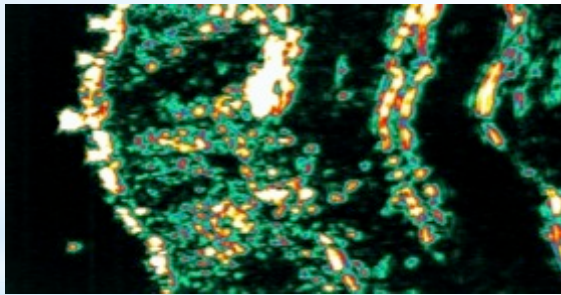
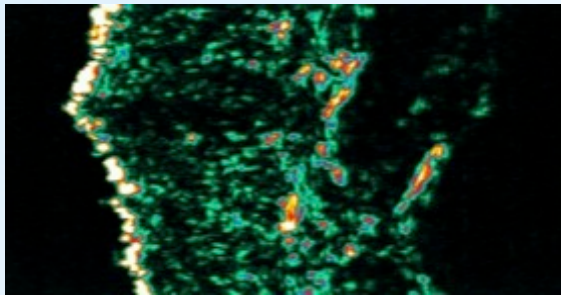
## 3D contraction effect



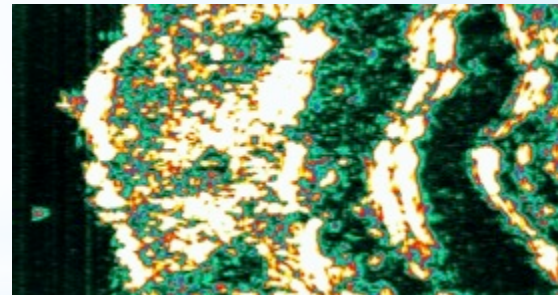
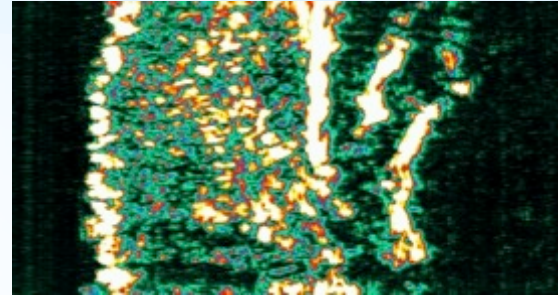
Effect on fascia—50%  
reduction of surface area

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# How THERMi*Tight*<sup>TM</sup> Works



Before/after 30 days  
25db Ultrasound



Before/after 30 days  
30db Ultrasound

Denis Branson, MD

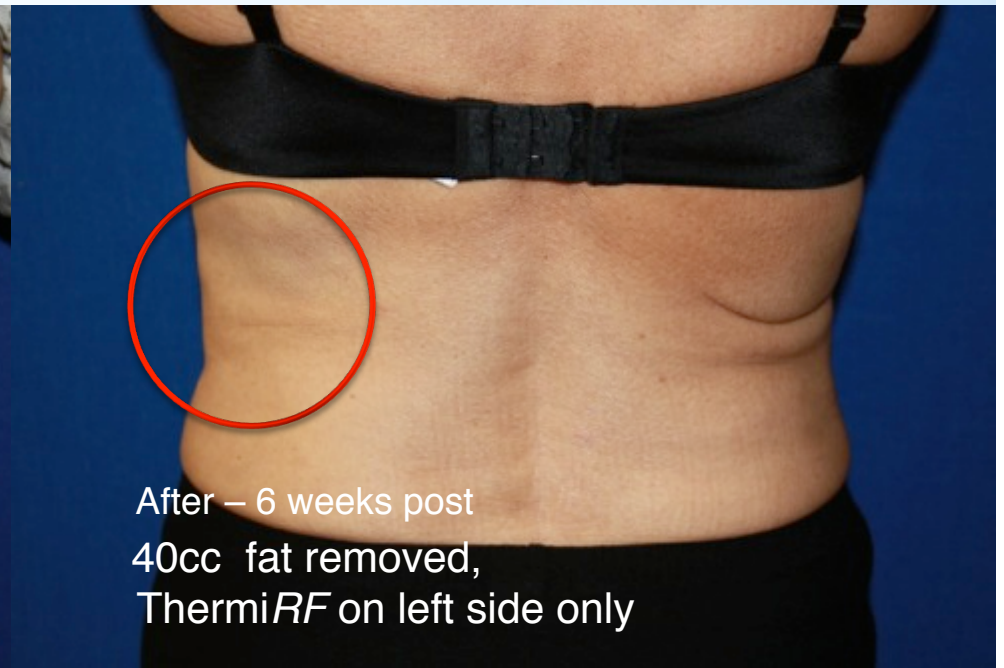
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# How THERMi*Tight*<sup>TM</sup> Works



Before



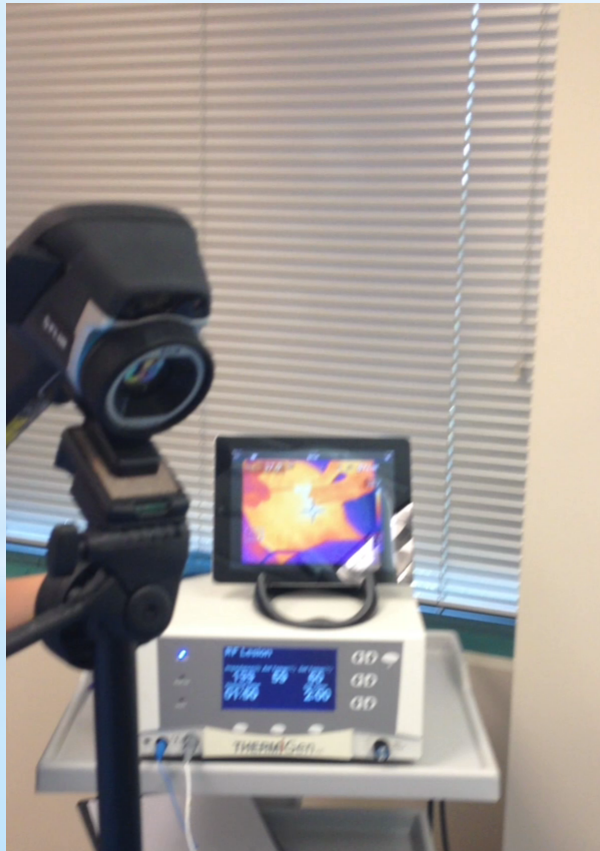
After – 6 weeks post  
40cc fat removed,  
ThermiRF on left side only

Dr. Leonard Miller

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# How THERMi*Tight*<sup>TM</sup> Works



**Slow radial movement** to cause immediate sub dermal tightening (50-60C) and maintain safe skin (<42C)

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**THERMi***Tight*<sup>™</sup>

Injectable *RF*



Pretreatment



6 Months



15 Months



30 Months

Dr. Leonard Miller

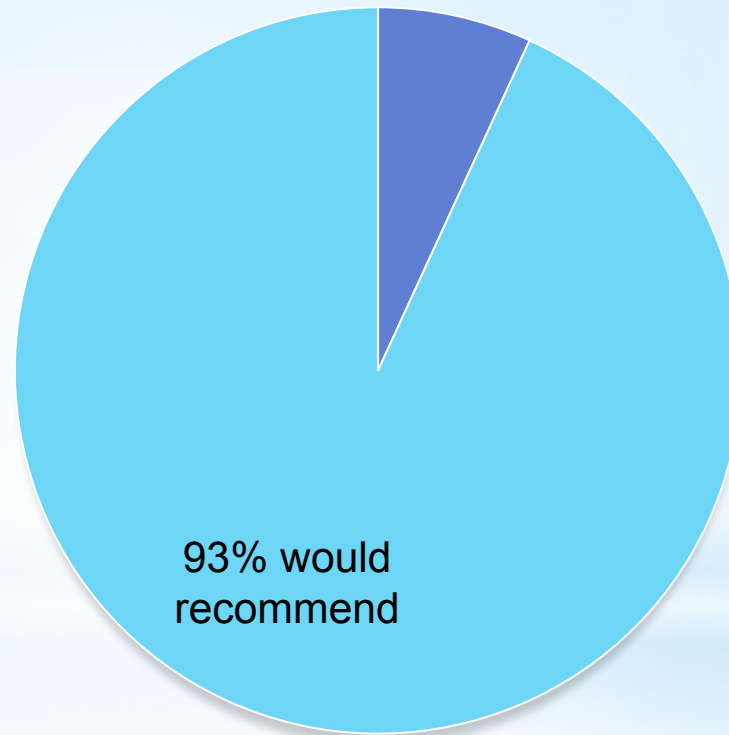
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# **THERMi***Tight*<sup>TM</sup>

Injectable *RF*

**73 patients  
were asked  
“would you  
recommend  
this  
procedure? ”**

**93% YES**



**Key Laser Institute**  
the Center for Regenerative  
Cosmetic Medicine

**THERMi***Aesthetics*<sup>TM</sup>



**THERMi***Tight*<sup>™</sup>



Greta McLaren, MD

**Injectable RF**



**THERMi***Aesthetics*<sup>™</sup>



# THERMi*Tight*<sup>TM</sup>

# Injectable RF



42yo  
60C, No Lipo  
50 days post



Key Laser Institute  
for Cosmetic Regenerative Medicine  
[www.KeyLaserInstitute.com](http://www.KeyLaserInstitute.com)

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Injectable *RF*



6 months. Jowl/neck - sub dermal at 50°C, 6 min, skin temp 43-46°C. Fat at 55°C, 2 min, skin temp < 42°C. No lipo.

Brock Ridenour, MD

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Brian Kinney, MD

**Injectable RF**

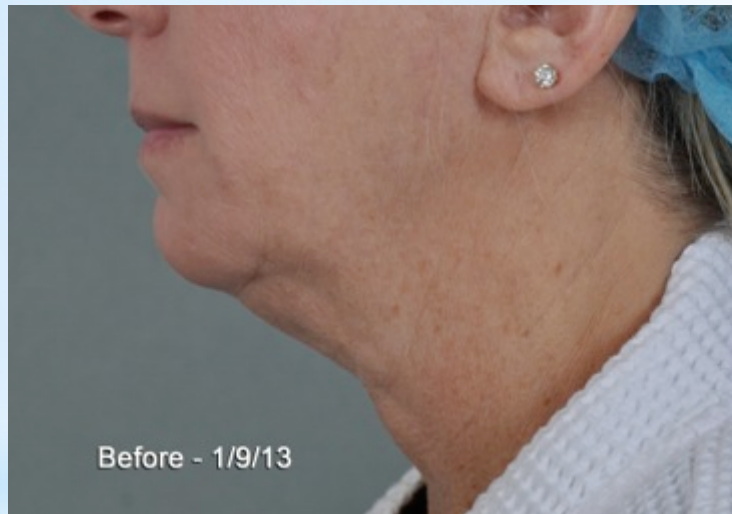


Neck only, NO LIPO  
55°C, 6 mos

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## Injectable RF



55yo  
60°C, 14ml Lipo  
60 days post



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[www.KeyLaserInstitute.com](http://www.KeyLaserInstitute.com)

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# THERMi*Tight*<sup>TM</sup>



Robert Langdon, MD

Temp set to 55C, 4 passes to each side of neck, 2 passes to each lower cheek area (2 min passes).  
Max skin temp 39.4 (right cheek), 41.4 (left cheek), 40.9 (right neck), 41.8 (left neck); 13cc lipo

# Injectable *RF*



2 months Post  
ThermiRF and liposuction

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**THERMi***Tight*<sup>™</sup>

Injectable *RF*



Roxanne Sylora, MD

8 weeks post

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**Injectable RF**



Suzanne Yee, MD

50C  
no lipo  
After 8 weeks

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Injectable *RF*



James Gallo, MD

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# THERMi*Tight*<sup>™</sup>

## Injectable RF



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for Cosmetic Regenerative Medicine  
[www.KeyLaserInstitute.com](http://www.KeyLaserInstitute.com)

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**Injectable RF**



55C, 8 min/arm  
w/Lipo  
3 Months

Richard Fisher, MD

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Karen Harkaway, M.D.

4 months  
70C, 2 passes, max skin temp 38C, no lipo

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Injectable *RF*



65C, no lipo

G. Robert Meger M.D.  
4 months

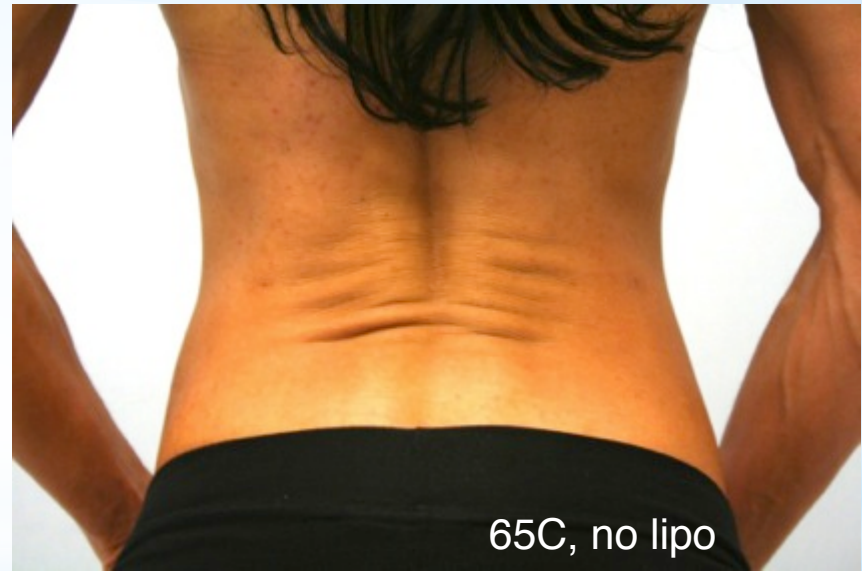
**THERMi***Aesthetics*<sup>™</sup>



**THERMi***Tight*<sup>™</sup>



**Injectable RF**



65C, no lipo

G. Robert Meger M.D.  
1 tx Dec 15<sup>th</sup>, After taken 4/22

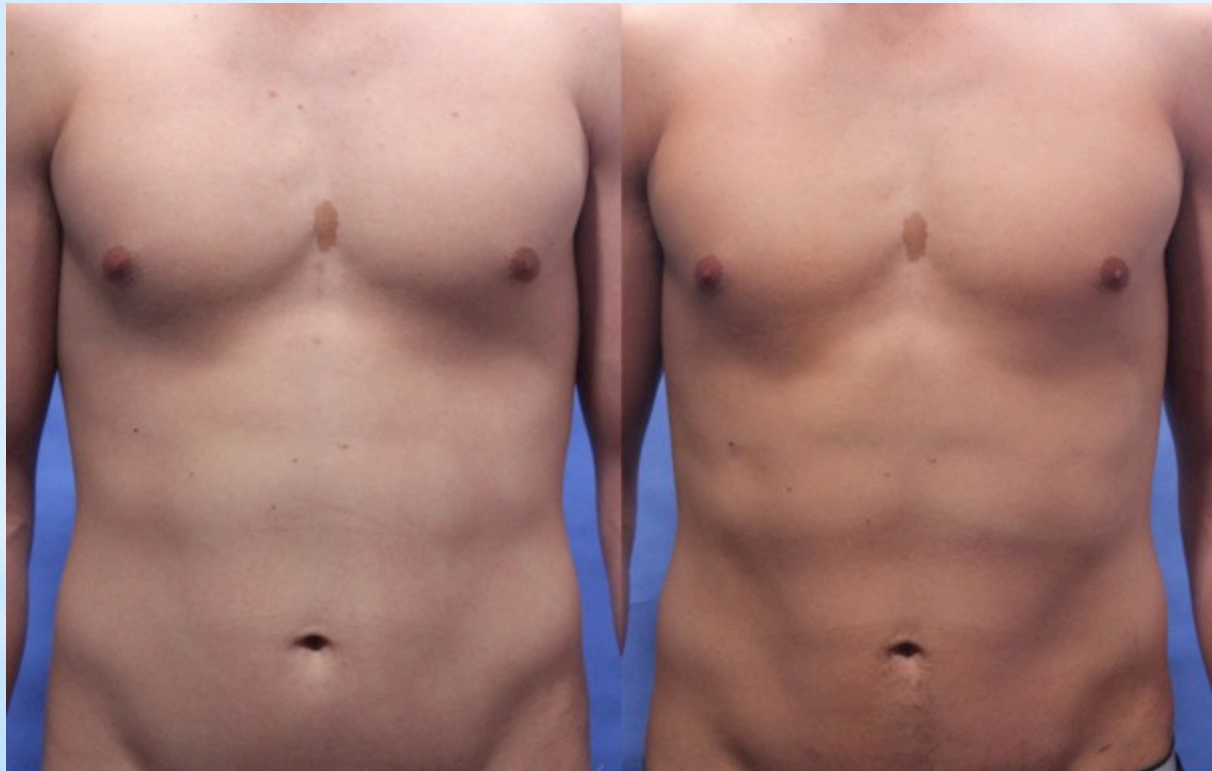
**THERMi***Aesthetics*<sup>™</sup>

# **THERMi***Tight*<sup>™</sup> Injectable *RF*

Hi-def etching  
65C + hi-def lipo  
5 Months

Curtis Perry, MD

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Injectable *RF*

High Def Thermi Lipo © 2014 H. William Song, MD



Before



After

2 Months

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**THERMi***Tight*<sup>TM</sup>

Injectable *RF*



Karen Harkaway, MD



One month post

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**THERMi***Tight*<sup>TM</sup>

Injectable *RF*



Karen Harkaway, MD

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**THERMi***Tight*<sup>™</sup>



Karen Harkaway, MD

**Injectable RF**



One month post

**THERMi***Aesthetics*<sup>™</sup>

**THERMi***Tight*<sup>TM</sup>



Jay Haubrich, MD, Edmonton, Alberta

**Injectable RF**



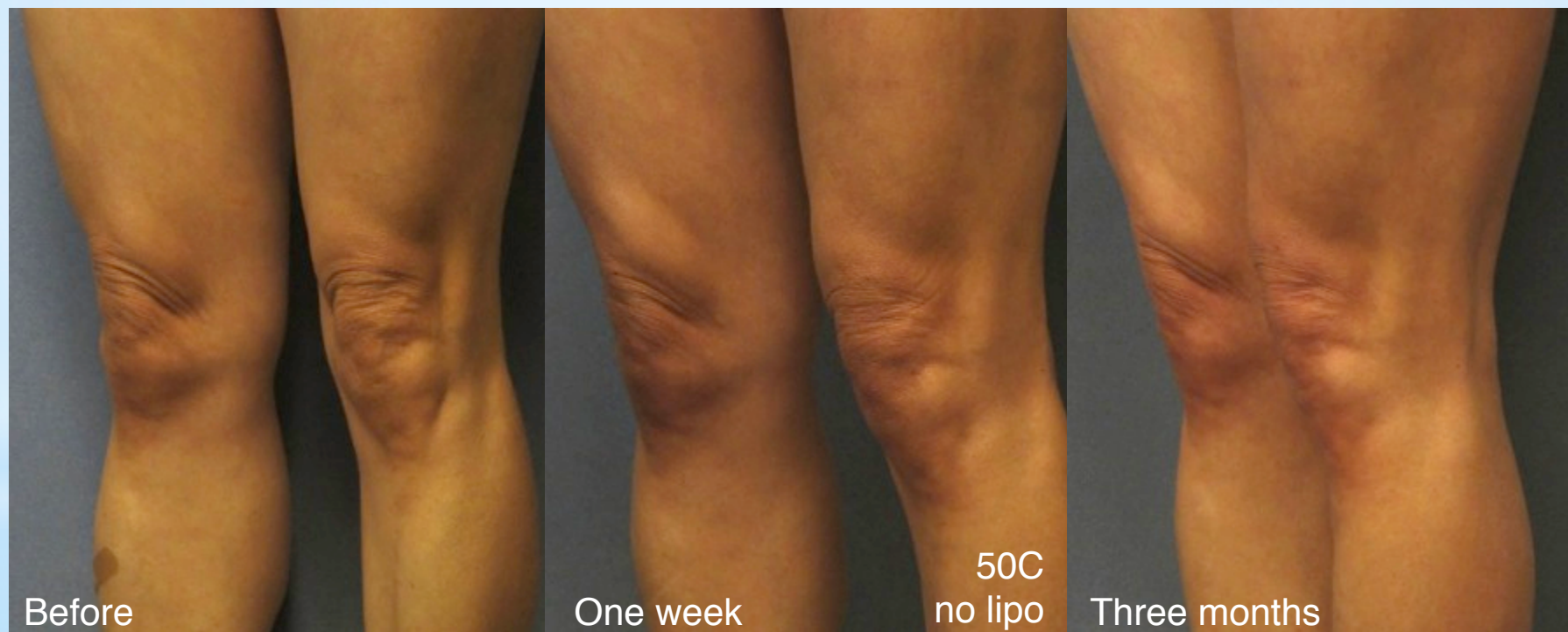
After 3 months, 60C deep, 45C superficial

**THERMi***Aesthetics*<sup>TM</sup>



**THERMi***Tight*<sup>™</sup>

Injectable *RF*



Brian Kinney, MD

**THERMi***Aesthetics*<sup>™</sup>





**THERMi** *Smooth*™

Non-invasive *RF*

**THERMi** *Aesthetics*™

# THERMiSmooth™

## TEMPERATURE CONTROLLED RADIO FREQUENCY

- ✓ Temperature Controlled RF Generator
- ✓ Re-usable non-invasive RF applicators



THERMiAesthetics™

# THERMiSmooth™

**NON-INVASIVE  
TEMPERATURE CONTROLLED  
RADIO FREQUENCY**

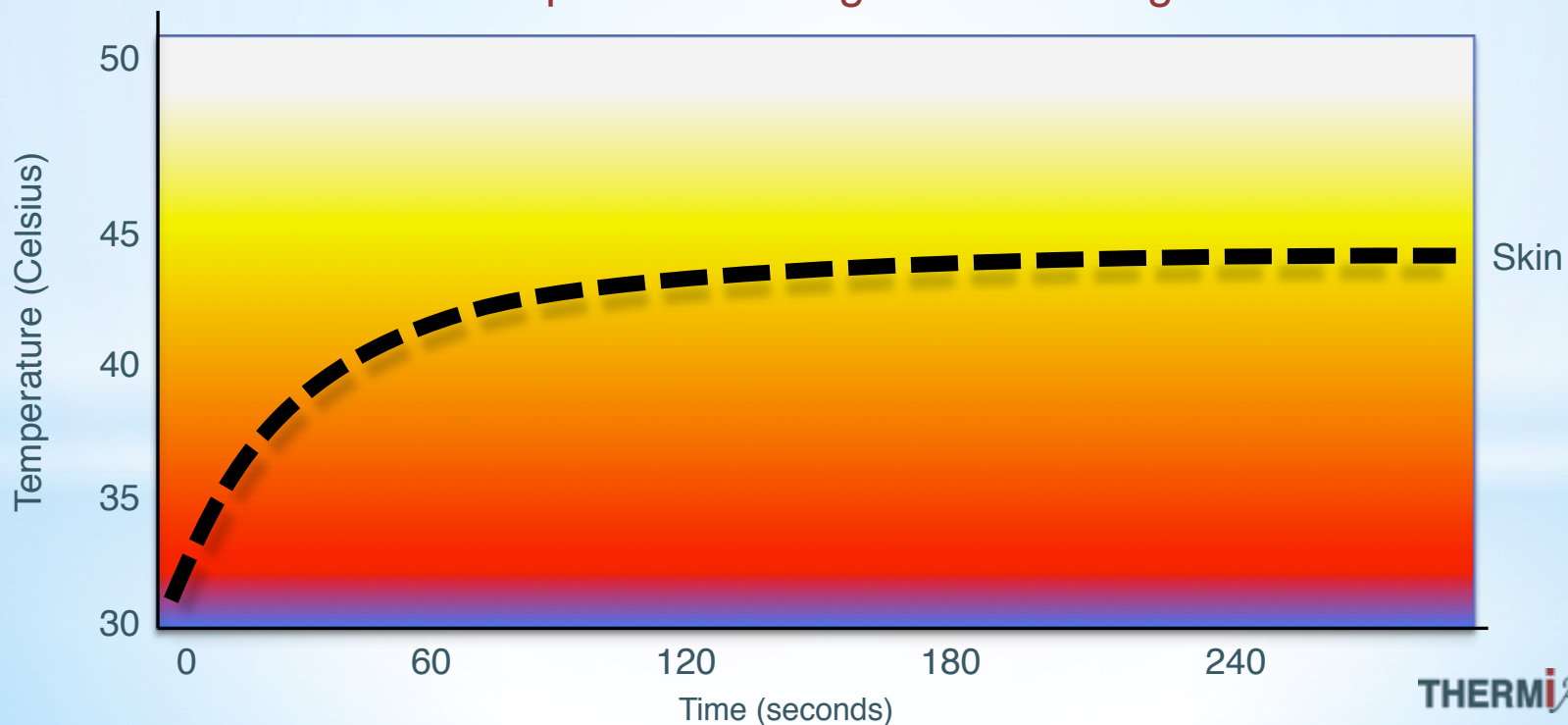
- ✓ 10mm Re-usable non-invasive RF applicator
- ✓ Treatment Range of 35-45°C
- ✓ Fine lines, skin laxity, smoothing



**THERMiAesthetics™**

# How THERMiSmooth™ Works

Energy emission is user controlled to regulate maximum temperature during a timed dosage



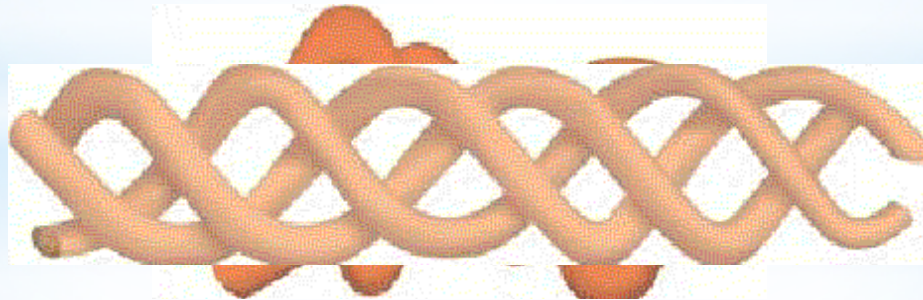
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# How THERMiSmooth™ Works

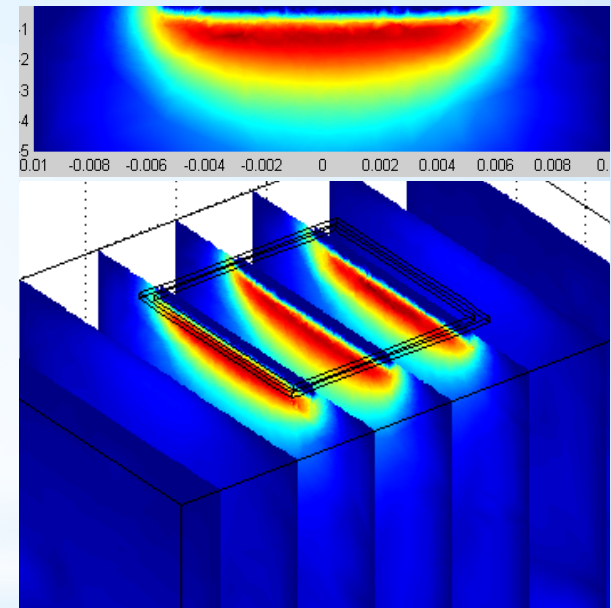
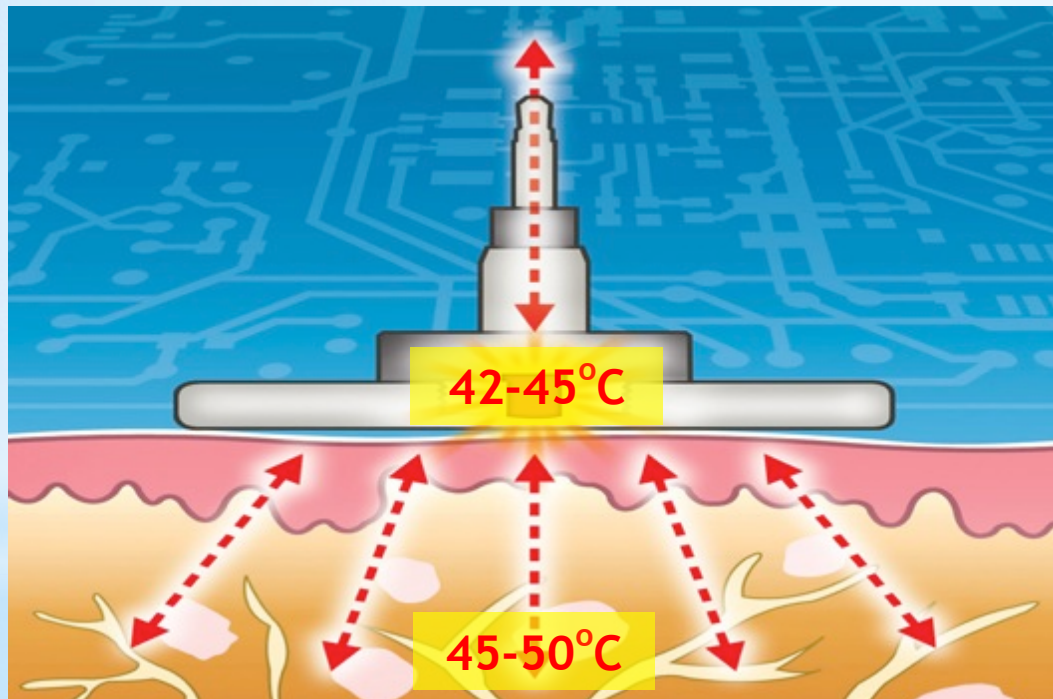
HEATING OF THE DERMIS PROMOTES 3 DIFFERENT KINDS OF EFFECT:

- \* IMMEDIATE CONTRACTION OF COLLAGEN
- \* IMMEDIATE COLLAGEN REMODELING AND ELASTICITY
- \* LONG TERM STIMULATION IN PRODUCING NEW COLLAGEN



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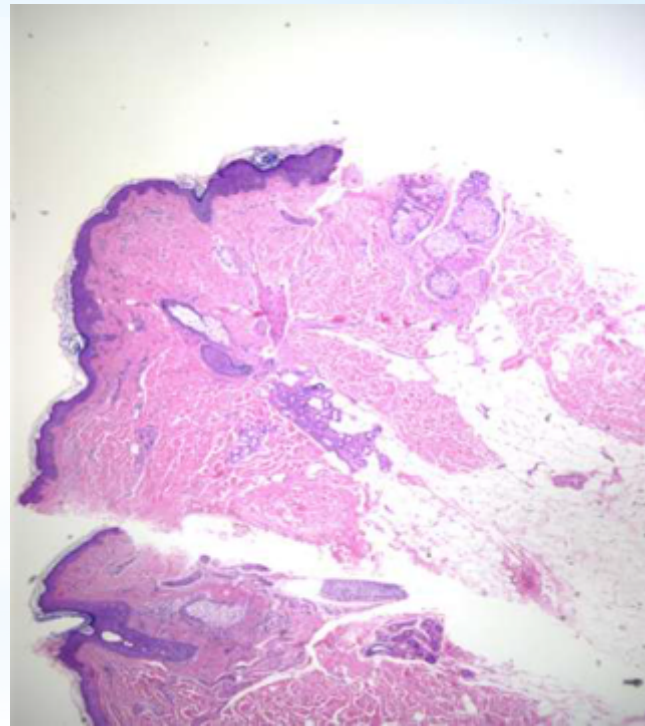
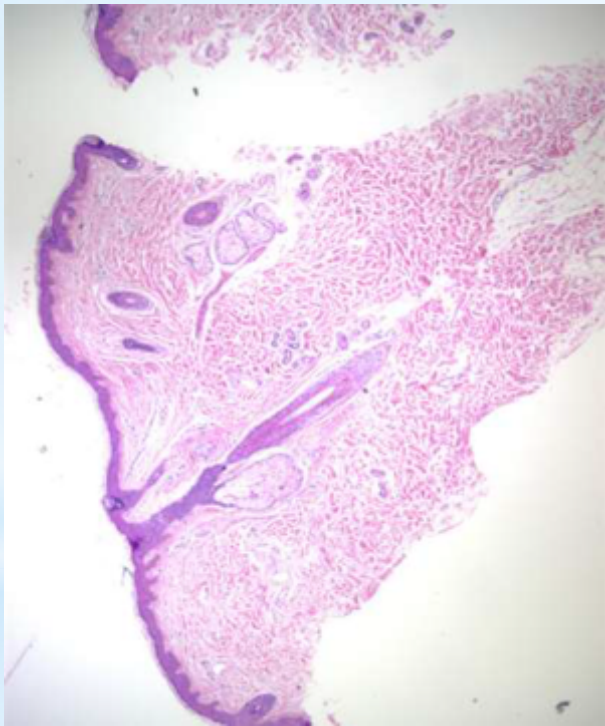
# How THERMiSmooth™ Works



Therapeutic depth is ~40% of diameter of tip

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# How THERMiSmooth™ Works



THERMiAesthetics™

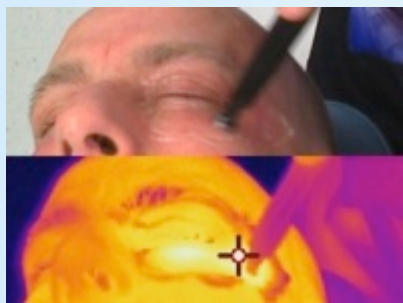




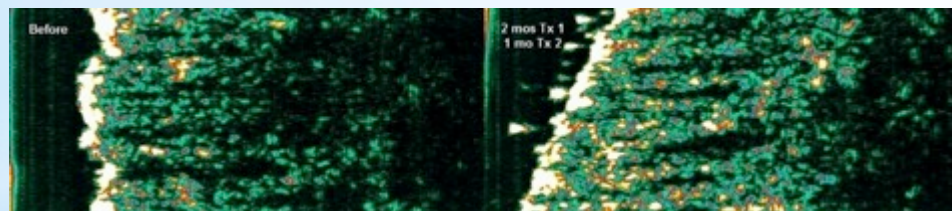
**THERMi**Smooth™



# THERMiSmooth™



42°C, 7 min/eye  
Lower lid 2 tx @ 3 wks  
Upper lid 1 tx @ 3 wks



50mHz ultrasound done before treatment and after the second treatment (day of the 3<sup>rd</sup> Tx). Note the increase skin thickness and improved skin quality (increased blue/green echoes).

Denis Branson, MD



THERMiAesthetics™

# THERMiSmooth™



reduction of upper and lower eyelid laxity, and lines

42°C, 5 min/eye  
2 weeks post 2 treatments  
of the upper lids,  
3 treatments of the lower  
lids.

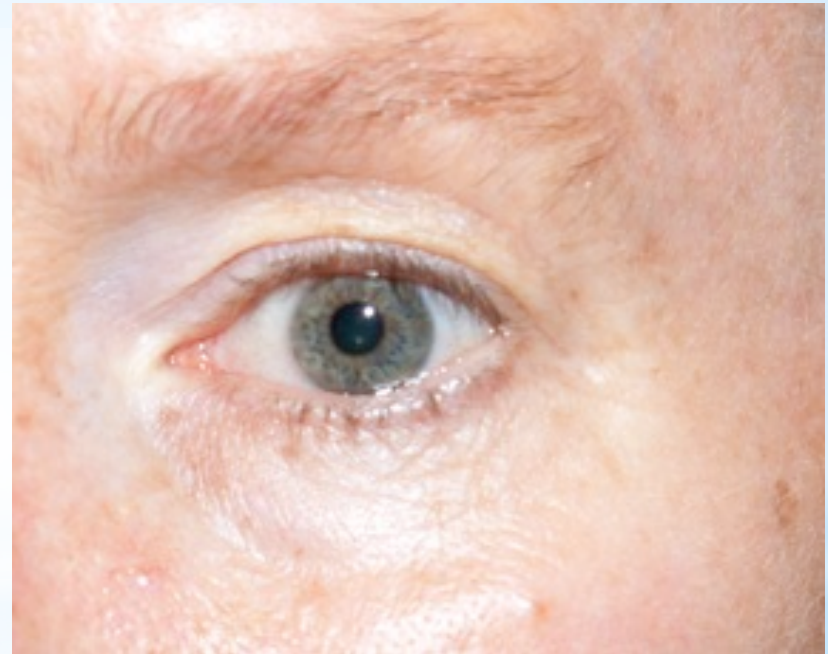
Denis Branson, MD

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# THERMiSmooth™



Jean Keamy, MD

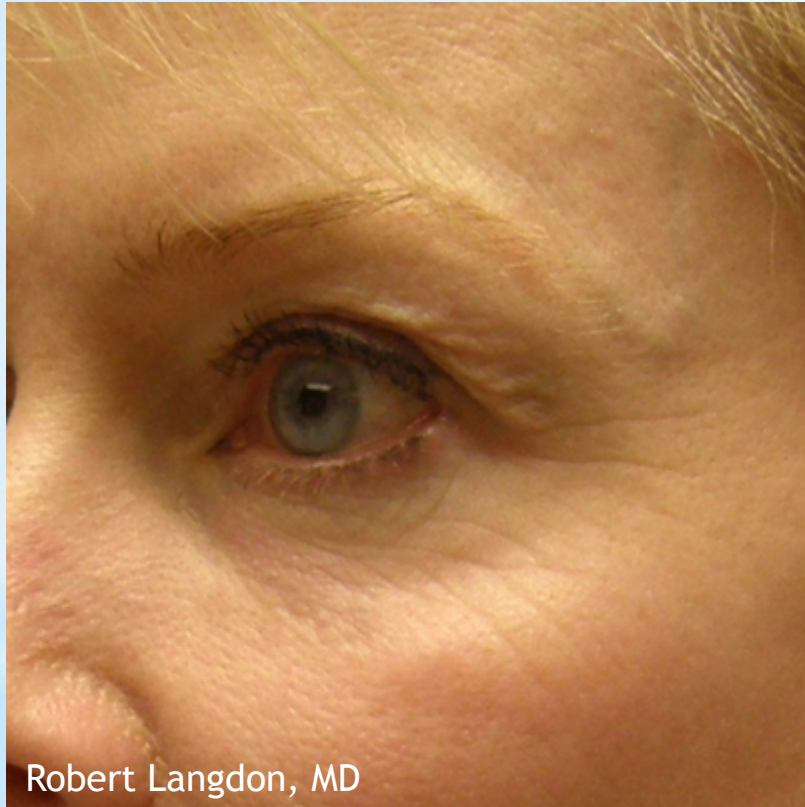


After 5 treatments @ 2 weeks  
42°C, 8 minutes per eye

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# THERMiSmooth™



Robert Langdon, MD



Note improvement in brow position, upper lid dermatochalasis, and peri-orbital rhytids.

51yo female; 2 weeks after 3 treatments @ 2 weeks

42°C, 6 min - upper lid/eyebrow (superior to outer canthus), 3 min - lower lid

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# THERMiSmooth™



Treatment of “cupid’s bow”

One treatment @ 3 weeks  
44°C, 12 min each side

Denis Branson, MD

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## Good Medicine

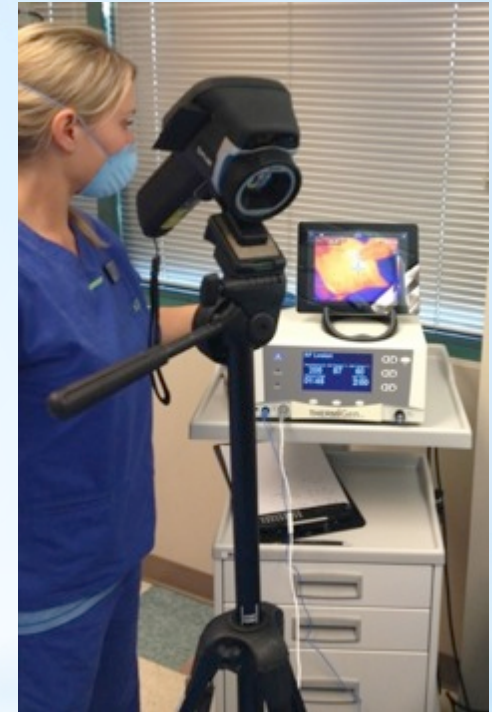
- ✓ use temperature as an endpoint
- ✓ dual temp monitoring/infrared imaging
- ✓ Safe and predictable results

## Easy to Perform

- ✓ Micro-invasive (18/22ga probes)
- ✓ Tumescence or local anesthesia
- ✓ Less than 1 hour

## Makes Money

- ✓ ~\$3-4,000 per hour



THERMiRF™

# Benefits

THERMiAesthetics™

## Patients want

- ✓ To delay a major procedure
- ✓ An effective, one time treatment
- ✓ Little down time
- ✓ Long lasting results

## Physicians want

- ✓ To differentiate their practice
- ✓ To meet the needs of the broader market
- ✓ Have a small capital outlay
- ✓ Fast ROI (Avg \$3,000 per procedure)



# THERMiRF<sup>TM</sup> Delivers!

THERMiAesthetics<sup>™</sup>