

**Full body sculpting using 3D-Cryolipolysis  
3 year experience following 3200 single sessions**

**Villy Rodopoulou, MD, EBOPRAS  
Plastic Surgeon**

**KOSMESIS Aesthetic Plastic Surgery Center, Athens , Greece.**

# The Universal Trend

## Body Contouring - Non invasive

## Latest ASPS Procedures Statistics as of 1/3/2018

- **Non-invasive fat reduction** procedures that use special technology to "freeze" away fat without surgery increased **7%**
- **Non-invasive skin tightening** procedures that target fat and tighten sagging areas increased **9%**
- **Non-surgical cellulite treatments** that use lasers to eliminate fat increased **19%** (up 55% since 2000)



## Comparison of existing non invasive technologies for fat reduction

Technology	Mechanisms of action	Pain level	Side effects	Treatments needed (n)
High-intensity focused ultrasound	Necrosis	High	Massive bruising and tenderness up to 2 weeks	1–2
Unipolar radiofrequency	Apoptosis	Medium	Redness and tenderness for 1–3 days	2–3
Low-level laser therapy	Apoptosis	None	None	6
Acoustic wave therapy	Apoptosis	None	None	8
<b>Cryolipolysis</b>	<b>Apoptosis</b>	<b>Low</b>	<b>Numbness and bruising for up to 7 days</b>	<b>1–2</b>

# 3D Cryolipolysis - Cryosculpting

A non-invasive procedure that uses patented 360° cooling technology that results in localized fat reduction with a special 3D patented design.

It can induce apoptosis only in fat cells symmetrically and gently in order to gradually reduce the fat layer, while preserving all other tissue, and offer a natural “smoothed out” result



# Video 3D-Cryolipolysis

# Advantages of 3D Cryolipolysis

- ✓ 360° Handpiece – Cooling down up to  $-9^{\circ}$  all sucked skin area equally using Strong suction up to 50 Kpa
- ✓ Inducing permanent apoptosis of fat cells
- ✓ Non-invasive lipolysis
- ✓ No downtime
- ✓ Minimal consumables
- ✓ Dual different shaped applicators (2 treatment sites at the same time)
- ✓ It does not cause skin sagginess but the opposite

# Indications and Bonus effects

- TORSOPLASTY-ABDOMEN
- DIFFICULT AREAS
- METABOLIC RATE?
- SKIN TIGHTENING?



# Procedure



Kosmesis

# Materials and Methods

- A prospective study of **502 patients** (424 women and 78 men),
- 1-3 session of Cryolipolysis 3D on the same area
- Mean age of the patients was 45 years old (19-76)
- Mean Body Mass Index (BMI) was 24,2 (19-39).

# Materials and Methods

15 different areas were treated :

211 patients had treatment to one area,

151 patients to 2 areas

66 patients in 3 areas and

74 patients in more than 3 areas

# Treatment areas / sessions : 1679



# Materials and Methods

- Clinical outcomes were assessed using skinfold caliper measurements (The FatTrack PRO DIGITAL Body Fat skinfold caliper),
- Patient surveys (according to GAIS 5-point scale)
- 2 blinded plastic surgeons photographs evaluation.

# Results

## **Caliper** measurements

- **Significant reduction of the treated areas between 15 - 38% at 2.5-3 months**

# Results

## Patient surveys

- **82%** of patients marked the results as very much improved or much improved,
- **14%** improved,
- **4%** no change
- **0%** worse

# Results

## Plastic surgeons photographs assessment

- **69%** very much improved or much improved
- **22%** improved
- **9%** no change



# Side effects

In 75% of the cases

- Mild oedema
  - Bruises
  - Numbness
- ...that all resolved in a few days



Our equipment





**3D Cryolipolysis Achieving Non Invasive  
Sculpting of Difficult Body Areas :**  
A Prospective Study Following 306 Treatments

**Villy Rodopoulou, MD,EBOPRAS**  
Plastic Surgeon

KOSMESIS Aesthetic Plastic Surgery Center, Athens , Greece.



# Our experience



**Full Body Sculpting using 3D Cryolipolysis.**  
3 years experience following 1679 single sessions

**Villy Rodopoulou, MD,EBOPRAS**  
Plastic Surgeon

KOSMESIS Aesthetic Plastic Surgery Center, Athens , Greece.



**ROOM 10**  
Dr Villy **RODOPOULOU**  
Plastic surgeon, Greece

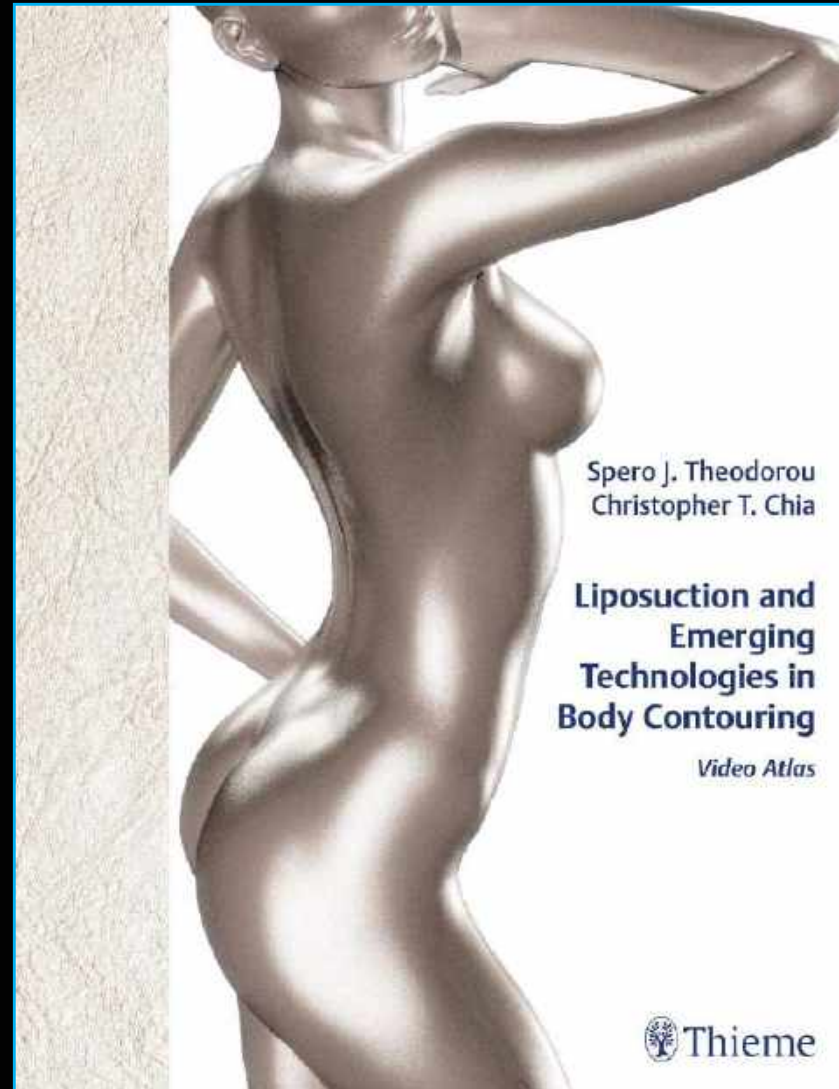
**Torsoplasty Using 3D-Cryolipolysis**

**Villy Rodopoulou, MD,EBOPRAS**  
Plastic Surgeon

KOSMESIS Aesthetic Plastic Surgery Center, Athens , Greece.



Chapter entitled: “Non-Invasive Cryolipolysis Body Contouring.  
in the upcoming book by Drs Theodorou and Chia  
*Liposuction and Emerging Technology on Body Contouring,*



# The question is...

- 3D-Cryolipolysis Versus Liposuction
- 3D-Cryolipolysis Versus Abdominoplasty

Proper patient selection and technique with the use of effective equipment can often lead to comparable to surgical results!



Result of Liposuction to  
love handles – back rolls

# Results: 3D-Cryolipolysis Flanks and Back rolls



Before



2,5 Months After 1 session

# Result of Liposuction to outer and inner thighs





## Results: 3D-Cryolipolysis Inner Thighs



Before

2,5 Months After 1 session

## Results: 3D-Cryolipolysis Inner Thighs



Before

2,5 Months After 1 session

# Result of Liposuction to love handles - outer and inner thighs



# Results: 3D-Cryolipolysis Flanks and Back rolls



Before



2,5 Months After 1 session

## Results: 3D-Cryolipolysis Inner Thighs



Before

2,5 Months After 1 session

# Results-Cases

# Results: 3D-Cryolipolysis Abdomen- Flanks and below



Before

2,5 Months After 1 session

# Results: 3D-Cryolipolysis Unusual Upper Abdomen



Before



2,5 Months After 1 session



# Results : 3D-Cryolipolysis operated abdomen



Before



2,5 Months After 1 session

# Results : 3D-Cryolipolysis Sagging Abdomen with striae + Flanks



Before



3 Months After 1 session

# Results : 3D-Cryolipolysis Sagging Abdomen with striae + Flanks



Before



3 Months After 1 session

# Results : 3D-Cryolipolysis Abdomen



Before



3 Months After 1 session

# Results : 3D-Cryolipolysis Abdomen



Before



3 Months After 1 session

# Results : 3D-Cryolipolysis Abdomen



Before



3 Months After 1 session

# Results : 3D-Cryolipolysis Flanks



Before



3 Months After 1 session

# Metabolic rate increase?



**8 Months later  
with only 7 kg  
weight loss  
and multiple  
sessions and  
areas treated  
with 3D- Cryolipo**





# Metabolic rate increase?



**8 Months later with  
only 7 kg weight loss  
and multiple sessions  
and areas treated  
with Cryolipo3D**



# Difficult / Unusual Areas

# Results : 3D-Cryolipolysis Flanks and below + Back rolls



Before



2,5 Months After 1 session

# Results: 3D-Cryolipolysis Flanks and Back rolls



Before



2,5 Months After 1 session

# Results : 3D-Cryolipolysis Flanks and Back rolls



Before



2,5 Months After 1 session

## Results : 3D-Cryolipolysis Flanks



Before



2,5 Months After 1 session

# Results : 3D-Cryolipolysis Gynecomastia



Before



2,5 Months After 1 session

# Results : 3D-Cryolipolysis Gynecomastia

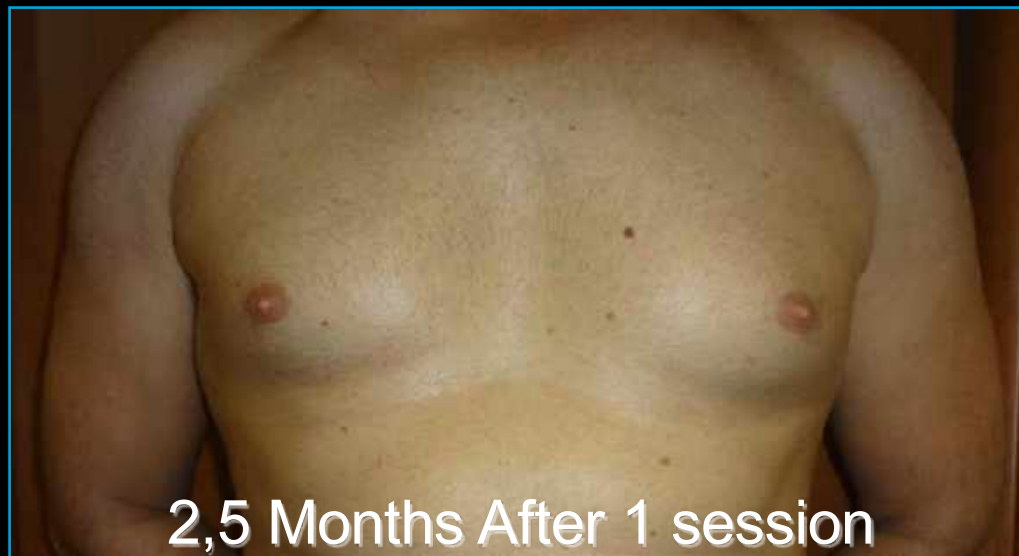
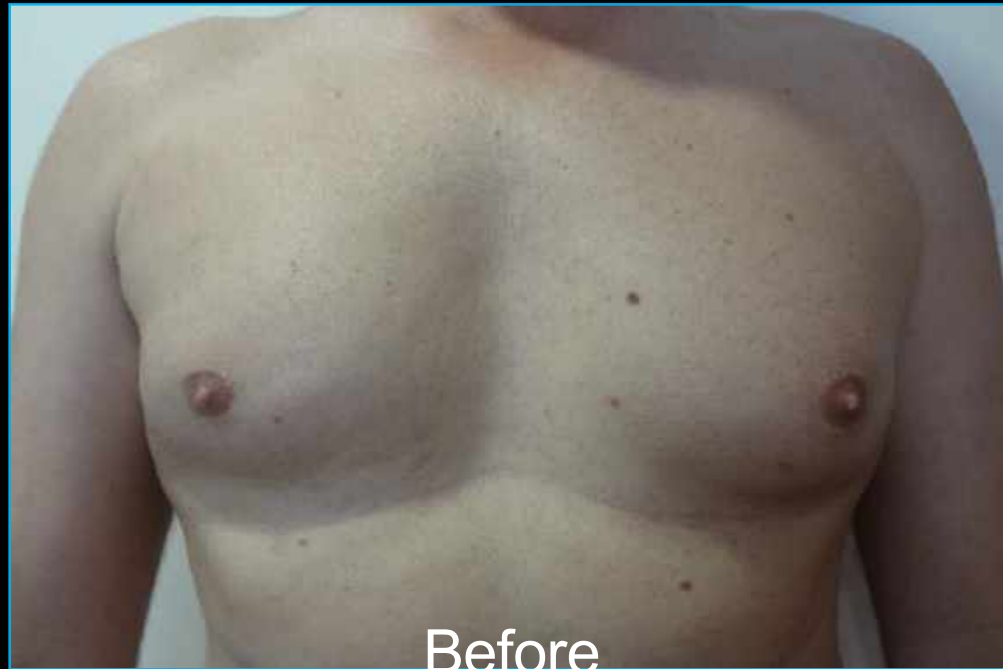


Before

2,5 Months After 1 session



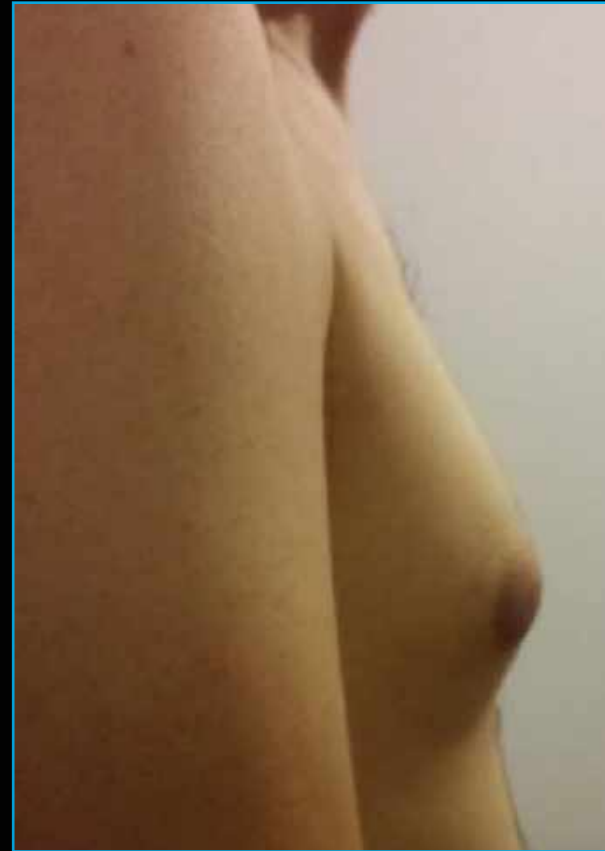
# Results : 3D-Cryolipolysis Gynecomastia



# Results : 3D-Cryolipolysis Gynecomastia



# Results : 3D-Cryolipolysis Gynecomastia



## Results : 3D-Cryolipolysis Axilla



Before



2 Months After 1 session

## Results : 3D-Cryolipolysis Axilla



Before



2 Months After 1 session

## Results : 3D-Cryolipolysis Buffalo Hump



Before



2,5 Months After 1 session

# Results : 3D-Cryolipolysis Back Rolls

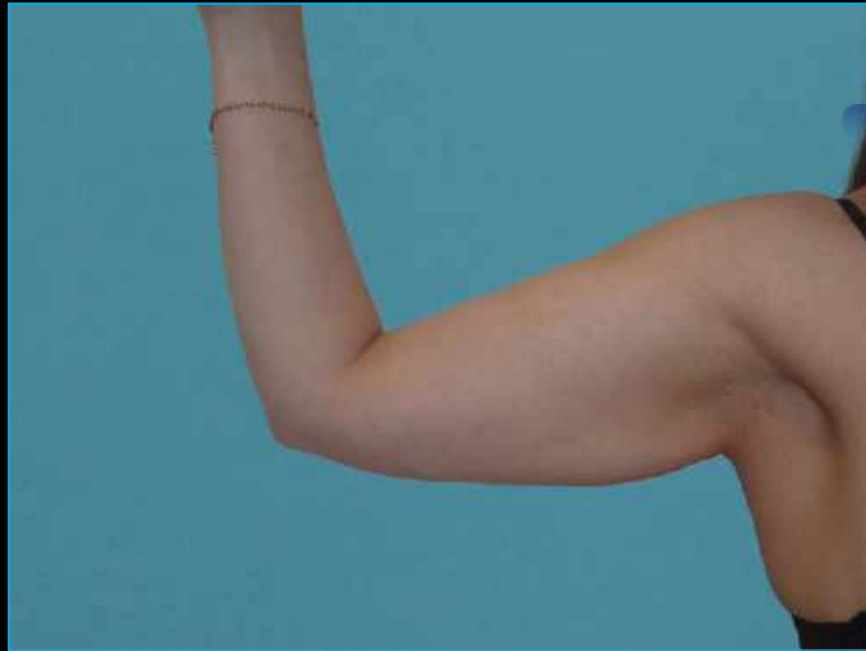


Before



2 Months After 1 session

# Results: 3D-Cryolipolysis - Arms



Before



2,5 Months After 1 session





# Results: 3D-Cryolipolysis - Arms



Before



2,5 Months After 1 session

# Results: 3D-Cryolipolysis - Arms



Before



3 Months After 1 session

## Results: 3D-Cryolipolysis - Arms



Before



3 Months After 1 session

# Results: 3D-Cryolipolysis - Arms



Before



3 Months After 1 session



# Results: 3D-Cryolipolysis - Arms



Before



3 Months After 1 session



## Results: 3D-Cryolipolysis- Knees



Before



2,5 Months After 1 session

**Results : 3D-Cryolipolysis Combo: Inner Thighs + Knees + Lat Thighs + Lower Flanks**

**Prominent skin sagginess and improvement**



Before



2 Months After 1 session on each area

**Results : 3D-Cryolipolysis Combo: Inner Thighs + Knees + Lat Thighs + Buttocks +  
Banana Rolls**



**Before**



**2 Months After 2 sessions in each area**



**Results : 3D-Cryolipolysis Combo: Inner Thighs + Knees + Lat Thighs + Buttocks  
+ Banana Rolls**



Before



2 Months After 2 sessions in each area

# Results : 3D-Cryolipolysis Lower Legs



Before



4 Months After 1 session  
on four different areas

# Results : 3D-Cryolipolysis Lower Legs

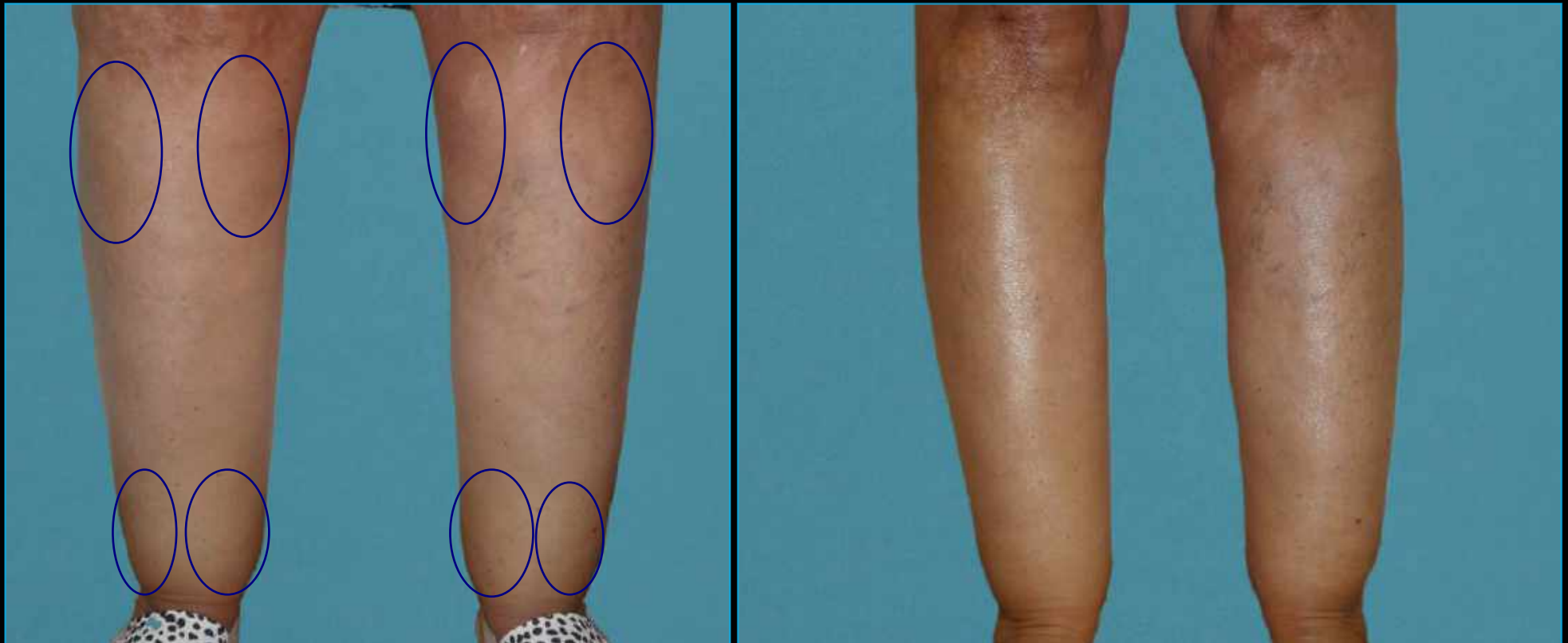


Before



4 Months After 1 session  
on four different areas

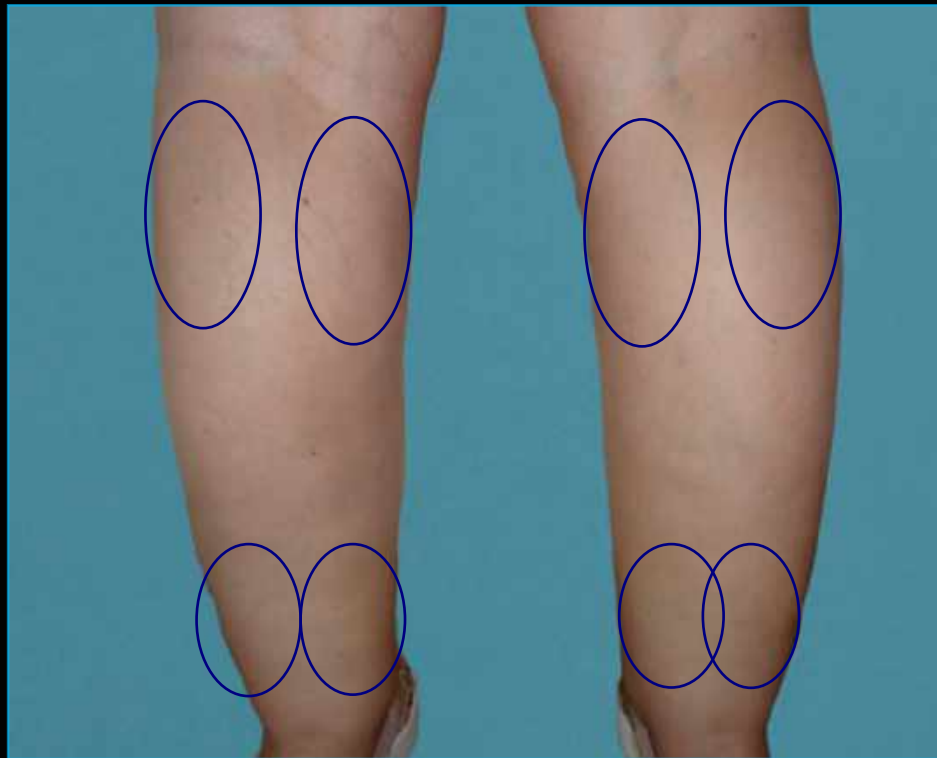
# Results : 3D-Cryolipolysis Lower Legs



Before

4 Months After 1 session  
on four different areas

# Results : 3D-Cryolipolysis Lower Legs



Before



4 Months After 1 session  
on four different areas

# Results : 3D-Cryolipolysis Anterior Thighs



2 Months After 1 session



# Results : 3D-Cryolipolysis Anterior Thighs



Before



3 Months After 1 session

# Results : 3D-Cryolipolysis Anterior Thighs



Before



3 Months After 1 session



# Skin Tightening

# Results : 3D-Cryolipolysis Sagging Anterior Inner thighs



Before



3 Months After 1 session

# Results : 3D-Cryolipolysis Sagging Abdomen with striae + Flanks



Before



3 Months After 1 session

**Results : 3D-Cryolipolysis Combo: Inner Thighs + Knees + Lat Thighs + Lower Flanks**  
**Prominent skin sagginess and improvement**



Before

2 Months After 1 session on each area

# Results : 3D-Cryolipolysis Gynecomastia



Before

2,5 Months After 1 session

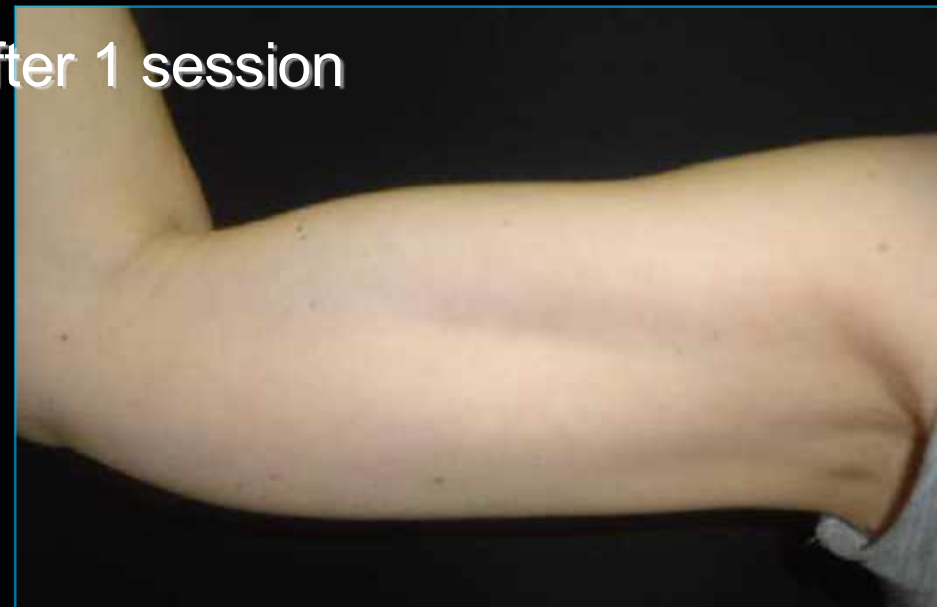
# Results : 3D-Cryolipolysis Arms



Before



3 Months After 1 session



# Conclusion

- SAFE
- EFFECTIVE
- NON INVASIVE
- NO RECOVERY

SKIN TIGHTENING?

# The new device **CLATUU**

## Characteristics

- Body sculpting device based on Cryolipolysis
- Various Applicators for Any Spot
- Applicators Optimized for Any Treatment
- Fast and Easy Applicator Exchange
- Any Treatment Area at Any Angle
- Upgraded 360° Surround Cooling and suction
- Shorter session time
- Minimal consumables
- Safety and efficacy

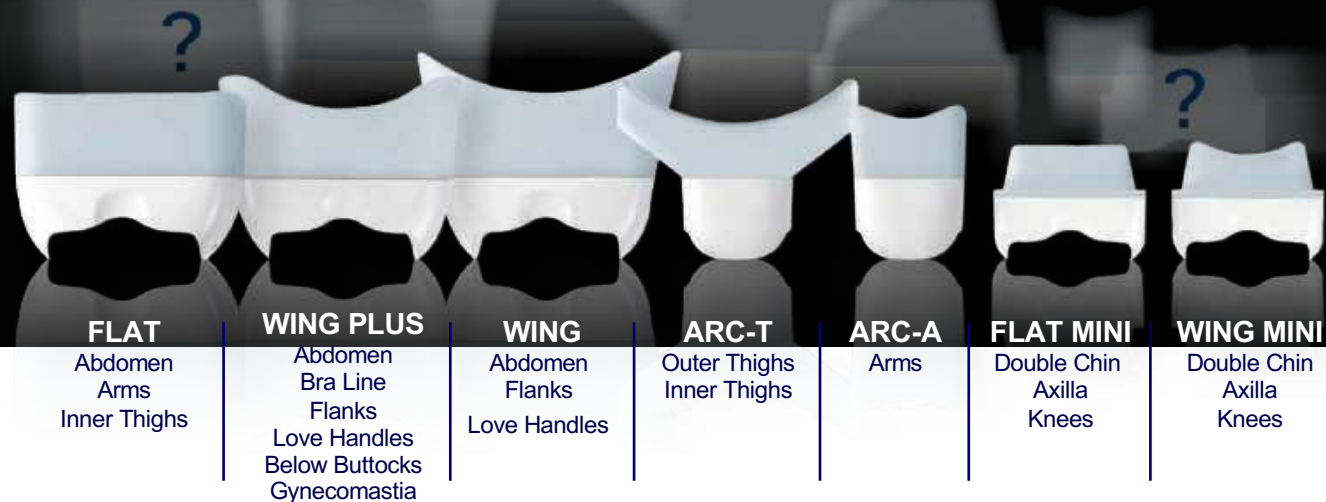




# Benefits

## Various exchangeable Applicators for any body area

There is a wide range of cooling cups and are suitable to conform to a large variety of body shapes and patients. Each individual cup helps to achieve a variety of customized treatment plans to effectively reduce fat cells resulting in a full body sculpting



# Some other benefits

## Fast and Easy Applicator Exchange

With a simple press-and-release mechanism, allows maximum convenience and makes switching cooling cups as simple as possible. Detaching cables or turning the system off is not required even during treatments.

## Any Treatment Area at Any Angle

The arm stand provides a variety of benefits for practitioners by serving as assistants in the treatment environment. The arm helps to operate without the use of cushions for extra support and the length of the cables can be adjusted so you can operate at a comfortable distance from the treatment area.

## Easy Storage

The ease of detaching the cooling cups from the hand-piece, comfortably allows physicians to use minimal storage space within the operating environment.

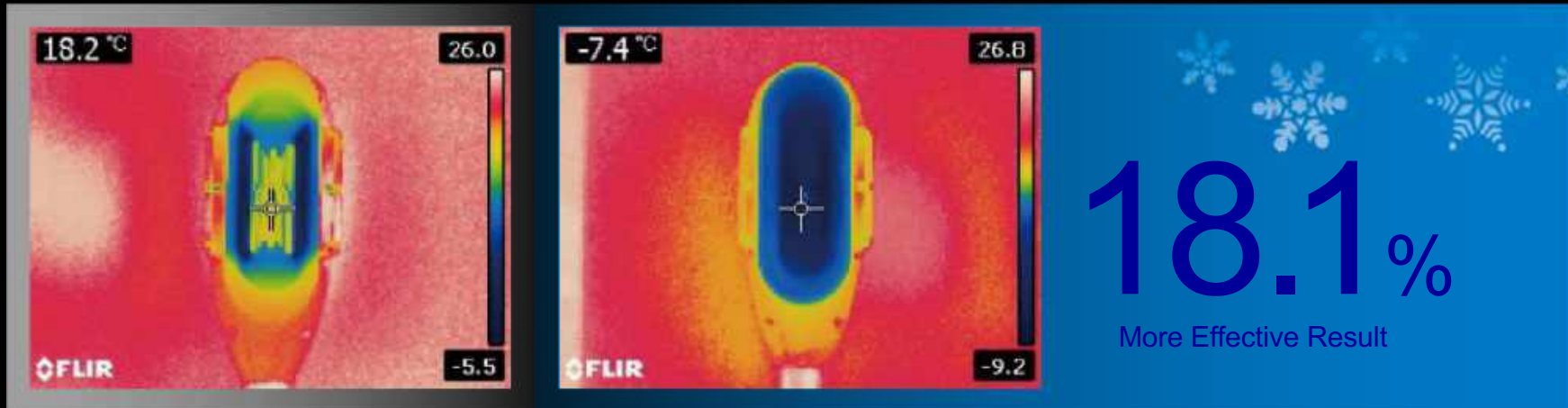


# Upgraded 360° Surround Cooling

360° Surround Cooling Technology unlike the conventional two-side cooling methods, increases efficiency by up to **18.1%**. Allowing delivery of cooling to the entire cup and in result removes fat cells more effectively and offers a **3D effect**

Previous Methods

360° Surround Cooling Technology



**20%**

Stronger Suction

“ It has the world’s first 360° cooling panel that can deliver cooling energy more effectively than the conventional two-sided model. ”

“ Our investigational results confirmed that non-invasive fat cooling results in adipocyte cell death and apoptosis over time. ”

The cooling system of the CLATUU Alpha is engineered to reach its target **temperature faster** than previous models, reducing the inconveniences of waiting and maximizing time efficiency for both patients and physicians.

# New area: Double Chin + Lateral Neck



Before

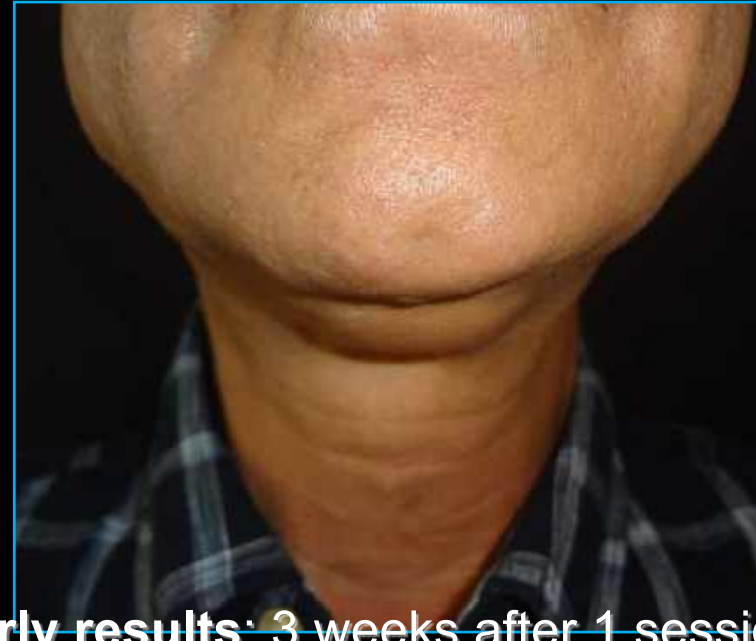


Early results: 3 weeks after 1 session

# New area: Double Chin + Lateral Neck



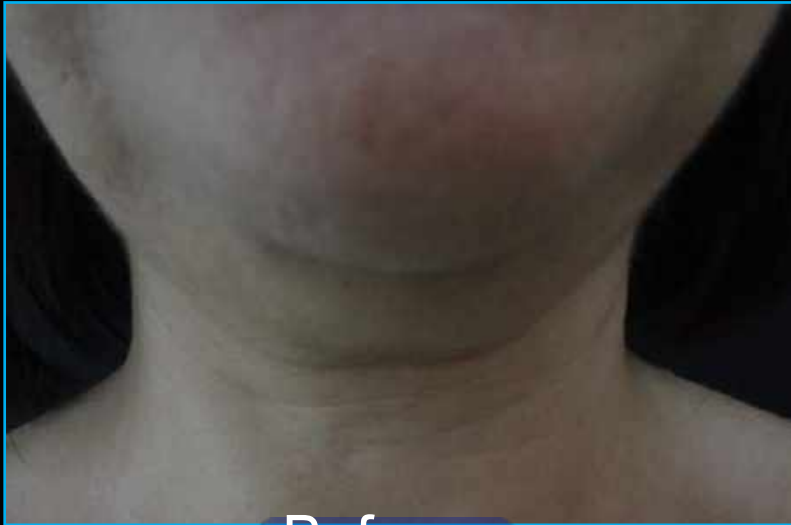
Before



Early results: 3 weeks after 1 session



# New area: Double Chin + Lateral Neck



Before



Early results: 3 weeks after 1 session



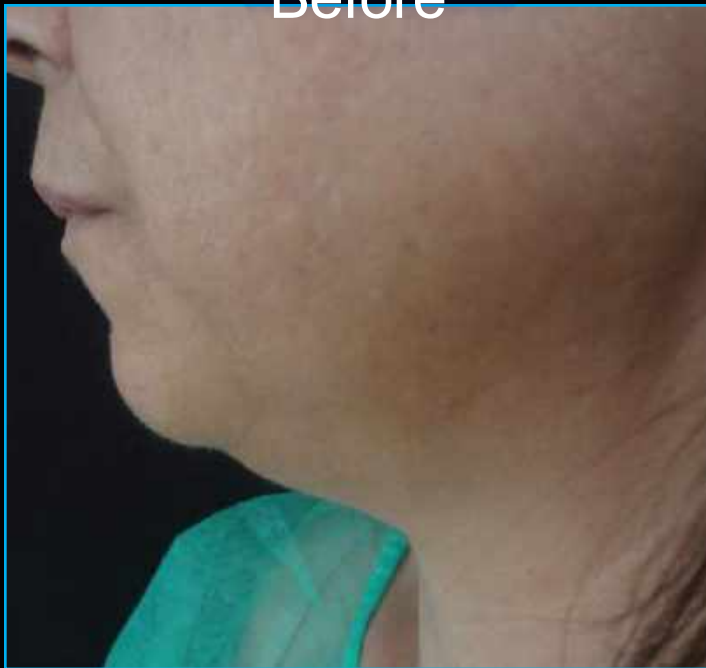
# New area: Double Chin + Lateral Neck



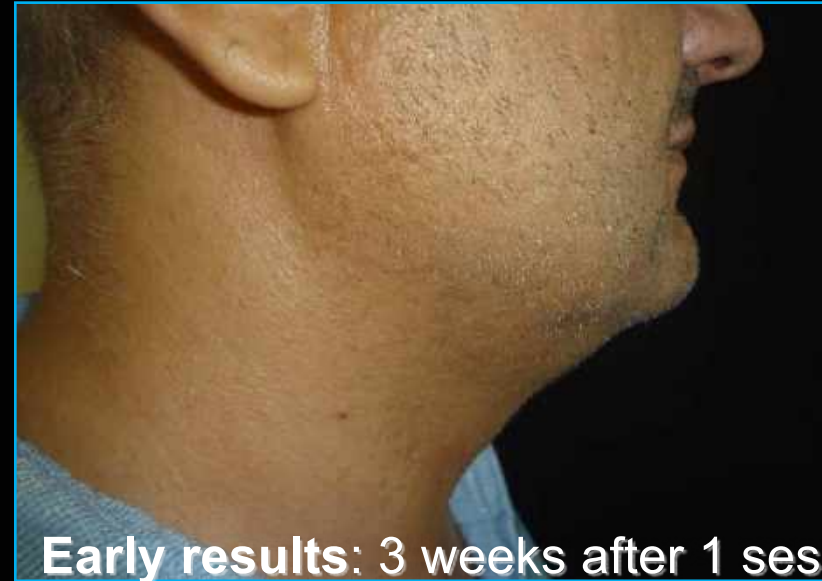
Before



Early results: 3 weeks after 1 session



# New area: Double Chin + Lateral Neck





# New area: Double Chin + Lateral Neck



Before



Early results: 3 weeks after 1 session



# New area: Double Chin + Lateral Neck



# New area: Double Chin + Lateral Neck



Before



Early results: 3 weeks after 1 session



# New area: Double Chin + Lateral Neck



Before



Early results: 3 weeks after 1 session



# New area: Double Chin + Lateral Neck

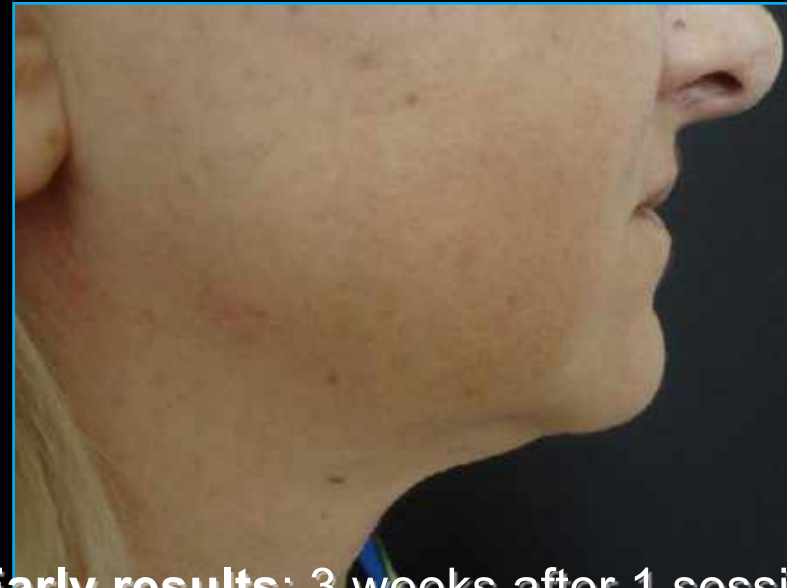


Early results: 3 weeks after 1 session

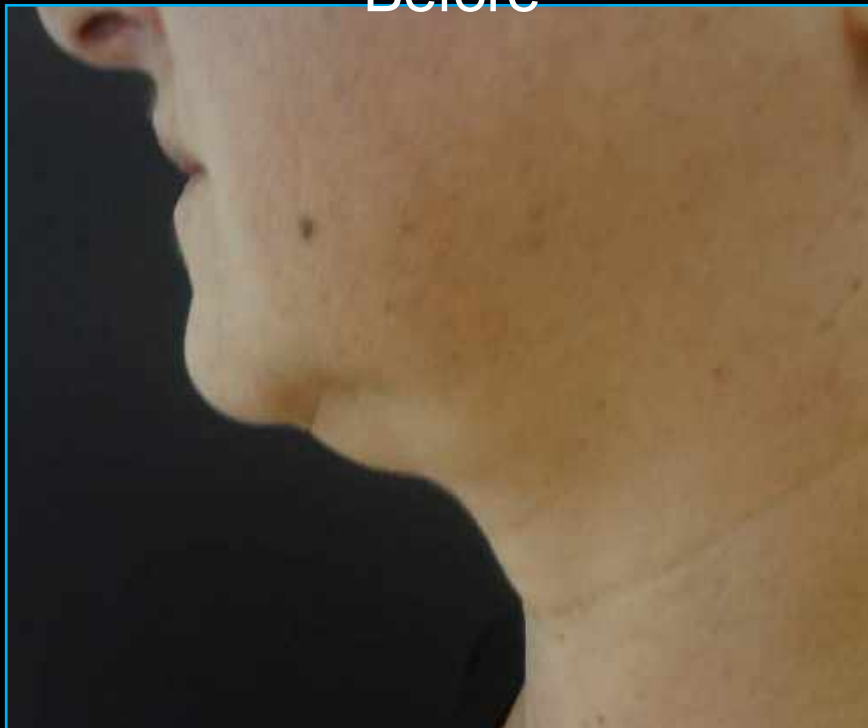
# New area: Double Chin + Lateral Neck



Before



Early results: 3 weeks after 1 session



# New combo operation of the two 3D-Cryolipolysis devices simultaneously



# New combo operation of the two 3D-Cryolipolysis devices simultaneously = Non invasive body sculpting in 2 hours



Inner thighs  
+ abdomen



Outer thighs  
+ lower flanks



## Comparison of existing non invasive technologies for fat reduction

Technology	Mechanism	Pain	Side effects	sessions
HIFU	Necrosis	+++	2w Intense bruising, inflammation	2
Unipolar RF	Apoptosis	++	2-3d inflammation	2-3
Acoustic wave	Apoptosis	0	None	8
<b>Cryolipolysis</b>	<b>Apoptosis</b>	<b>+</b>	<b>1w Bruising, numbness</b>	<b>1-2</b>

### Cryolipolysis for noninvasive body contouring: clinical efficacy and patient satisfaction

Nils Krueger, Sophia v Mai, Stefanie Luebberding, Neil S Sadick  
 Clinical, Cosmetic and Investigational Dermatology 2014:7

## Conclusion

- ✓ 3D Cryolipolysis is a safe and effective treatment modality for the reduction of excess adipose tissue located on torso area avoiding the side effects of invasive procedures.

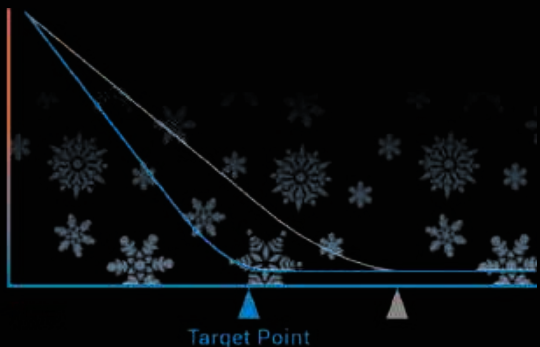
# CLATUU Alpha Treatment



The CLATUU Alpha automatically computes recommended parameters for each cup upon connection of each respective cooling applicator and in result effectively disposes of unwanted fat.

## Faster to Target Point

The cooling system of the CLATUU Alpha is engineered to reach its target temperature faster than previous models, reducing the inconveniences of waiting and maximizing time efficiency for both patients and physicians.



## Adjustable Levels

Not only is capable of 20% stronger suction, it also provides the ability to adjust both cooling and suction levels to confidently provide customized treatments for patients.

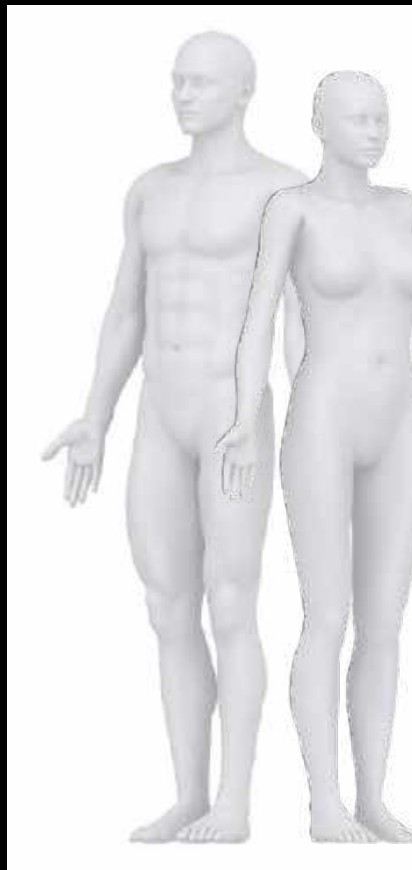
# 20%

Stronger Suction



## Applicators Optimized for Any Treatment

After laborious testing and research, each individual cooling cup has been ergonomically designed to adhere to each curve of the body. The CLATUU Alpha has been optimized to achieve desired outcomes from head to toe.



**Double Chin**

**Axilla**

**Arms**

**Bra Line**

**Abdomen**

**Flanks**

**Love Handles**

**Below Buttocks**

**Outer Thighs**

**Inner Thighs**

**Knees**



# Materials and Methods

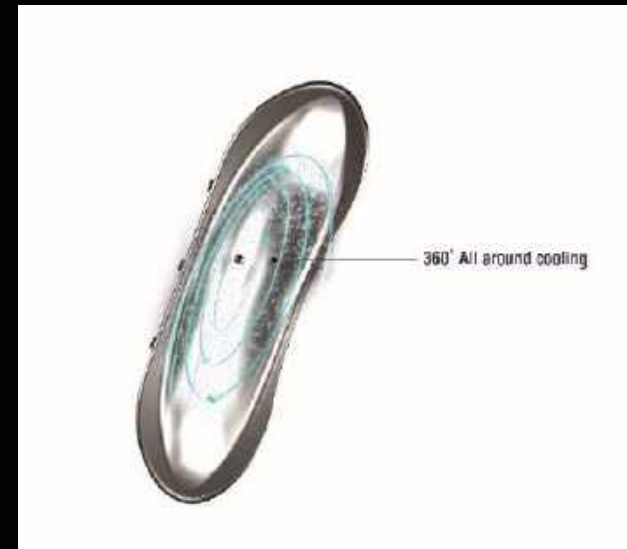
- A prospective study of **135 patients** (130 women and 5 men), treated with 1 session of Cryolipolysis 3D in **difficult** body areas (e.g. **back rolls, anterior thighs, lower legs, knees, arms, axilla and male breasts**)
- Clinical outcomes were assessed (according to GAIS 5-point scale) using skinfold caliper measurements (The FatTrack PRO DIGITAL Body Fat skinfold caliper), patient surveys and 2 blinded plastic surgeons photographs evaluation.
- The studies were conducted using a commercially available non-invasive medical device for cryolipolysis (CLATUU from Classys Inc- Korea) .
- All patients received **gentle massage of the treated area for 3 minutes** and **the follow up ranged from 2,5 - 24 months.**
- Mean age of the patients was 43 years old (19-68)
- Mean Body Mass Index (BMI) was 24,2 (19-39).

# Results

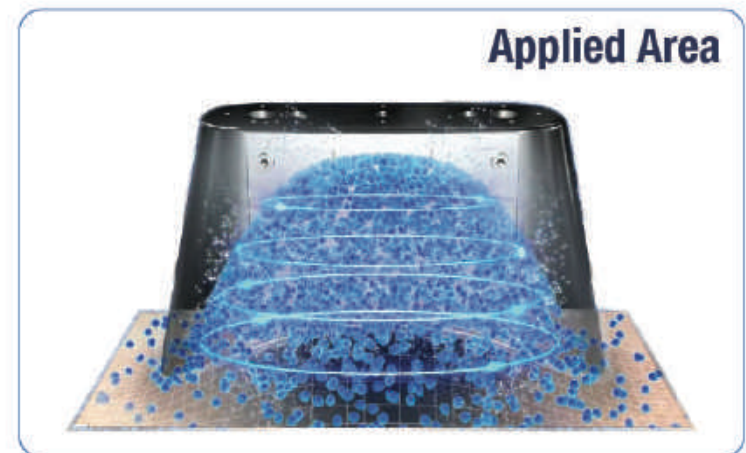
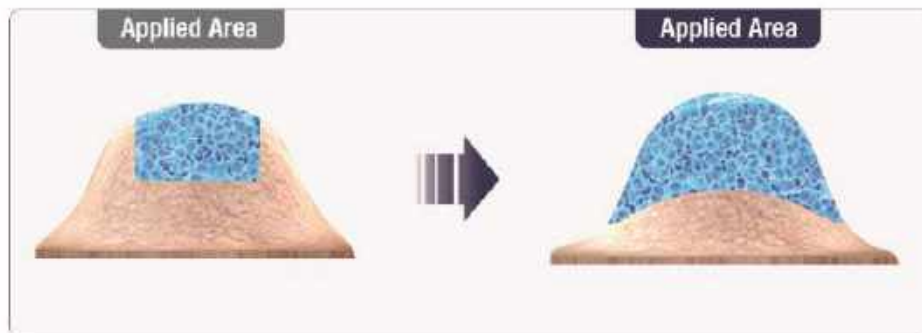
- 254 different areas were treated : 105 patients had treatment to one area, 68 patients to 2 areas and 27 patients in 3 areas.
- Most treated area were the **knees: 108**, followed by **arms : 78**  
**back rolls: 38**, **anterior thighs: 16**, **gynecomastia: 8**, **lower legs: 6**.
- Comparison of the pre- and post-treatment caliper measurements demonstrated significant reduction of the treated areas between **15-40% at 2.5 months**
- Post-treatment **85% of patients** marked the results as **very much improved or much improved**, 10% improved, 5% no change and 0% worse.
- **Plastic surgeons photographs assessment** demonstrated **65% very much improved or much improved** results and 25% improved results and 10% no change .
- In a few cases mild oedema, bruises and numbness were observed after the treatment and were resolved in a few days.

# 360° Cooling patented technology for 3D Cryolipolysis effect

## ■ 360° of cooling mechanism



## ■ All around suction with strong power.





# Handpieces

## Small-Flat



Inner Thighs, Arms, Knees, Calves,  
Back Rolls, Axilla, Anterior Thighs

## Big-Wing shaped



Abdomen, Flanks, Lateral Thighs,  
Anterior Thighs, Gynecomastia

## Results

- Comparison of the pre- and post-treatment caliper measurements demonstrated significant reduction of the treated areas between **15- 38% at 2.5 months**
- Patient surveys : Post-treatment **82% of patients** marked the results as **very much improved or much improved**, 14% improved, 4% no change and 0% worse.
- **Plastic surgeons photographs assessment** demonstrated **69% very much improved or much improved** results and 22% improved results and 9% no change .

# Torso

The **torso** or trunk is an anatomical term for the central part of the human body from which extend the neck and limbs.

The **torso** includes anteriorly the thorax and the abdomen and posteriorly the back rolls-axilla and flanks with their fat deposits that represent the vast majority of the total body fat in both sexes.



## Regional Body Volumes, BMI, Waist Circumference, and Percentage Fat in Severely Obese Adults

[Jack Wang](#), [Dympna Gallagher](#), [John C. Thornton](#), [Wen Yu](#), [Rich Weil](#), [Betty Kovac](#), and [F. Xavier Pi-Sunyer](#)

Body Composition Unit, New York Obesity Research Center, St. Luke's-Roosevelt Hospital, Columbia University, New York

*Obesity* (Silver Spring). 2007 Nov; 15(11): 2688–2698.

# Materials and Methods

- A prospective study of 422 patients (332 women /90 men)
- 1-3 session of Cryolipolysis 3D on the same area
- Mean age of the patients was 45 years old (19-75)
- Mean Body Mass Index (BMI) was 27 (19-35).

# Materials and Methods

Most treated areas were the following:

Flanks : 419

Abdomen : 368

Back rolls/ axilla: 98

Gynecomastia: 25

# CLATUU

Freeze ON Fat OFF



# The trend

## Body Contouring-Non invasive

- Cryolipolysis 3D
- Injection Lipolysis

### **Body Sculpting and Non-Invasive Fat Procedures Boom**

"Plastic surgeons are able to give patients more options than ever before for fat elimination or redistribution. Patients appreciate having options, especially if they can act as maintenance steps while they decide if getting something more extensive down the line will be right for them."

Current non-invasive fat reduction and skin tightening procedures continue to gain popularity:

**Non-invasive fat reduction procedures that use special technology to "freeze" away fat without surgery increased 7%**

Non-surgical cellulite treatments that use lasers to eliminate fat increased 19% (up 55% since 2000)

**Non-invasive skin tightening procedures that target fat and tighten sagging areas increased 9%**

# Result of Liposuction to love handles - outer and inner thighs

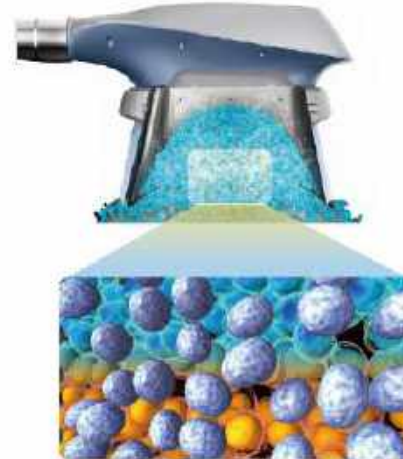




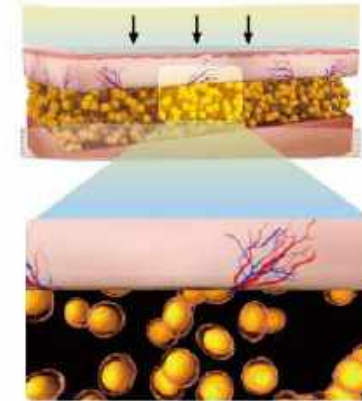
## Mechanism of Freezing fat away.



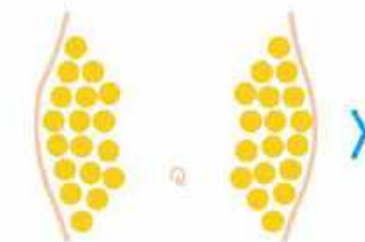
**1** Applied target area is suctioned into the handpiece.



**2** Cooling energy treats the fat layer without damaging surrounding tissues.



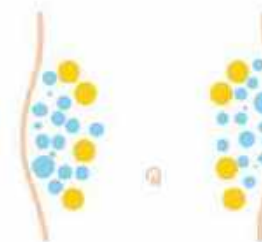
**3** Damaged fat cells are broken down and eliminated by natural body process (apoptosis).



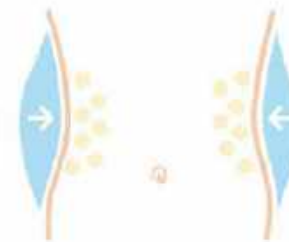
Fat bulges in the abdomen.



Delivering cool energy



Fat cells destroyed

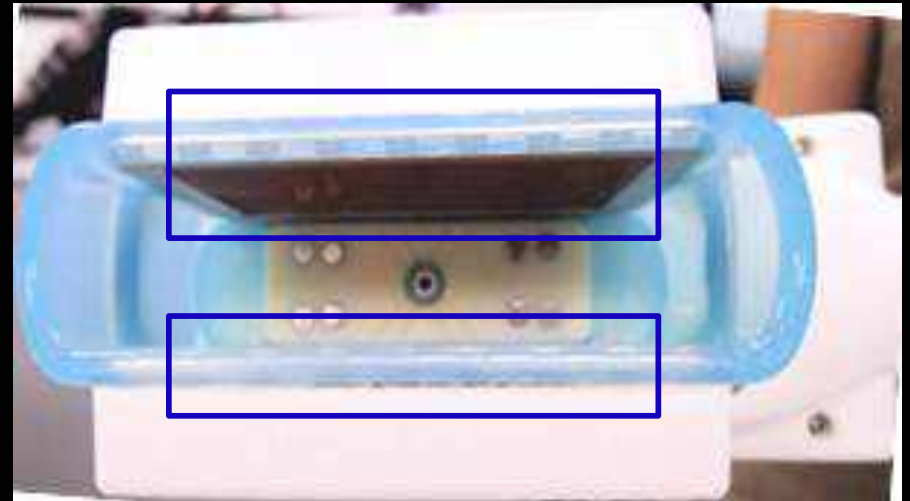


Number of fat cells are decreased in abdomen

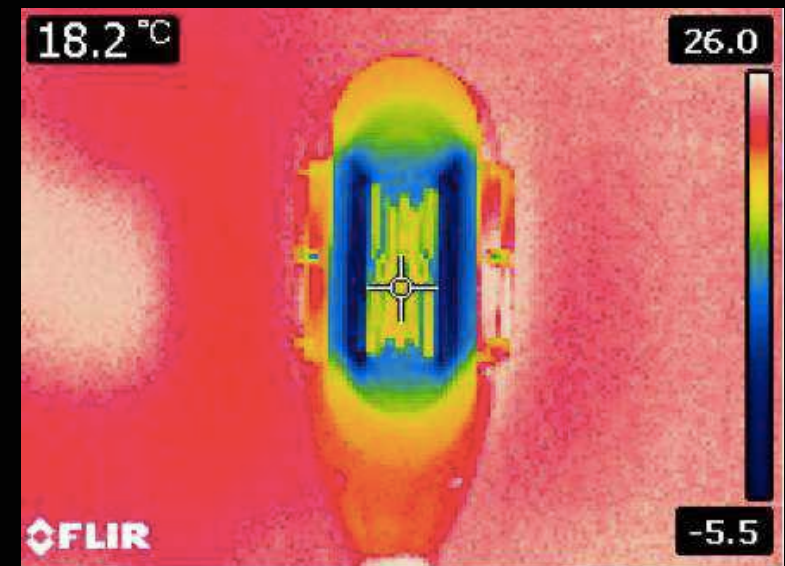
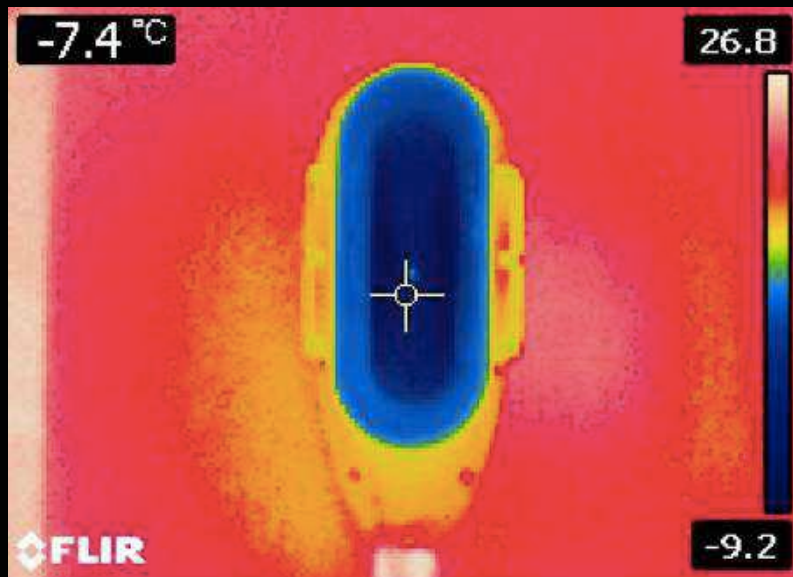
**360° Cooling effect with 3D result**



**Flat plated handpiece with limited effect**



**VS**



# New area: Double Chin + Lateral Neck



# New area: Double Chin + Lateral Neck



**NO DISCLOSURES**