



cooltech  
D E F I N E

# Agenda

- Who Are We
- The Fat Concept
- The Science Behind Cryoadipolysis
- The Body Contouring Market
- Why Cooltech Define And Cryoadipolysis Comparison
- The Cooltech Define Procedure, Patient Selection, Expectation And Follow Up
- Clinical Awareness And Evidence



# Who Are We?



**2010**  
Barcelona  
5 employees

**2013**  
Headquarter  
at Barcelona  
tech district

**2017**  
Service,  
Logistic & own  
factory at  
Bulgaria

**2018**  
LATAM  
office  
*Colombia*

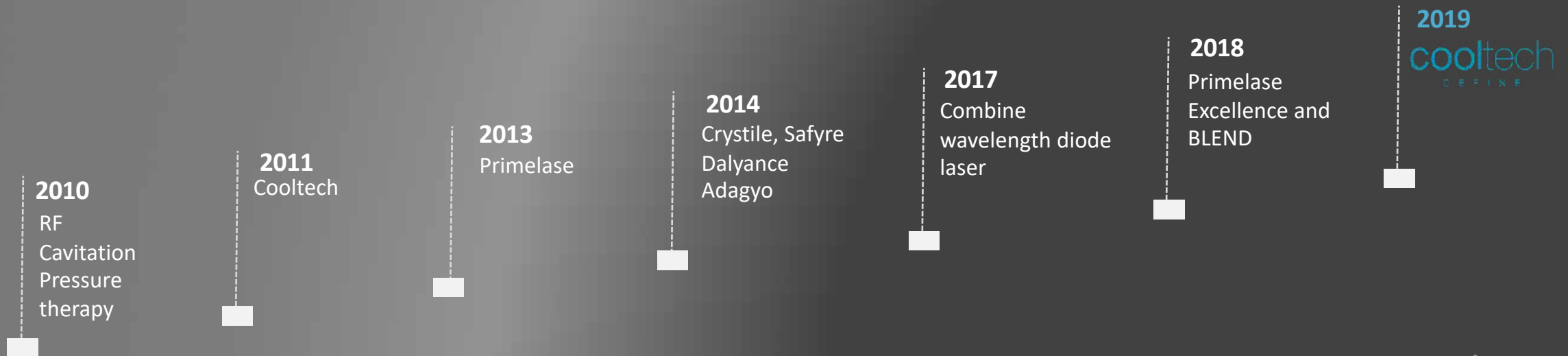
**2019**  
International  
hubs  
EMEA- *Italy*  
APAC- *HK*

**2019**  
160+ employees  
20% R&D  
70+ countries  
9000+ devices  
M+ treatments



“At Cocoon Medical, we continually challenge ourselves to strive for excellence, quality and innovation providing clinically based world class products to ultimately improve the lives of the patients we serve.”

**Miguel Pardos**  
CEO Cocoon Medical



# Certification & Qualification

- 24 patents including Europe, United State, China, Japan, Korea and other international markets.
- Medical approved in major international market.
- ISO certificate of design, management of manufacture and service of medical laser treatment.



## Cryoadipolysis by Cocoon Medical

- 9 years of Cryoadipolysis expertise in the market.
- A clinical proven Cryoadipolysis medical device for localized fat reduction.
- Supported by multiple clinical publications.
- Cocoon Medical's Cryoadipolysis technology is cleared in the European Union, Australia, Singapore, Korea, Israel and other international markets for non-invasive fat layer reduction.
- Millions treatments performed in 70 countries with 8000+ systems installed.

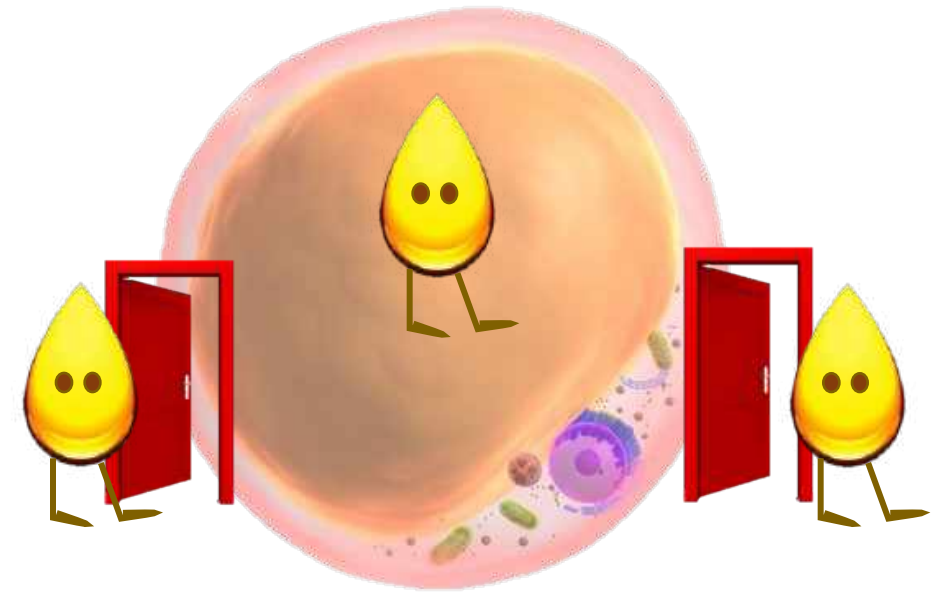
A white medical device, the Cooltech Optune, is shown against a dark blue background. The device has a central screen, a control panel with a circular button, and two handpieces at the bottom. The brand name 'cooltech' and 'OPTUNE' are visible on the front panel.

# The Fat Concept



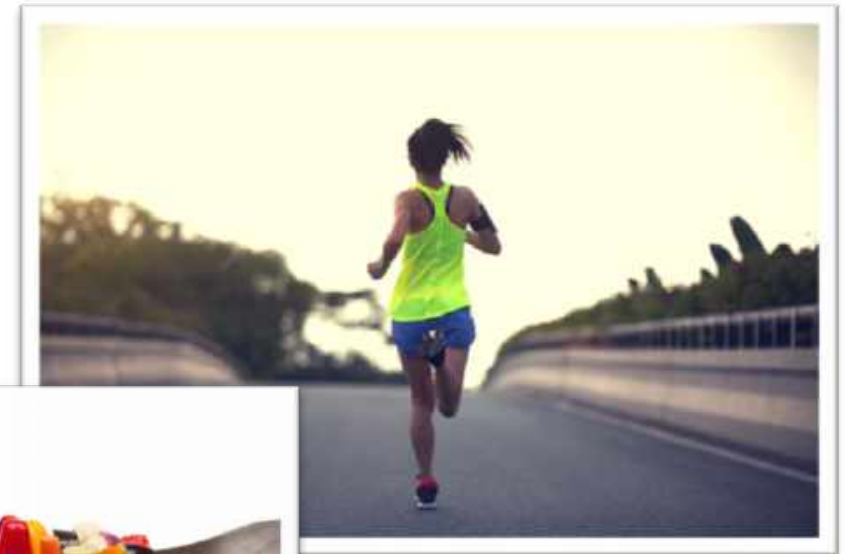
## What Cause Of Fat?

- Diet habits
- Exercise habits
- Genetics
- Sickness
- Environmental factors



## Functionality Of Fat

- Energy Supply
- Promote cell growth and tissue forming
- Vitamin absorption (A, D, E & K)
- Protection & maintenance (Bone, organ, hormones & body temperature)
- Curve!



## Fat... Is That Bad?

Fat is important to endocrine organ

Too much fat can lead to

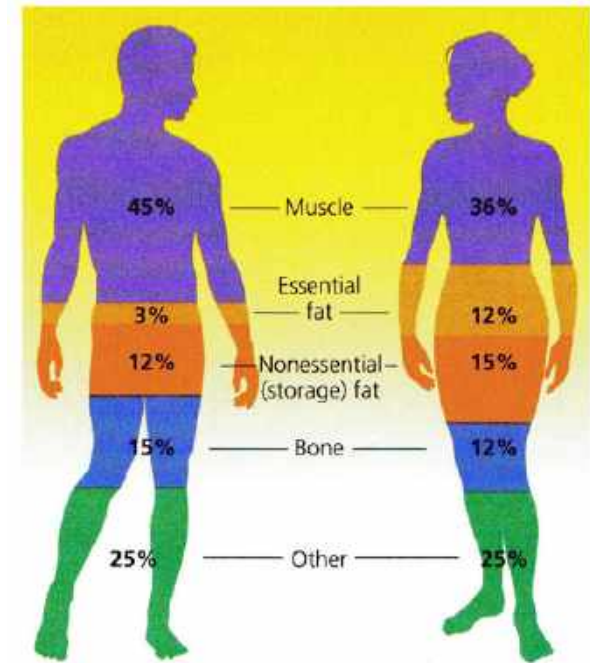
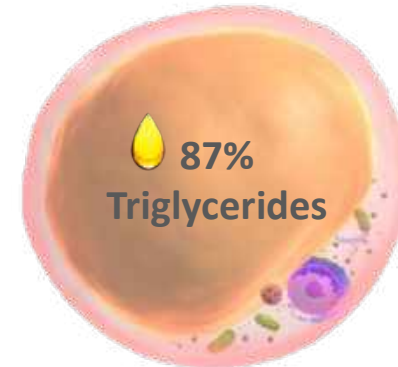
- Knee pain, back problem
- Lowered immunity to infection
- Obesity related diseases
  - High blood pressure, stroke, heart disease, gallstones, type II diabetes, etc.

Too little fat can lead to

- Weakness, unconscious, tired,
- Lowered metabolism, irregular bowel movements, decrease in growth hormones, vitamins deficiencies
- Irregular menstrual cycles
- Emotional problem

## The Fact of Fat

- Set number after adulthood
- Essential fat vs excess body fat
- Adipocyte: triglycerides, nucleus and general cell contents
- 1 pound of fat = 3500 calories
- 87% triglyceride in adipocyte

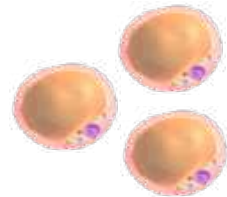


**Figure 6.1** Body composition of a typical man and woman, 20–24 years old. SOURCE: Adapted from Brooks, G. A., et al. 2005. *Exercise Physiology: Human Bioenergetics and Its Applications*, 4th ed. New York: McGraw-Hill.

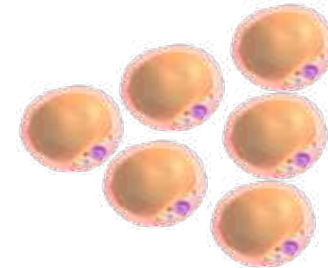
## Hypertrophy & Hyperplasia

- Set number after adulthood
- Mainly in childhood: gain weight = fat cell amount increase = hyperplasia
- Mainly in adulthood: gain weight = fat cell size increase = hypertrophy

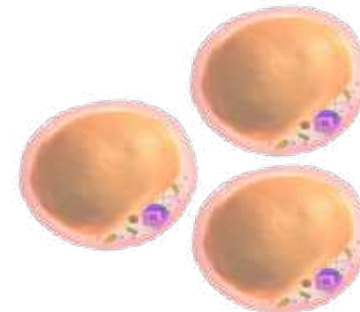
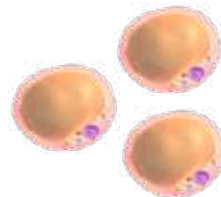
Hyperplasia



Gain weight



Hypertrophy



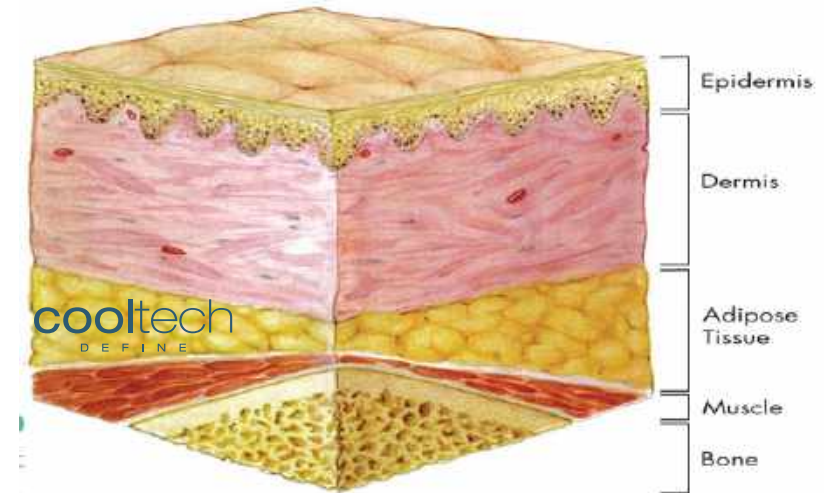
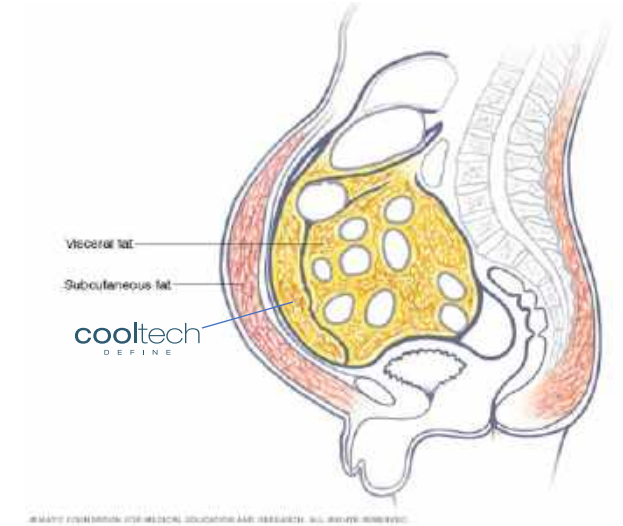
## Body Contouring

- Basic tissues structure
- Fat reduction vs weight reduction
- Subcutaneous fat vs visceral fat

What patient cares?



**Aesthetic outcome!**



A photograph of a Cooltech Define cryolipolysis machine, which is a white, rectangular device with a screen and various ports. The machine is shown against a teal background with a circular pattern. The text "cooltech DEFINE" is visible on the front of the machine. The title "The Science Behind Cryoadipolysis" is overlaid on the right side of the image in white text.

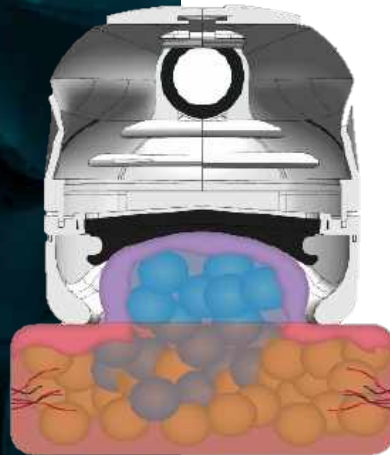
# The Science Behind Cryoadipolysis

# Cryo adipolysis

- Invented by scientist of Wellman Center for Photomedicine, Massachusetts General Hospital and Harvard Medical School.
- Non invasive fat reduction technique based on the application of controlled cooling.
- Derived from two case reports:  
70's - Popsicle panniculitis  
80's - Equestrian cold panniculitis
- Groundbreaking research from Harvard & MGH.
- Adipocyte is hypersensitive to cold – more so than skin, nerve, muscle.
- Cooling triggers natural fat cell death via apoptosis



# How does it work?



- Non-invasive controlled cooling of fat cells to induce adipolysis without damage to other tissues or structures\*<sup>1</sup>
- Biologically selective energy extraction affects adipocyte only\*<sup>1</sup>
- Adipocyte is hypersensitive to cold – more so than skin, nerve, muscle\*<sup>1</sup>
- Cooling triggers natural fat cell death via apoptosis\*<sup>1</sup>

\*<sup>1</sup> Author(s): Zelickson B, Egbert BM, Preciado J, Allison J, Springer K, Manstein D.  
Source: Dermatologic Surgery. 2009; 35(10):1462-1470

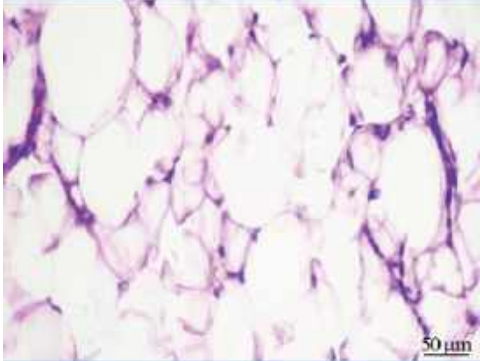
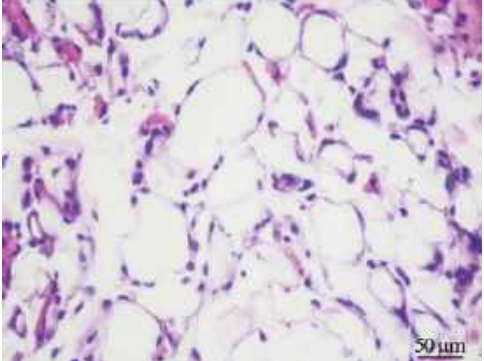
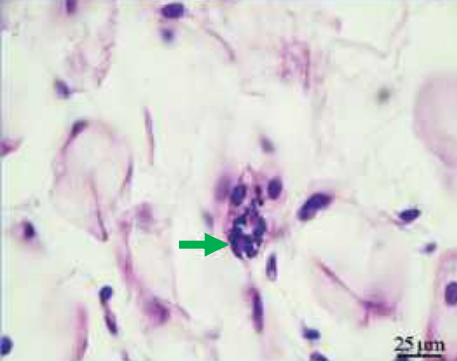
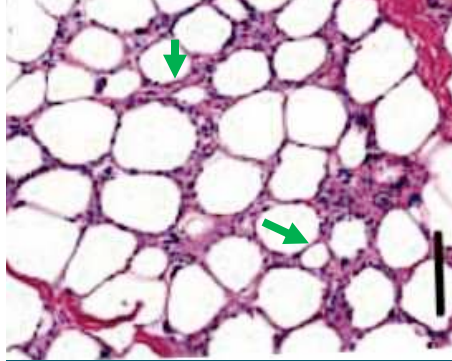
# Mechanism of action:



- 1** The treatment begins by creating a vacuum so the fatty tissue is in total contact with the applicator.
- 2** The temperature decreases in the treatment area.
- 3** The adipose cells are damaged by exposure at low temperature.
- 4** The nucleus of the fatty cells crystallizes
- 5** Inflammatory response.
- 6** 48 hours post treatment  
Macrophage recruitment
- 7** Phagocytosis.
- 8** 30 days post treatment  
Lower immune response
- 9** 90 days post treatment  
Lower thickness of interlobular septa.

# Mechanism Of Action

Histological effect of adipose tissue after exposure at low temperature.

| Control site                                                                                   | 4 days post treatment                                                                           | 17 days post treatment                                                                            | 28 days post treatment                                                              |
|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  <p>50 μm</p> |  <p>50 μm</p> |  <p>25 μm</p>  |  |
| <p>Subcutaneous adipose tissue</p>                                                             | <p>Immune response, increased amount of mononuclear cells (macrophages)</p>                     | <p>Nuclear fragmentation and structure change of adipocyte (apoptotic sign marked with arrow)</p> | <p>Adipocyte lysis.</p>                                                             |

## Where Does The Fat Goes?

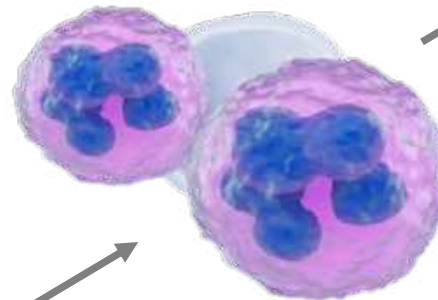
Normal adipocyte  
(aka fat cell)



Cooling is applied  
and triggers the  
apoptotic pathway



The fat cell dies  
and collapse



Macrophage digest the  
dead cells and clean  
through the lymphatic  
system



Liver processed as an  
energy source for body.



# The Body Contouring Market



# Global Body Contouring Market Overview

- The 15 major body contouring markets worldwide in 2015.
  - NA-US, Canada, Brazil, Mexico
  - EMEA- France, Germany, Italy, Spain, UK, Russia
  - APAC- China, South Korea, Japan, Taiwan, Australia
- Among those countries, Brazil, Mexico, Germany, China, South Korea, France, Japan, Colombia, the UK, the US, and Spain had the highest number of body contouring procedures in 2014.
- According to the ASPS there was an 18.7% increased in the number of these procedures performed from 2014 to 2015, and a 58% increased in the number of non-surgical skin tightening procedures.
- In 2016, the global body contouring market reached a value of US\$ 5.3B.
- In 2016, Only 6% of international aesthetic practices offer body shaping procedures (vs 15% in NA)
- In 2017, Cryoadipolysis is the leading technology for fat reduction worldwide. It shared almost 50% in the market.

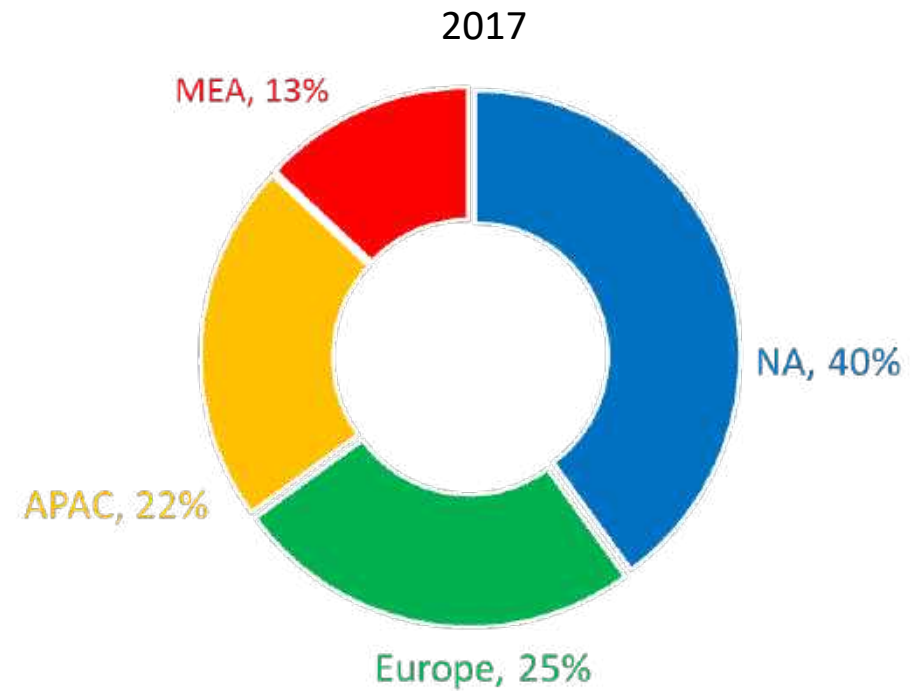
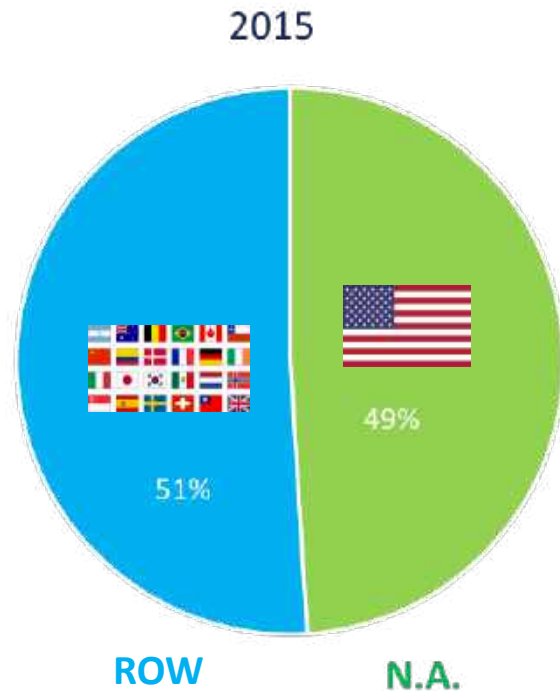


## Consumer Data

- Cryoadipolysis is the top procedure consumer is considering which occupied 58% (ASDS 2017)
- 85% of consumers concerned with excess body fat in specific areas (ASDS 2017)
- 73% of patients are bothered by excess fat under the chin (ASDS 2017)
- 117+M considerers non-surgical body contouring procedure in UK, France, Germany, Brazil, Australia, Japan, Korea
- In 2017, 35M consumers expressing interest in body contouring, specifically the Cryoadipolysis procedure, more than 46% are male.



## 2015 Global Body Contouring Market Data



Source: Market Research Future

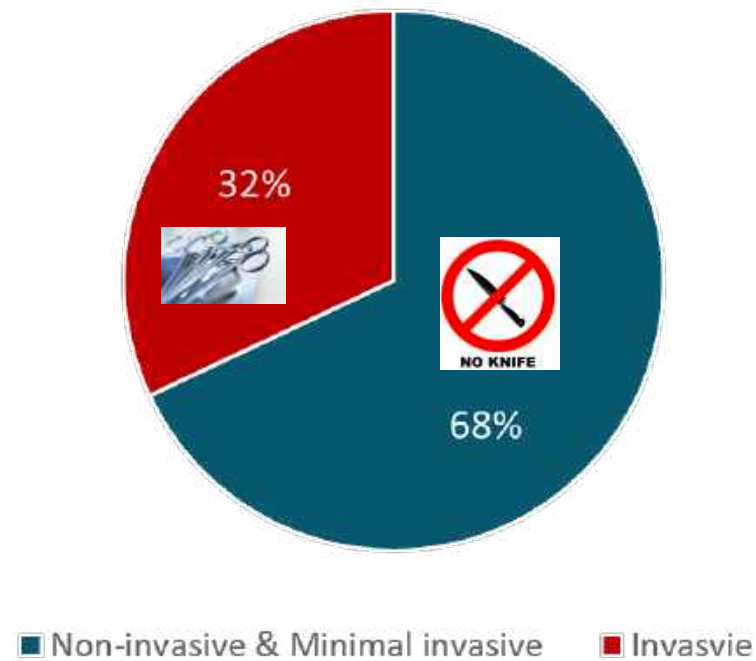
In 2015, it is estimated that the overall body contouring market in 2015 was \$671.8m across the 15 major markets.

Americas dominate the global body contouring devices market by accounting for over 49% of overall market share. But 2017, the international market rapidly raised to 60%.





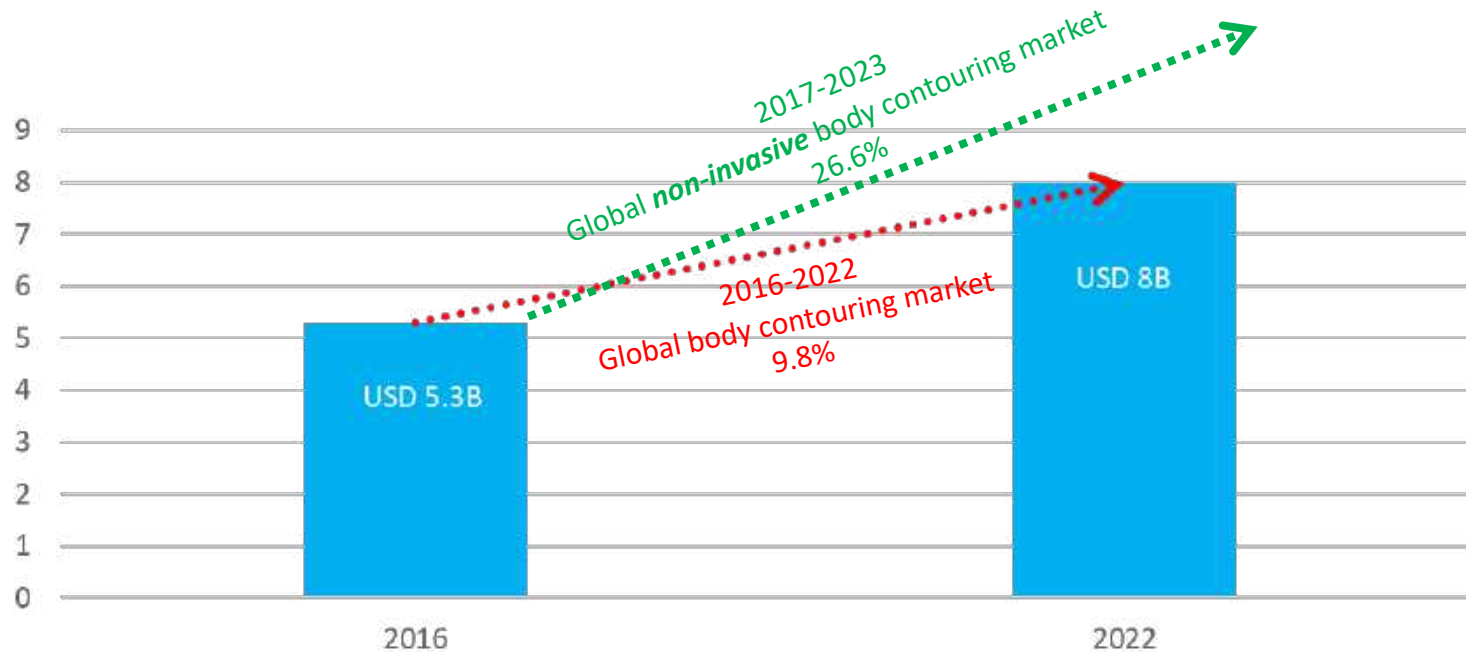
## 2015 Invasive vs Non-invasive Body Contouring Market



In 2015, the non-invasive and minimal invasive body contouring segment holding almost 68% of the overall market share.



## 2016 -2023 Global Body Contouring Market



- The global body contouring market reached a value of USD 5.3B in 2016. Owing to this, the market is expected to reach a value of more than USD 8B by 2022.
- The market forecast the global **body contouring marketing** to growing at a CAGR of around **9.8%** during forecasted period 2017-2023. But **26.6%** for the **non-invasive fat reduction devices market**.
- Rising disposable incomes, presence of sophisticated infrastructure and demand for better fat reduction procedures are some of the other factors driving the global body contouring market.

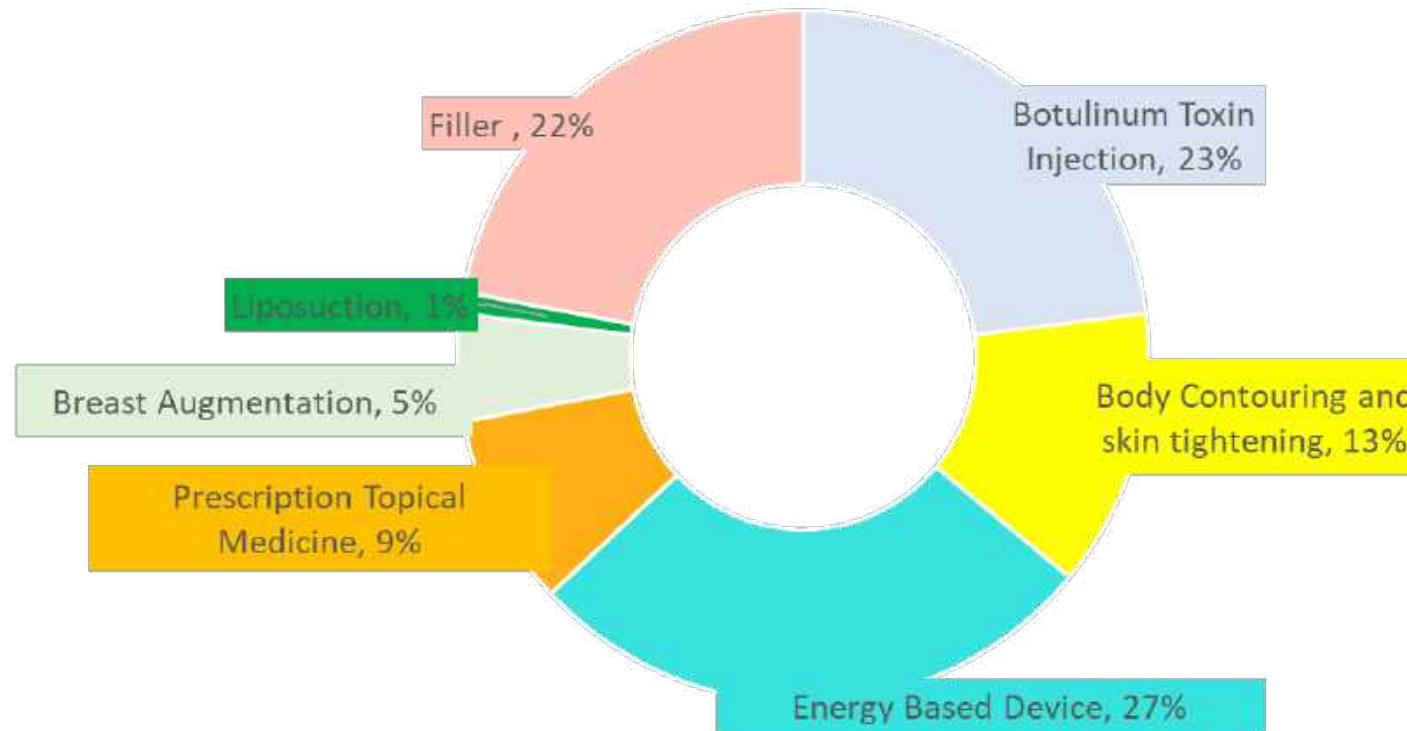


## APAC Body Contouring Market Overview

- The APAC medical aesthetics devices market (aesthetic Laser devices, body contouring devices, microdermabrasion and ultrasound) was worth USD1.97B in 2016 and estimated to be growing at a CAGR of 11.24%, to reach \$3.36 billion by 2021.
- Energy based devices, including body contouring and skin tightening reached 500M. Estimated growth of 12% from 2016-2020.
- The Asia-Pacific region is likely to witness highest CAGR from 2016 to 2021, mainly due to increasing middle class disposable income.
- China, South Korea, Japan, Australia and Taiwan are leading in APAC body contouring market.



## 2015 APAC Aesthetic Market By Category



Source: APAC aesthetic market study, 2016-medical Insight Inc.

- Surgical and non-surgical body contouring is 1:13 in 2015.
- 3<sup>rd</sup> largest category in aesthetic market APAC.
- The market forecast to growing at a CAGR of around 12% during forecasted period 2016-2020 of energy based device and body contouring category.



## APAC Body Shaping Market Trend

**Table 13-4**  
**Total Asian Sales of Aesthetic Products,**  
**2013 – 2018 (\$MM)**

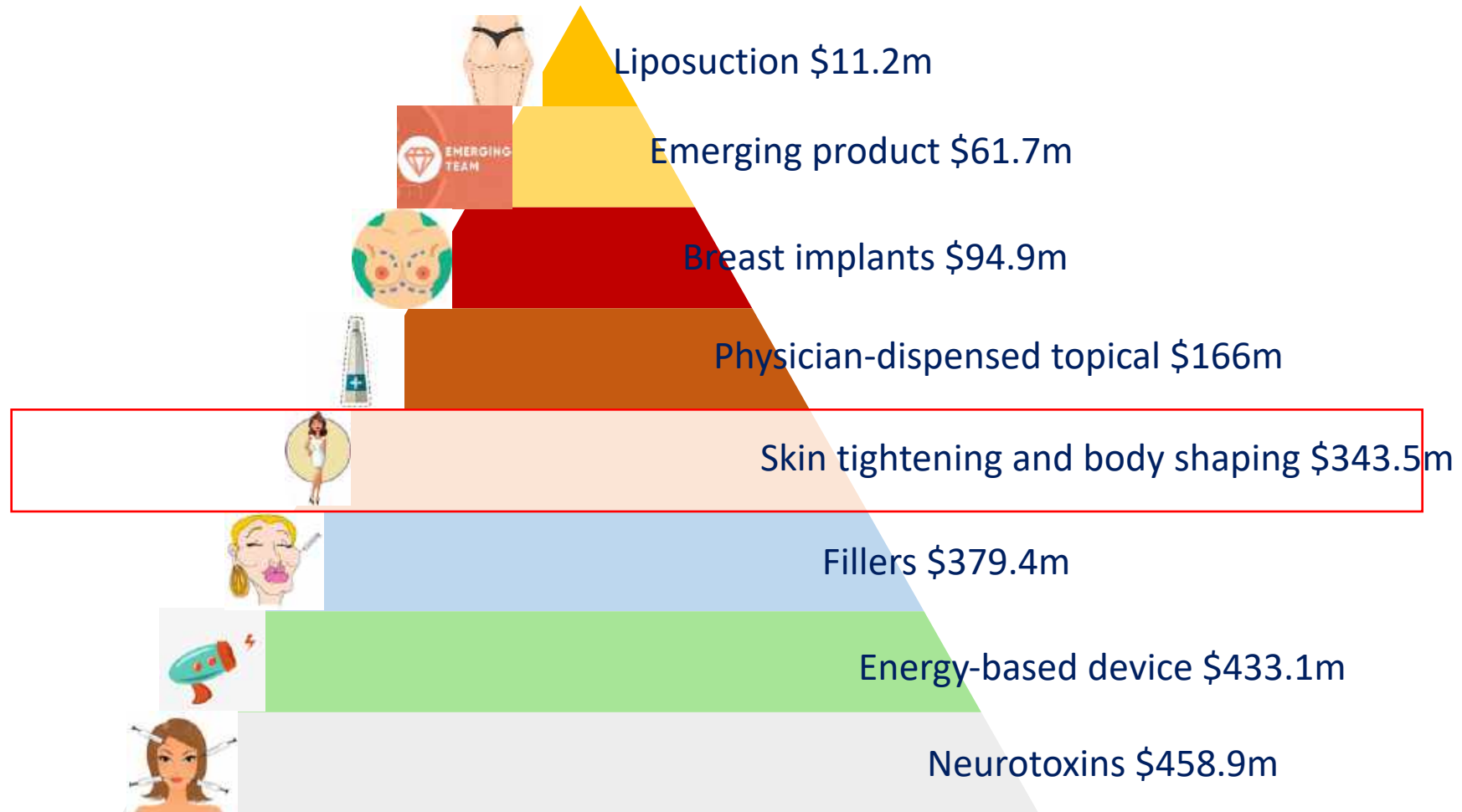
|                                         | 2013         | 2014         | 2015           | 2016           | 2017           | 2018           | CAGR         |
|-----------------------------------------|--------------|--------------|----------------|----------------|----------------|----------------|--------------|
| Energy Devices                          | 226.7        | 254.4        | 285.3          | 319.6          | 357.9          | 400.7          | 12.1%        |
| <b>Skin Tightening and Body Shaping</b> | 98.9         | 115.3        | 135.6          | 158.9          | 184.1          | 213.6          | 16.6%        |
| Neuromodulators                         | 195.6        | 218.1        | 243.0          | 271.0          | 302.2          | 342.5          | 11.9%        |
| Fillers                                 | 177.7        | 198.7        | 222.5          | 249.4          | 279.9          | 314.4          | 12.1%        |
| Chemical Peels                          | 5.9          | 6.1          | 6.4            | 6.7            | 6.9            | 7.2            | 4.0%         |
| Liposuction                             | 9.5          | 9.7          | 10.0           | 10.2           | 10.4           | 10.7           | 2.4%         |
| Breast Implants                         | 61.5         | 66.1         | 71.2           | 76.7           | 82.6           | 88.9           | 7.6%         |
| Physician-Dispensed Topicals            | 55.1         | 61.7         | 71.1           | 81.1           | 91.9           | 103.5          | 13.4%        |
| Emerging Products                       | 8.0          | 18.0         | 34.0           | 60.0           | 116.0          | 222.0          | 94.4%        |
| <b>Total</b>                            | <b>838.9</b> | <b>948.2</b> | <b>1,079.0</b> | <b>1,233.5</b> | <b>1,431.9</b> | <b>1,703.5</b> | <b>15.2%</b> |


Source: Medical Insight, Inc.

Note: includes device disposables but does not include device service revenues



# Total Asian sales of aesthetic products 2019 forecast



A white medical device, the Cooltech Define, is shown against a dark teal background. The device has a central screen, a power button, and two handpieces at the bottom. The brand name 'cooltech' and 'DEFINE' are visible on the front panel.

# Why Cooltech Define

**1** Device, multiple possibilities

Partners in  
**60**  
countries

**2<sup>nd</sup>**  
generation,  
even better result

**70min**  
long lasting results

**360°**  
Coverage cooling

**8** Years of cryoadipolysis expertise

**4** Simultaneous Applicators operations

**9** Handpieces and templates, adapts to all areas

**1/5** R&D expert

**-10°**  
10 mins procedure  
The perfect balance of  
Safety and efficacy





# 4 in 1 Simultaneous Operation

- solo treatment or friends gathering. It's all about you need
- With different combination of treatment areas



**1 area = 1 shot**



**Save time**



**Save cost**

Tiny



+

Straight



+

Tight



+

Double



Different areas  
 Different body shapes  
 Fulfil different patient needs  
 9 applicators, multiple opportunities



Curved

+



Oval

+



Oval curved

+



Tiny curved

+



Delta

# 9

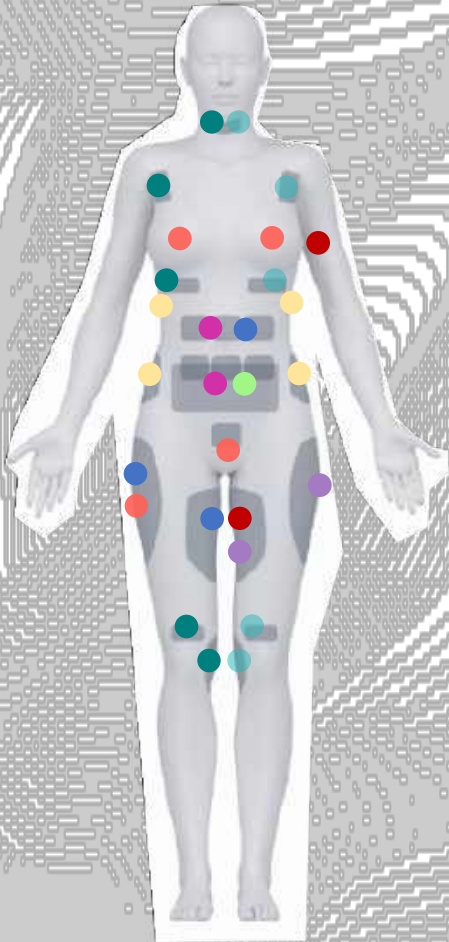
**3D TEMPLATES  
FOR A PERFECT  
DELIMITATION AND  
ASSESSMENT OF THE  
TREATMENT AREA**



**Advantages:**

- More precise to measure the treatment fat area
- Choose the best fit handpiece to achieve the best result.

# 9 Smart Applicators



Oval HP



Oval/Curved HP



Curved HP



Double HP



Straight HP



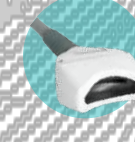
Delta HP



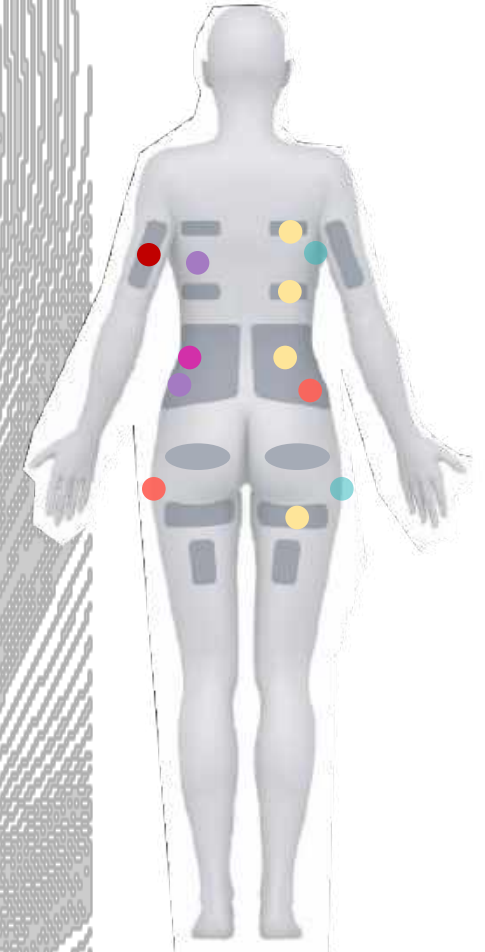
Tiny HP



Tight HP



Tiny Curved HP



Fit different body shapes  
and treat various areas

# Double Handpiece



## Double Handpiece

- ✓ The largest cooling surface area – **318.59cm<sup>2</sup>**
- ✓ Treating larger area in 1 treatment
- ✓ Save the time for customers, therapists, and the use of treatment room
- ✓ Save Cost



Save time



Save cost

# Handpiece Housing & Strap

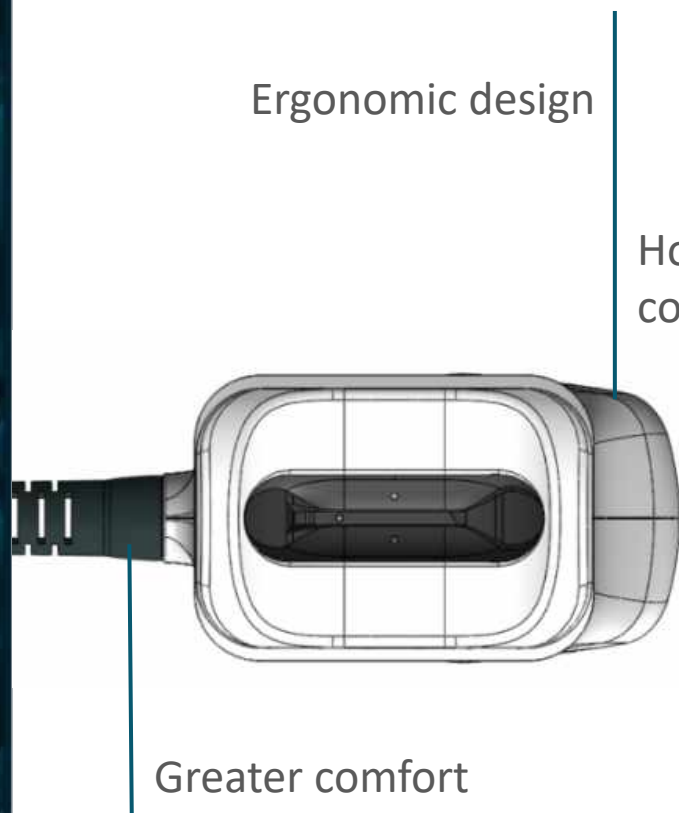
## Handpiece Housing & Strap

Advantage:

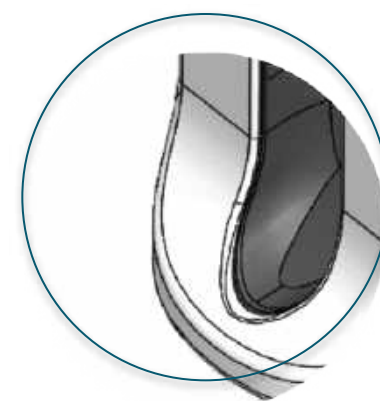
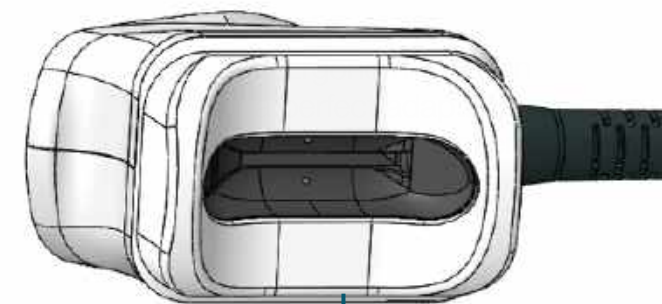
.To hold the handpieces during treatment to prevent the loosen of handpieces from the treatment area.



**360°  
power  
cooling**



Homogeneous cooling



Extraordinary results

# 360° Power cooling

Leads  
to

- Homogenous cooling to all treatment areas.
- Optimized design and internal shape ensure perfect contact with the treated area.



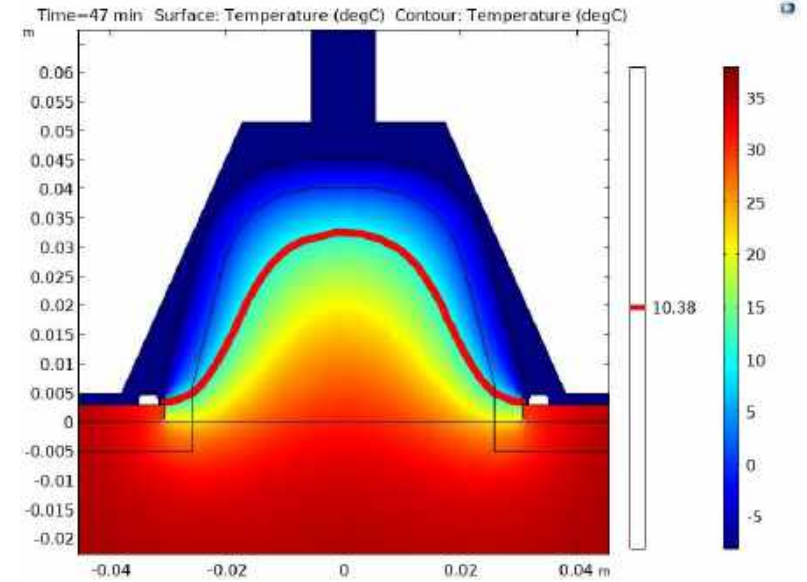
Cool  
faster



Better  
comfort

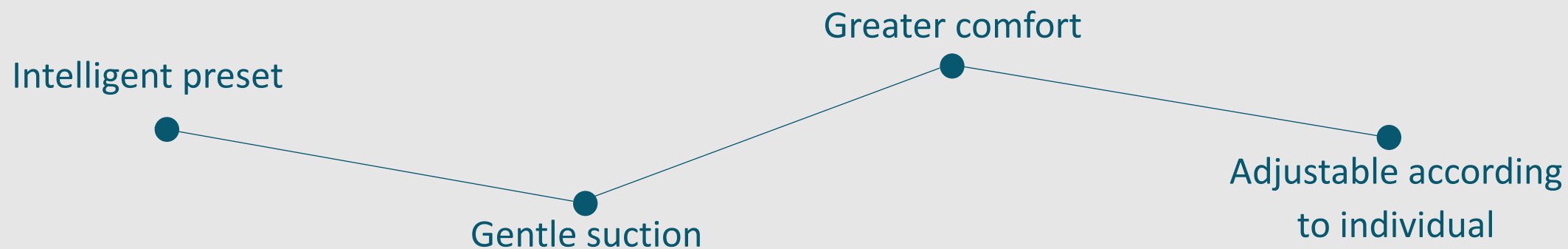


Greater  
result





# 3 Levels Smart Suction



# 360° Massager

## Unique 360° Massager

### Advantage:

- .Better result
- .Greater comfort
- .Better hygiene
- .Safer
- .More effective

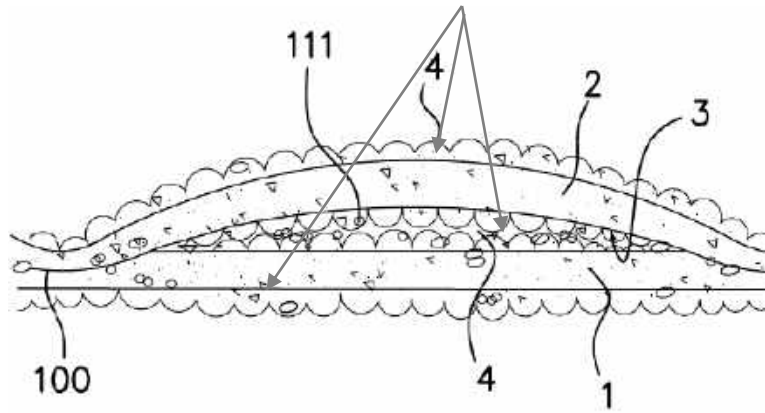
Lasers Surg. Med. 46:20–26, 2014. © 2013 The Authors. Lasers in Surgery and Medicine Published by Wiley Periodicals, Inc.



**MASSA**

To stimulate p  
circulation in t

Cryoprotectant Gel

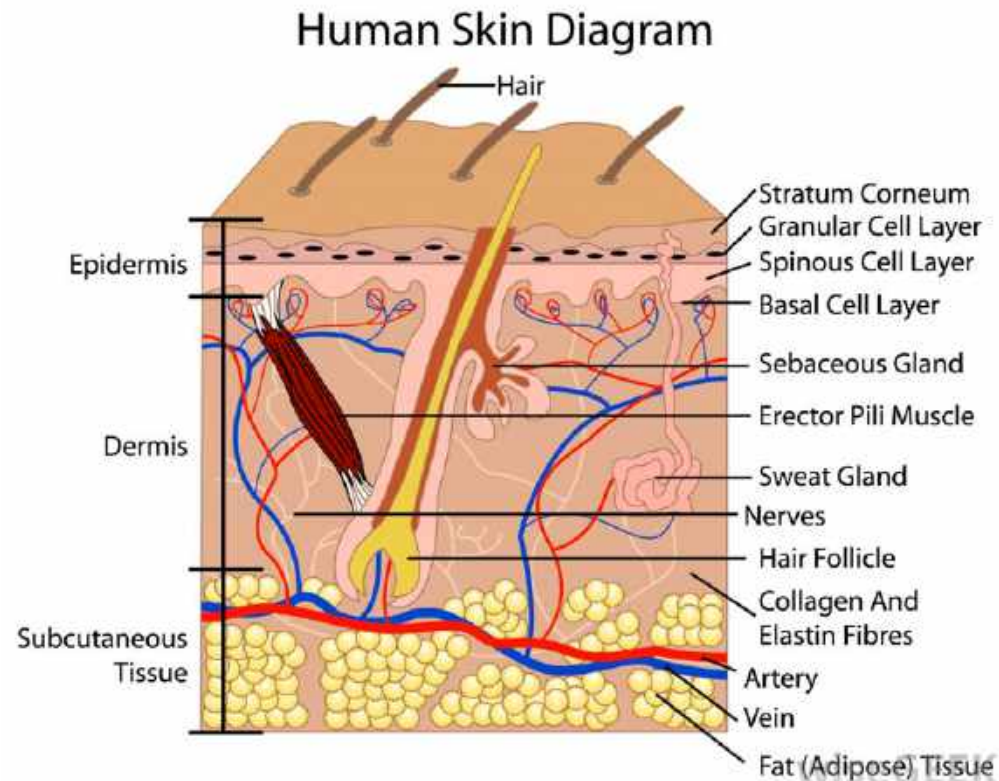


## Patented RFID CoolGel Pad

- Patented formula
- Exclusive technology
- Meticulous design, greater coverage, maximize protection
- Excellent thermal conductor
- RFID single application safety control



# Tissue Structure

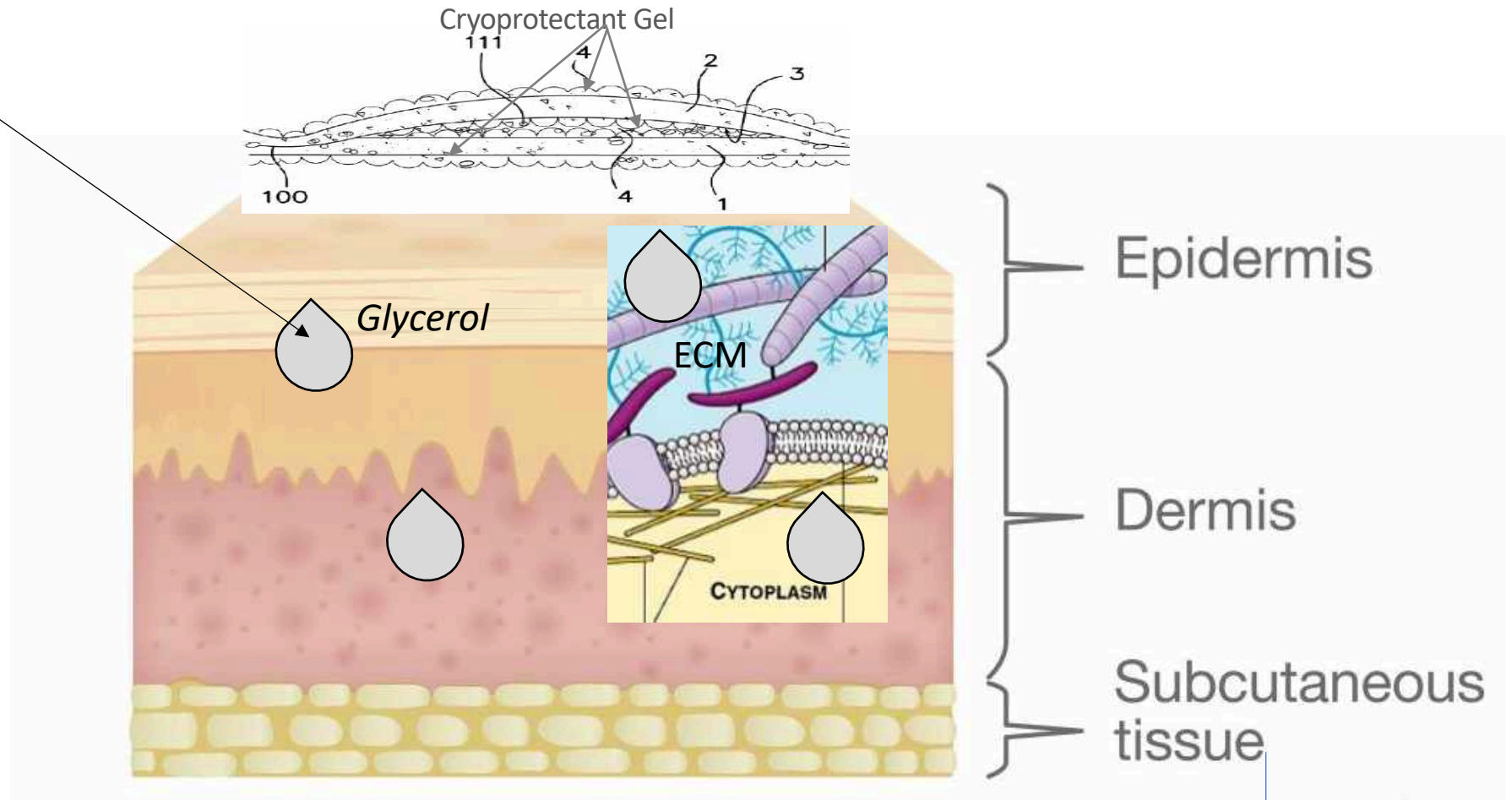


| Tissue                | Water Content |
|-----------------------|---------------|
| Brain                 | 75%           |
| <b>Skin</b>           | <b>72%</b>    |
| Blood                 | 83%           |
| Heart                 | 79%           |
| Lungs                 | 79%           |
| Liver                 | 68%           |
| Intestine             | 75%           |
| Kidney                | 83%           |
| Spleen                | 76%           |
| <b>Adipose tissue</b> | <b>10%</b>    |
| Muscle                | 75%           |
| Bone                  | 22%           |

The skin is composed of water, protein, and fat.

# How Does The CoolGel Pad Works?

- Low molecular weight
- ↓
- Diffusion through the skin
- ↓
- Penetrate to the cell
- ↓
- Chemical reaction
- ↓
- Temporary dehydrated
- ↓
- Decrease the freezing point
- ↓
- Protection



**-10°C**  
**70 mins**

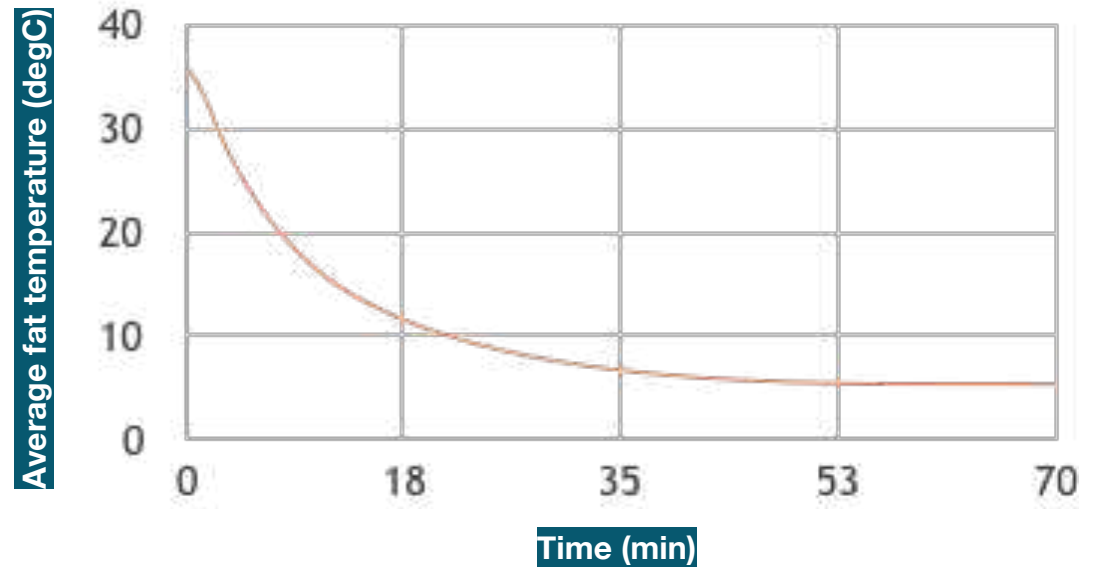
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**Procedure**

○ The perfect balance of safety and efficacy

○ Low risk of necrosis







○ High efficacy of fat reduction







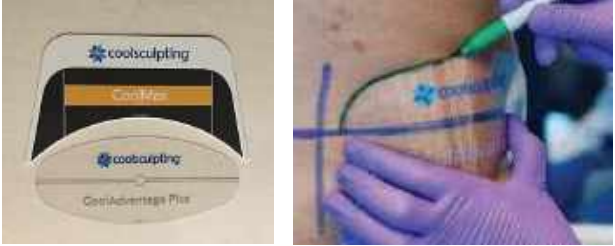

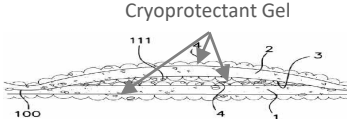
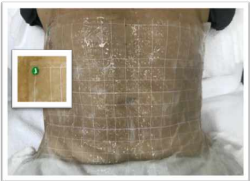



# Cryoadipolysis Market Comparison

# Cryoadipolysis Market Comparison





|                              | Cooltech Define                                                                                                                                       | CoolSculpting                                       | Clatuu Alpha                                                                                                                                                                                                                                                                                      |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fat reduction in one session | Maximum 50% fat reduction<br>Maximum 80mm circumference reduction  | 22.4%                                               | 25.5%                                                                                                                                                                                                                                                                                             |
| Handpiece                    | 9 types                                                              | 5 types                                             | 7 types                                                                                                                                                                                                                                                                                           |
| Max treatment area each time | 4                                                                  | 1                                                   | 2                                                                                                                                                                                                                                                                                                 |
| Suction Level                | 3 adjustable levels<br>Preset available                              | Adjustable<br>Not recommended<br>No preset function | 3 levels manual adjustment<br>No preset function<br>20% stronger compare to the previous version<br> <br>Previous version |



# Cryoadipolysis Market Comparison

|                                     | Cooltech Define                                                                                                                                                                                                                                                                                                                                                                                                                                   | CoolSculpting                                                                                                                                                              | Clatuu Alpha                                                                                                                                                            |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assessment Template                 | <p>Unique 3D templates<br/>Complete same size and shape with the applicator<br/>Ensure the best fit for the treatment area to prevent misassessment.</p>                                                                                                                     | <p>2D templates</p>  <p>Bendable material.<br/>Misleading assessment could be made.</p> | <p>2D templates</p>  <p>2D design, not able to confirm the actual treatment area</p> |
| Protective membrane<br>Cool Gel Pad | <p>World first RFID protective gel pad<br/>Unique design with pocket carrier<br/>-20°C patented formula<br/>(upcoming version protection level down to -50°C)<br/>Maximum safety</p>    | <p>Single layer gel pad</p>                                                            | <p>Single layer gel pad<br/>Formula unknown</p>                                     |

# Applicator Comparison

|                        | Cooltech Define                                                                                                                                                                         | CoolSculpting                                                                        | Clatuu Alpha                                                                         |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Design                 | 360°                                                                                                                                                                                    | 360°                                                                                 | 360°                                                                                 |
| Cooling plate material | Medical certified anodized aluminum                                                                                                                                                     | Unknow aluminum                                                                      | Unknown                                                                              |
|                        |                                                                                                       |  |  |
| Massager               | <p>Unique 2 ways semi-auto massager<br/>Even pressure<br/>Greater comfort<br/>Consistent result</p>  | Not available                                                                        | Not available                                                                        |

# Handpieces and Treatment Time

| Cooltech Define |             |       |               | CoolAdvantage        |         |       |               | Clatuu Alpha |            |      |               |
|-----------------|-------------|-------|---------------|----------------------|---------|-------|---------------|--------------|------------|------|---------------|
| Applicator      | Time        | Temp  | Cooling plate | Applicator           | Time    | Temp  | Cooling plate | Applicator   | Time       | Temp | Cooling plate |
| Oval Curved     | 50/ 70 mins | -10°C | 360°          | CoolAdvantage        | 35 mins | -11°C | 360°          | Wing Max     | 40-60 mins | -9°C | 360°          |
| Curved          |             |       |               | CoolAdvantage Petite | 35 mins |       |               | Wing Plus    |            |      |               |
| Tight           |             |       |               | CoolSmooth Pro       | 75 mins |       |               | -13°C        |            |      |               |
| Straight        |             |       |               | CoolAdvantage Plus   | 45 mins | -11°C | 360°          | Arc-T        |            |      |               |
| Oval            |             |       |               | CoolMini             |         |       |               | Wing Mini    |            |      |               |
| Delta           |             |       |               | Flat Mini            |         |       |               |              |            |      |               |
| Double          |             |       |               | 45 mins              | -5°C    |       |               |              |            |      |               |
| Tiny            |             |       |               |                      |         |       |               |              |            |      |               |
| Tiny Curved     |             |       |               |                      |         |       |               |              |            |      |               |

# CoolAdvantage

- 2<sup>nd</sup> generation of CoolSculpting
- 35 mins to 75 mins, 1 area 1 session
- FDA approved for fat reduction in the area of upper arm, bra fat, back fat, banana roll, submental and submandibular areas, thigh, abdomen and flank

## What are they saying

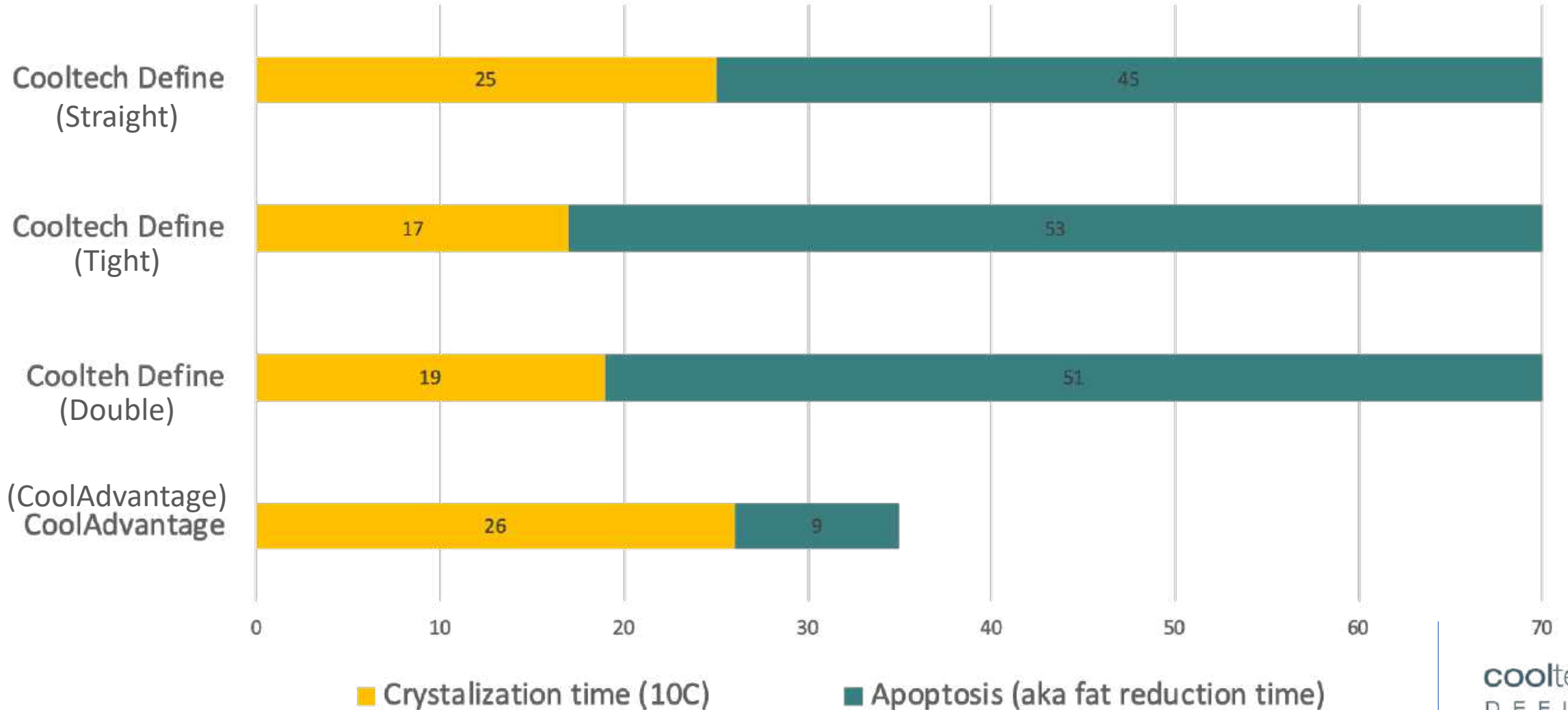
- 1 session, 22.7% fat reduction
- 35 mins procedure
- Over 7M treatments performed in over 60 countries
- No discomfort, no downtime

## Why Define is better than CoolAdvantage?

|                                                           | Cooltech Define                    | CoolAdvantage                                                                          |
|-----------------------------------------------------------|------------------------------------|----------------------------------------------------------------------------------------|
| In one session                                            | 4 areas simultaneously operations  | 1 area per session                                                                     |
| Actual treatment time<br>e.g. 4 areas (abdomen and flank) | 50/ 70 mins                        | 140 mins<br>(35 mins of each session x 4)<br>300 mins<br>(75 mins of each session x 4) |
| Safety mechanism                                          | RFID CGP to prevent thermal injury | Thermal Detector® to inform after temperature changed                                  |
| Consumable                                                | Patented CGP with low cost         | High cost operation card                                                               |




# Crystallisation & Fat Apoptosis

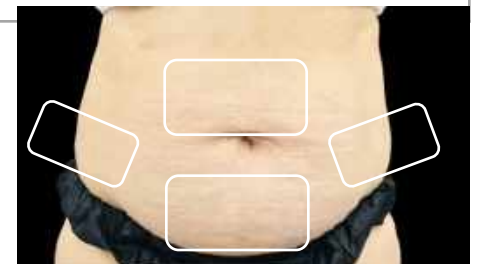





Really Shorter  
Treatment Time?

## Comparison of Treatment Time

|                      | Cooltech Define                                                                                   | CoolSculpting        | Clatuu Alpha             |
|----------------------|---------------------------------------------------------------------------------------------------|----------------------|--------------------------|
| Pre & post procedure | 20 mins                                                                                           | 20 mins x 4 sessions | 20 mins x 2 sessions     |
| Lower abdomen        | 50/ 70 mins                                                                                       | 35 mins              | 40/ 60 mins x 2 sessions |
| Upper abdomen        |                                                                                                   | 35 mins              |                          |
| Left flank           |                                                                                                   | 35 mins              |                          |
| Right flank          |                                                                                                   | 35 mins              |                          |
| Total                | 70/ 90 mins  | 220 mins             | 120 / 160 mins           |



A white medical laser device, the Cooltech Define, is shown against a dark blue background. The device has a central screen, a control panel with a dial, and two handpieces at the bottom. The brand name 'cooltech' and 'DEFINE' are visible on the front panel.

# The Procedure, Patient Selection, Expectation & Follow Up



## Cooltech Define Procedure



Consultation &  
patient education

Assessment &  
personalize  
treatment plan

Cooltech Define  
procedure

Patience follow  
up & repeat  
treatment



# Cooltech Define Effective Treatment Formula

**D**iscuss with your patient  
**E**ducation & manage expectation  
**F**ormulate treatment plan  
**I**dentify area to be covered  
**N**umber of treatment needed  
**E**fficacy

## Non Face-to-face Enquiry

- Excitement!
- Ask and address caller by name. Ask patient email address and contact number for follow up
- Provide simple and positive Cooltech Define information. E.g.
  - 27.4% (1/4) fat reduction
  - High patient satisfaction rate
- Real case sharing, invite caller to chat with the internal patient.
- Avoid over the phone consultations, convert calls to face to face consultations. Invite and limit the choose (2 sessions) for consultation
  - e.g. Would you prefer Tue 10pm or Sat 2pm?
- 2 days before: call, send confirmation email/ text with b&a photos to extend the interest.
- Remind patient to dress comfortable and do not eat too much before the appointment.



**Goal: convert a call to consultation**

## Patient Education & Expectation

- Understand your patient expectation and desired outcome.
- Use the *Flipbook* to educate your patient and what to expect before, during and after the Cooltech Define procedure.
- Invite your patient take full set of 8 before photos with *Cooltech Define photography standard*.
- Discuss with patient according to the before photos.
- Discuss medical history to ensure no contraindications with *Patient Consent Form* with patient and authorized person's signature.

**Goal: convert a consultation to a treatment**

*Tool: Flipbook, Treatment Planning Form, Photography guideline, Patient Consent Form*



# Patient Selection

Good Candidate



Pinchable distinct bulges with minimal skin laxity

# Patient Selection

## Bad Candidate



Visceral fat



Not enough fat



Too much fat



Laxity



Laxity



Laxity

# Patient Selection

## Discussion



Hernia



Cellulite



Stretch marks



Skin disease



Fresh scar



Obesity

## Assessment & Marking

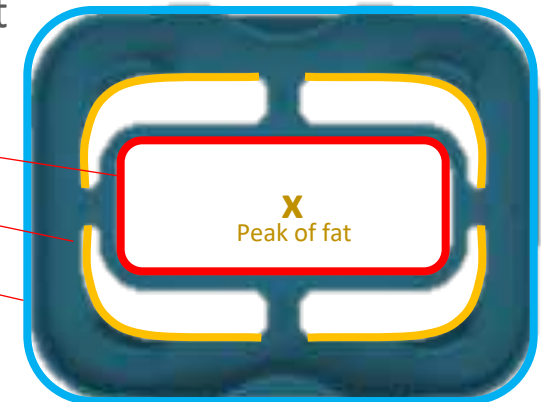
- Bring patient in front of a full size mirror. Ensure clothing is not covering the assessment area.
- Have the patient stand so their fat is subject to gravity
- Confirm patient expectation and desired outcome.
- Ask the patient to identify their greatest concern area(s) with physical touch.
- Assess the bulge by “C ∩” shape pinching. Identify the natural orientation of the bulge.
- Use the *Applicator Templates* to determine which applicator to use and how many applications will be required.
- Mark the peak of the fat, make sure the fat border is the same size of the treatment area and mark the applicator frame for application alignment.



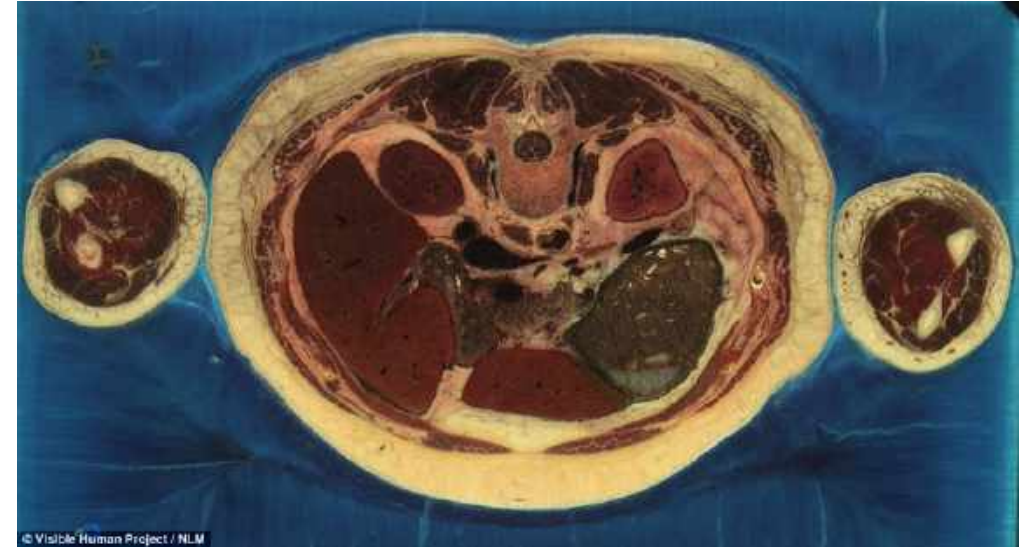
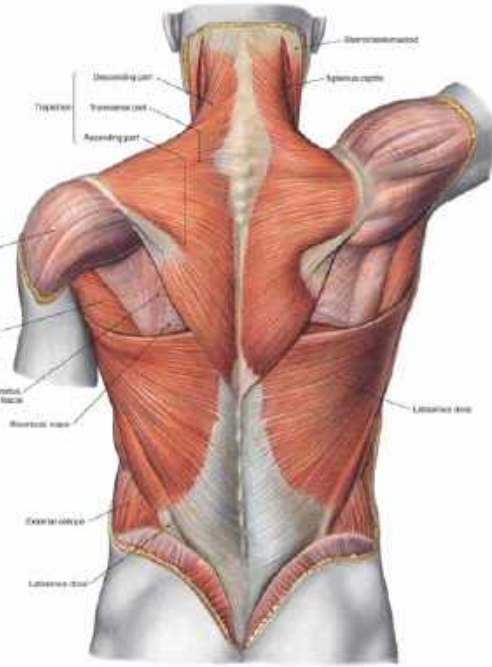
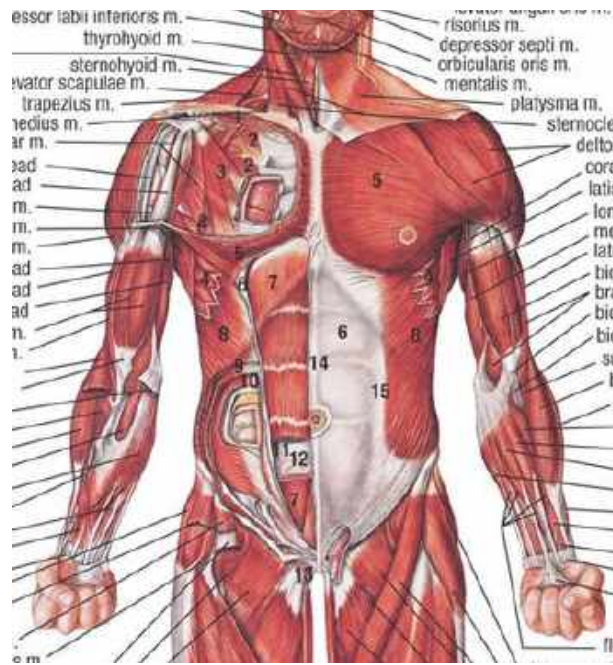
**Goal: educate patient the reason of full coverage with maximum outcome**

*Tool: Full Size Mirror, Applicator Template, Treatment Planning Form*

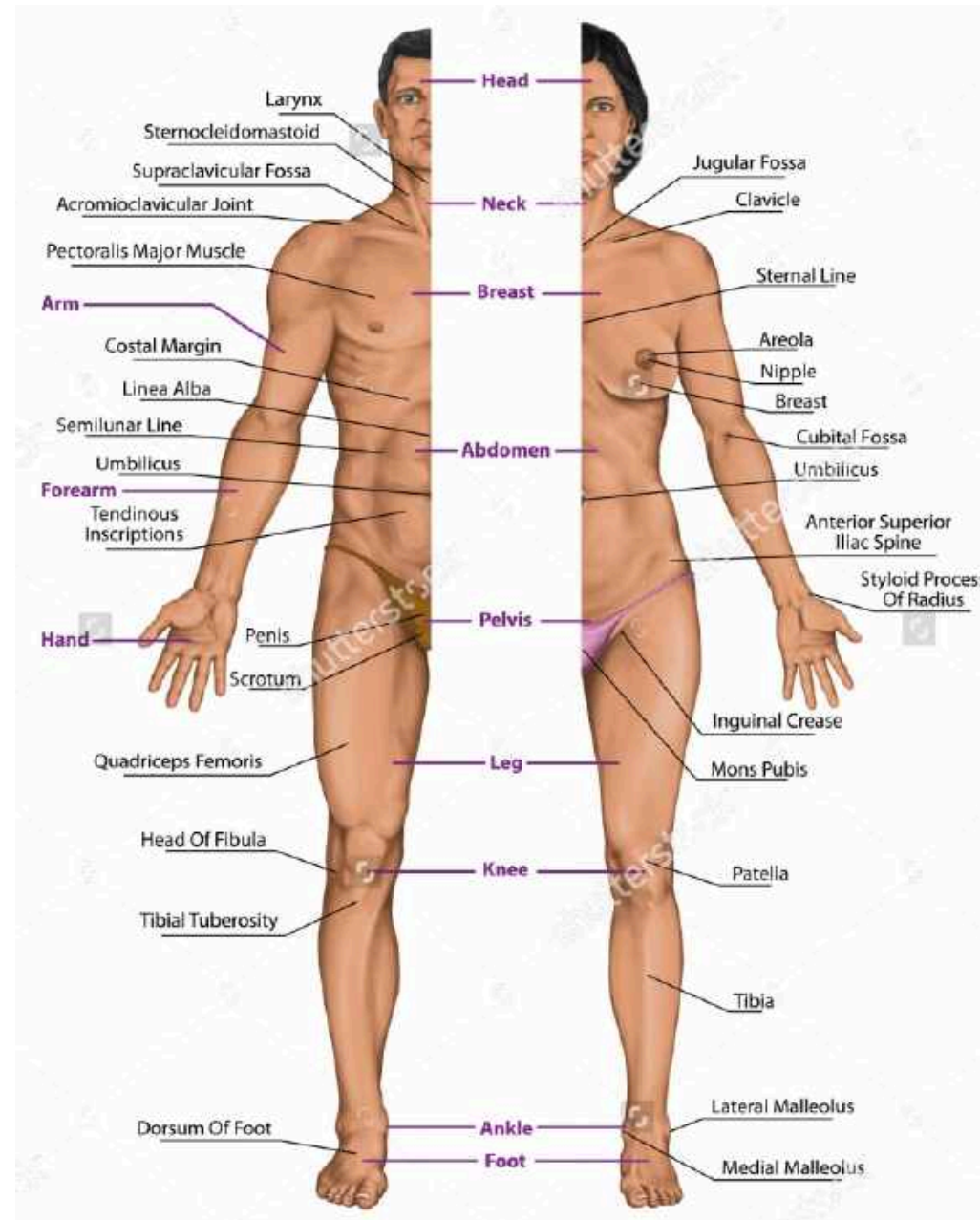
1. Applicator lip
2. Fat border
3. Applicator frame







Assessment & Personalize  
Treatment Plan

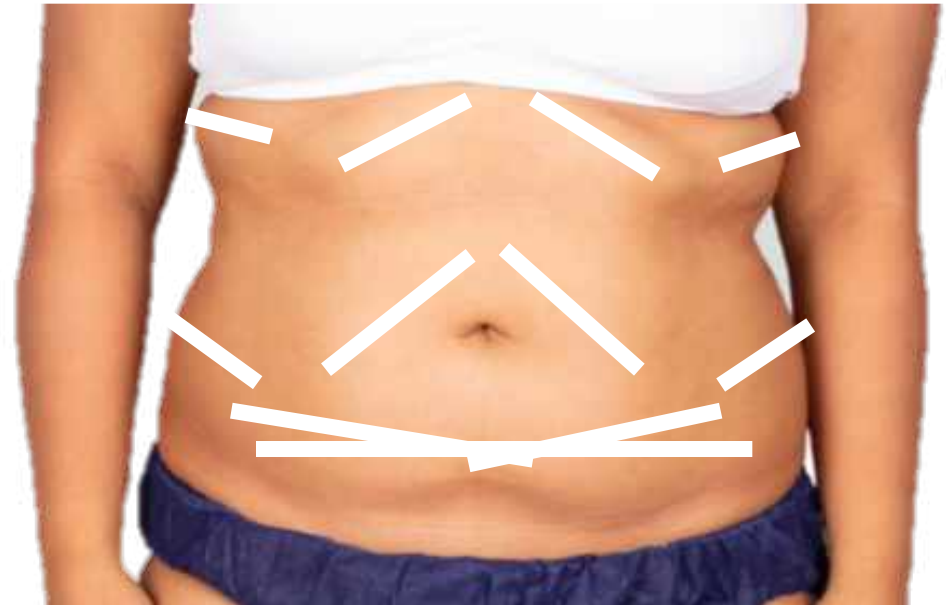
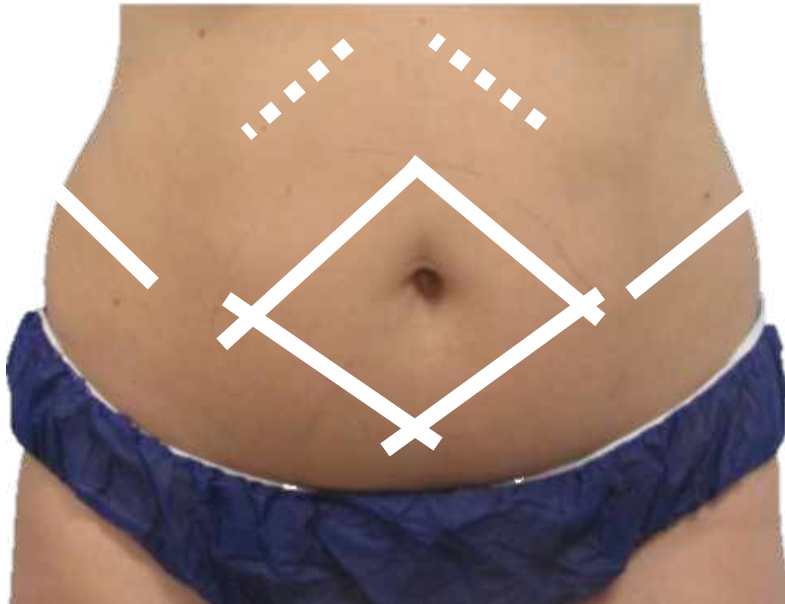


## The Essential Of Assessment

- How much fat does the patient has?
- Visual assessment
  - Debulking? Or contouring?
  - Where is the boarder of the fat? Single bulge? One big piece?
- Physical assessment
  - The orientation of the fat
  - Size: Single bulge? Long/ thick bulge?
- What applicator(s) do we use (Use template)
- Full coverage

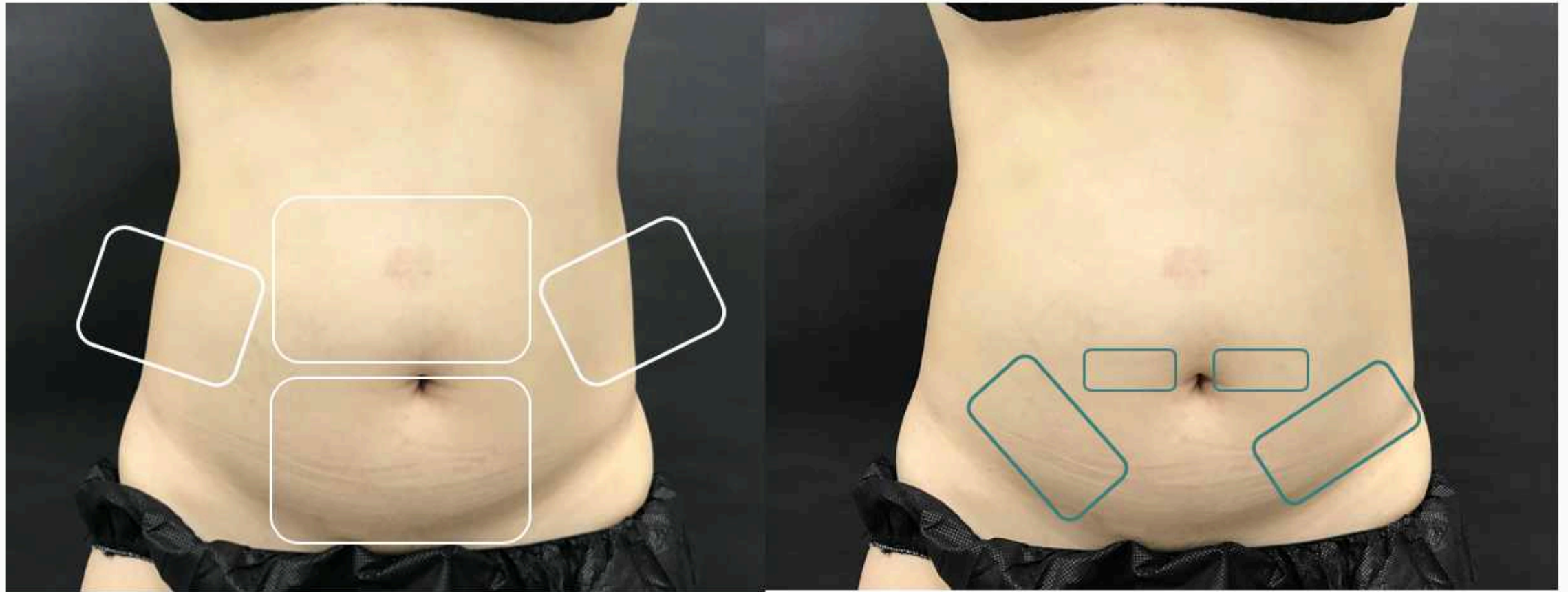


## Abdomen & Flank

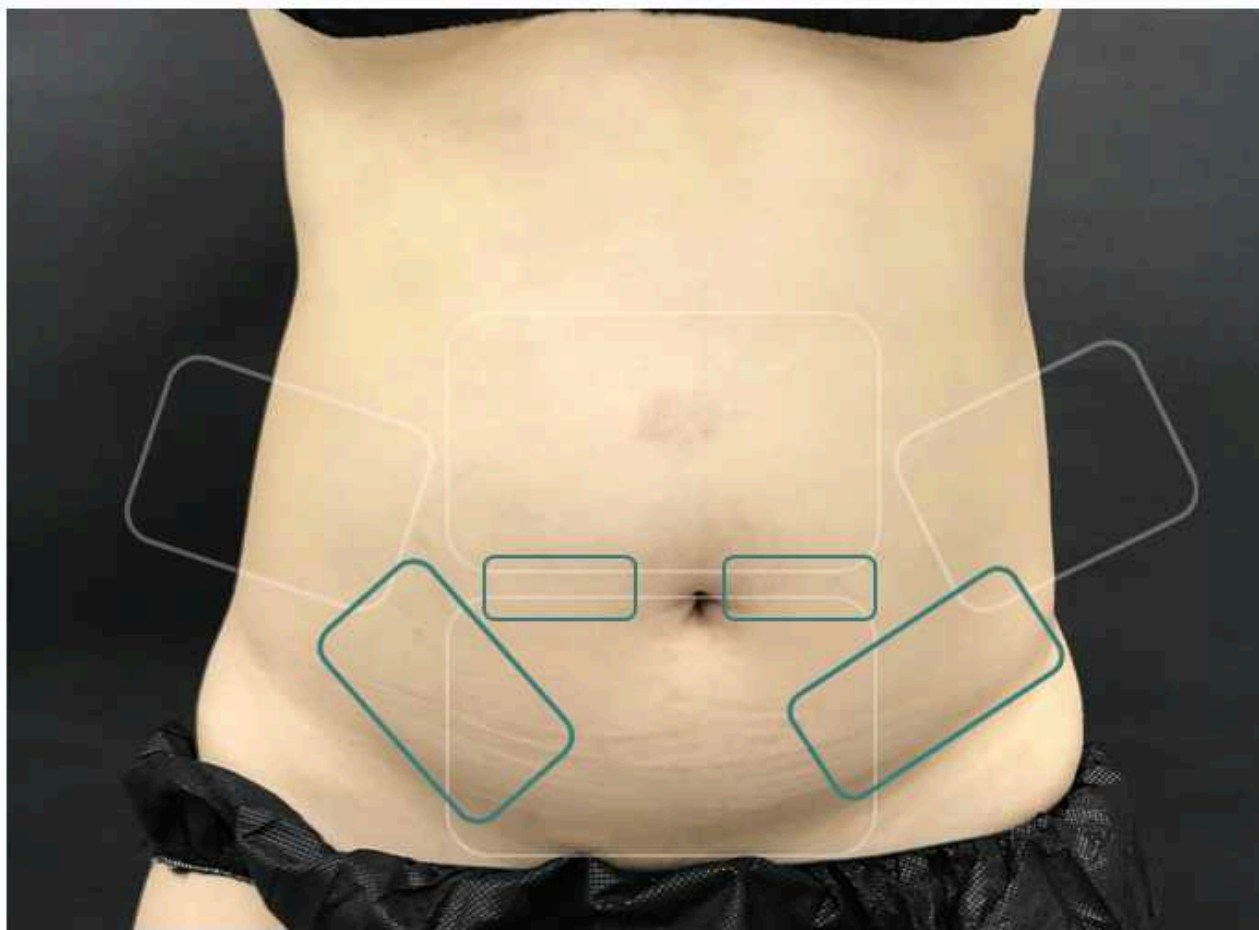


\*Reference only.

# Body Contouring In 2 Hours

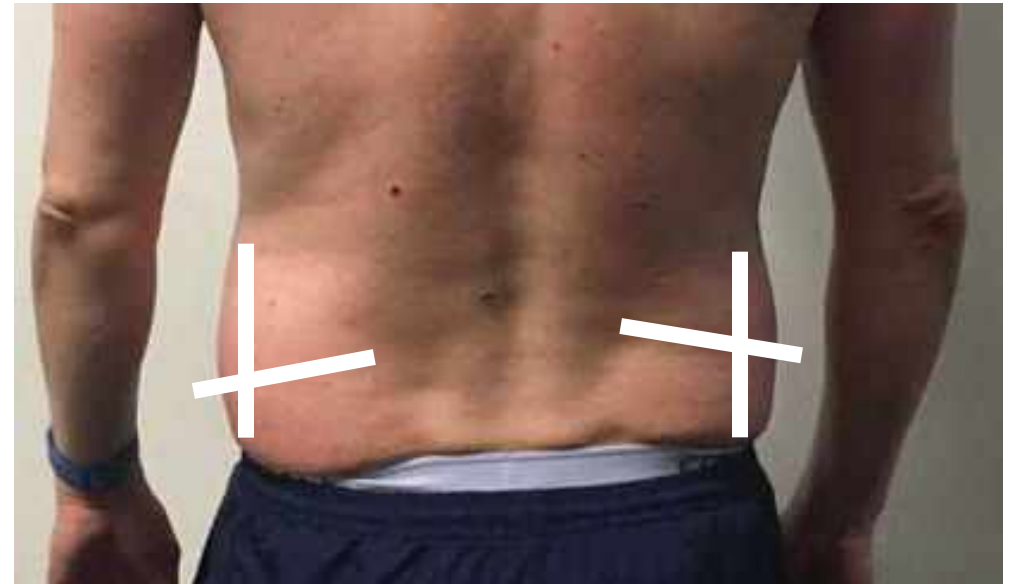
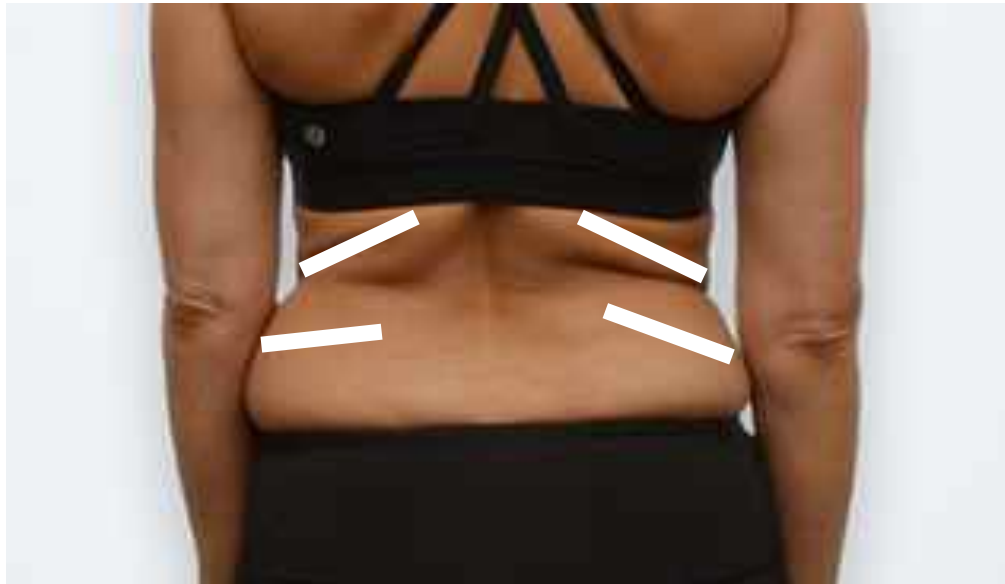


# Body Contouring In 2 Hours



Overlapped image

# Flank



\*Reference only.

Assessment & Personalize  
Treatment Plan

## Back & Flank



\*Reference only.

Assessment & Personalize  
Treatment Plan

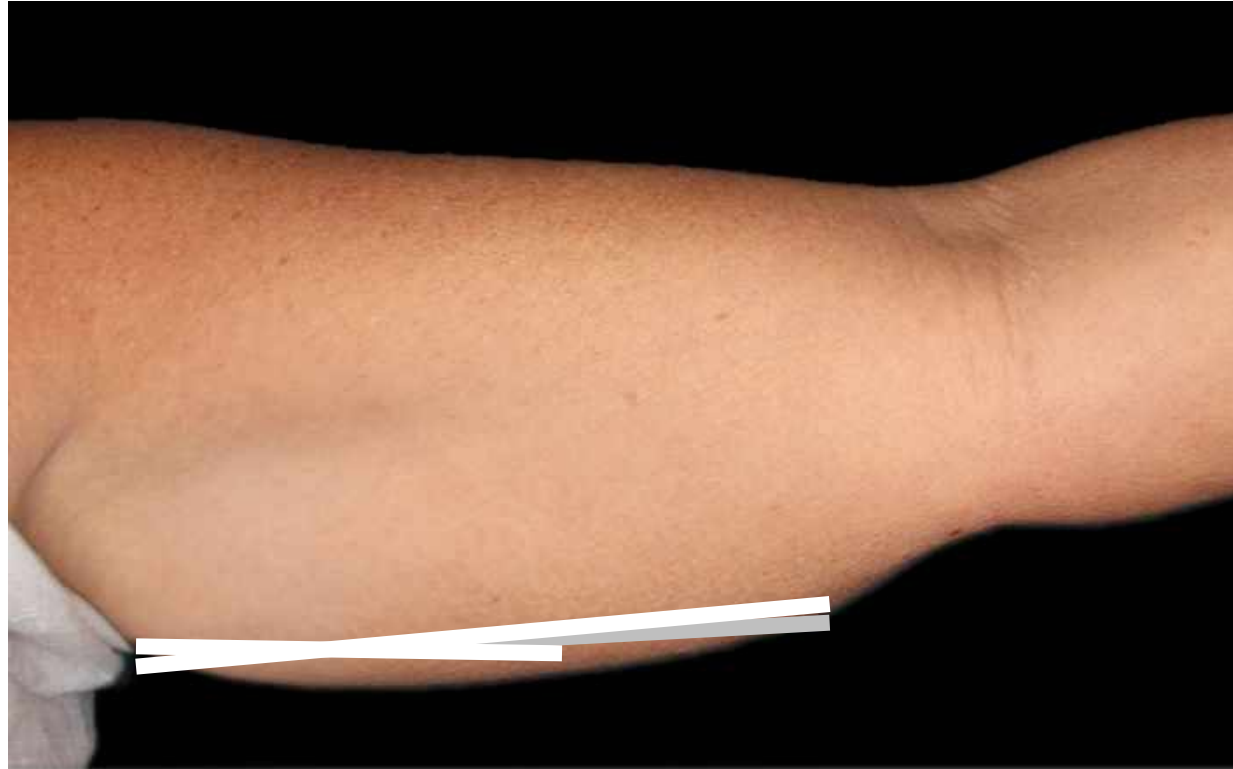


# Thigh



\*Reference only.

## Arm



\*Reference only.

## Bra Fat



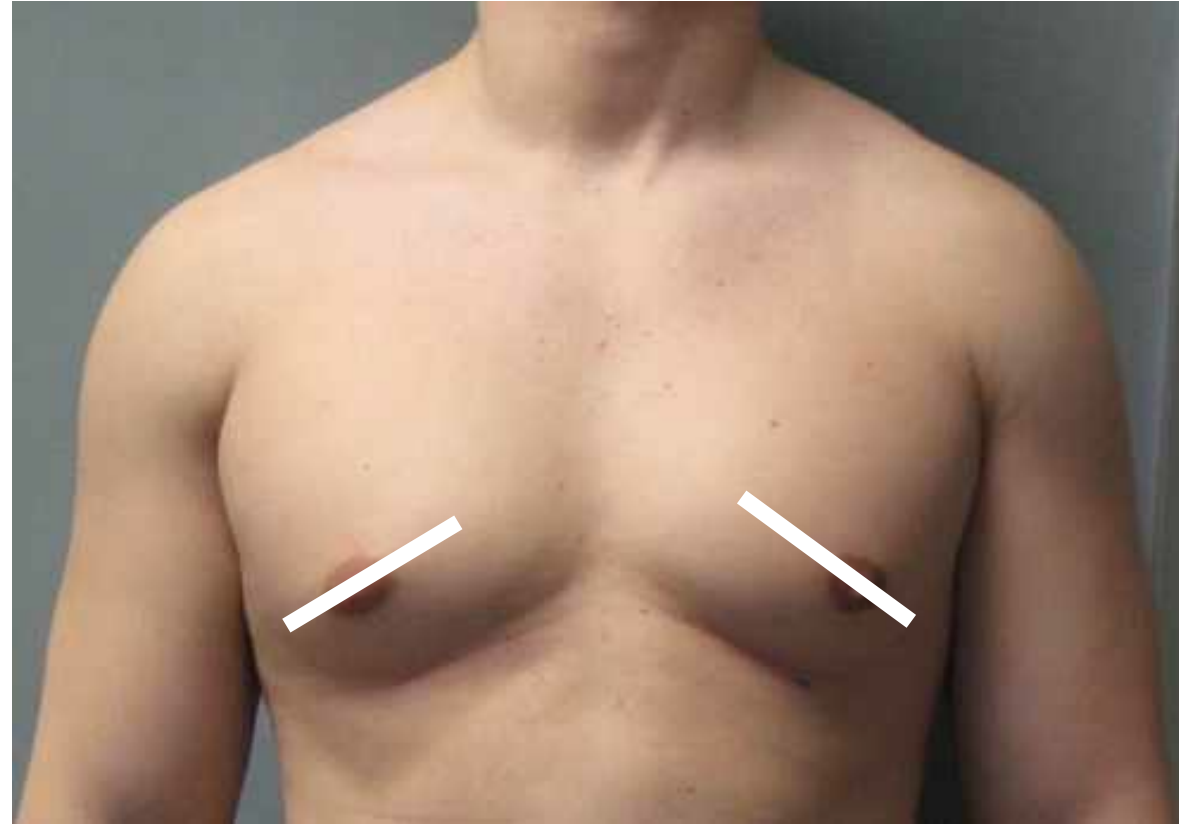
\*Reference only.

# Knee



\*Reference only.

## Psuedogyneocomastia



\*Reference only.

# Submental

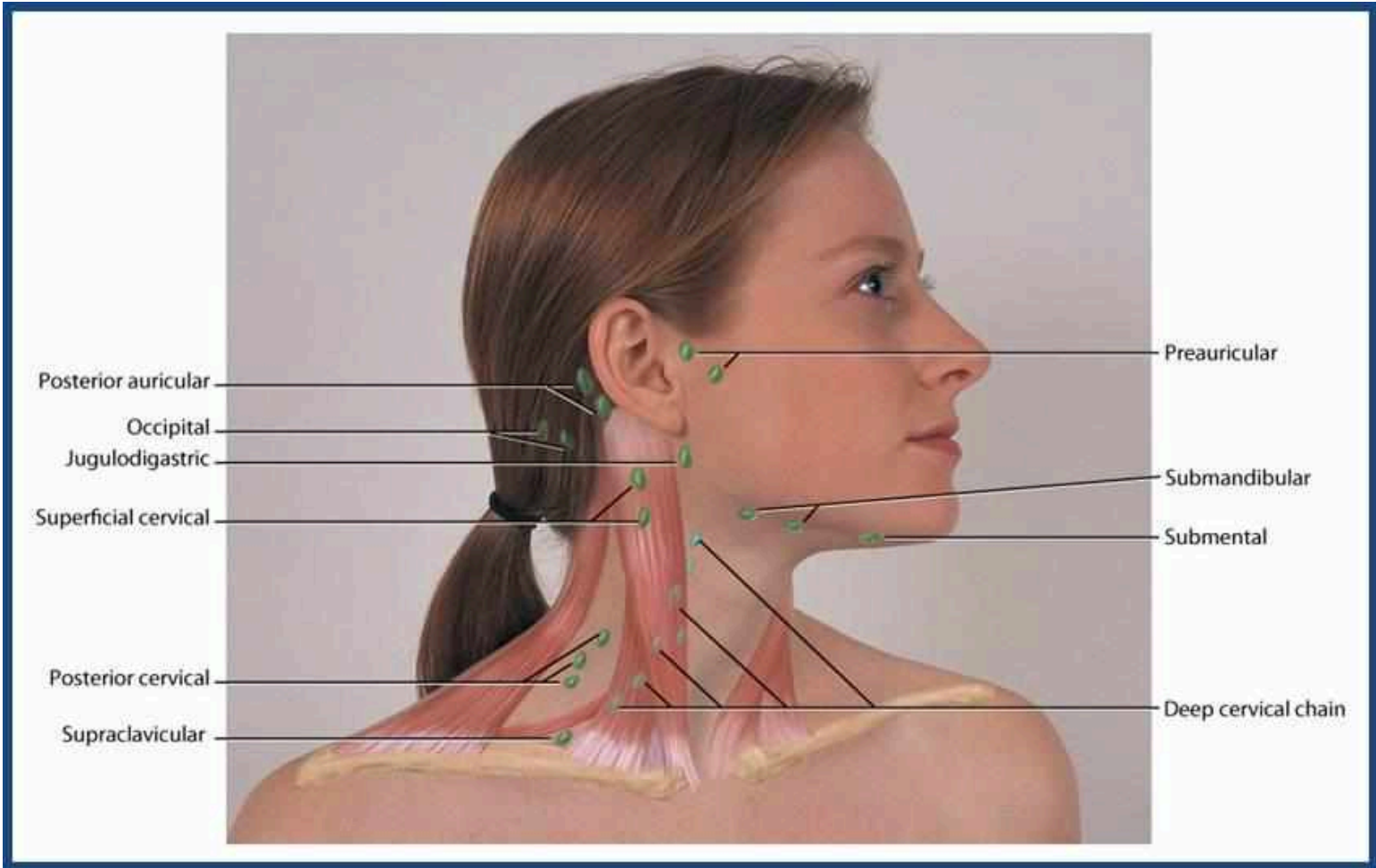
Assessment & Personalize  
Treatment Plan



\*Reference only.

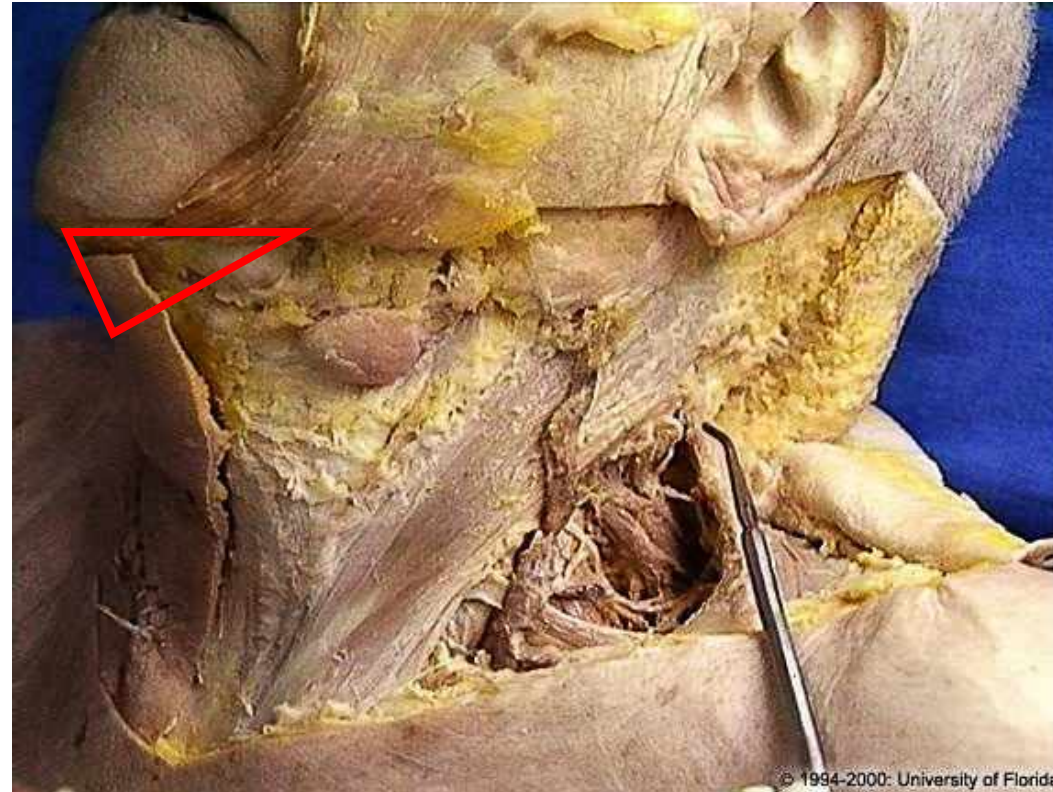
# Submental

Assessment & Personalize  
Treatment Plan



# Submental

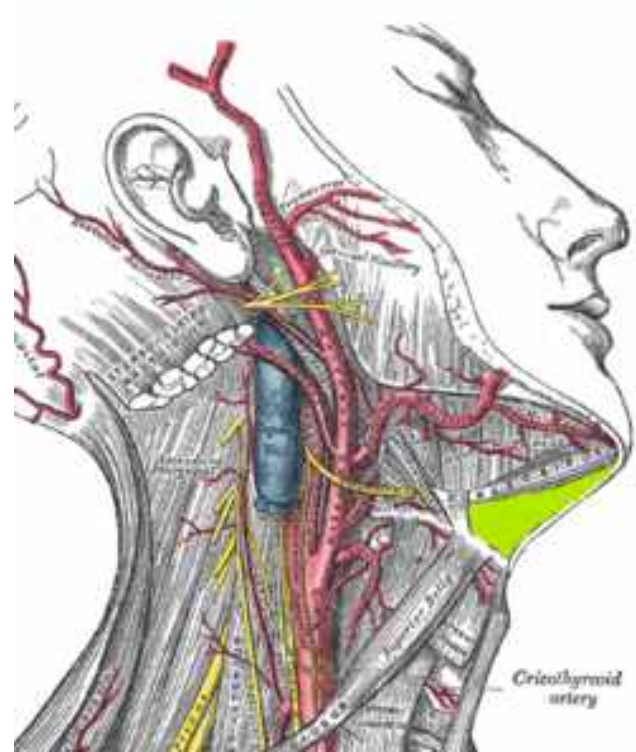
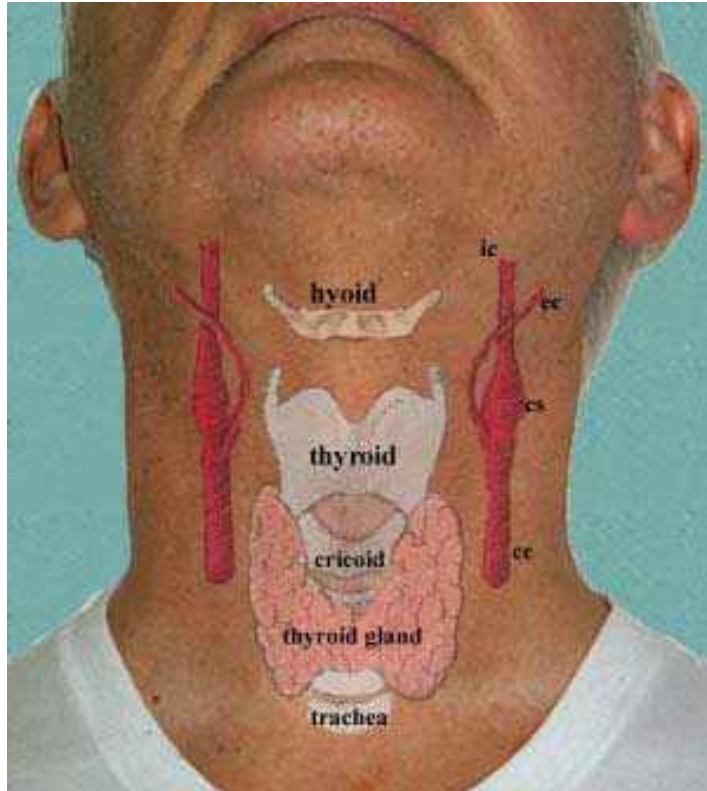
Assessment & Personalize  
Treatment Plan





# Submental

Assessment & Personalize  
Treatment Plan



# Submental

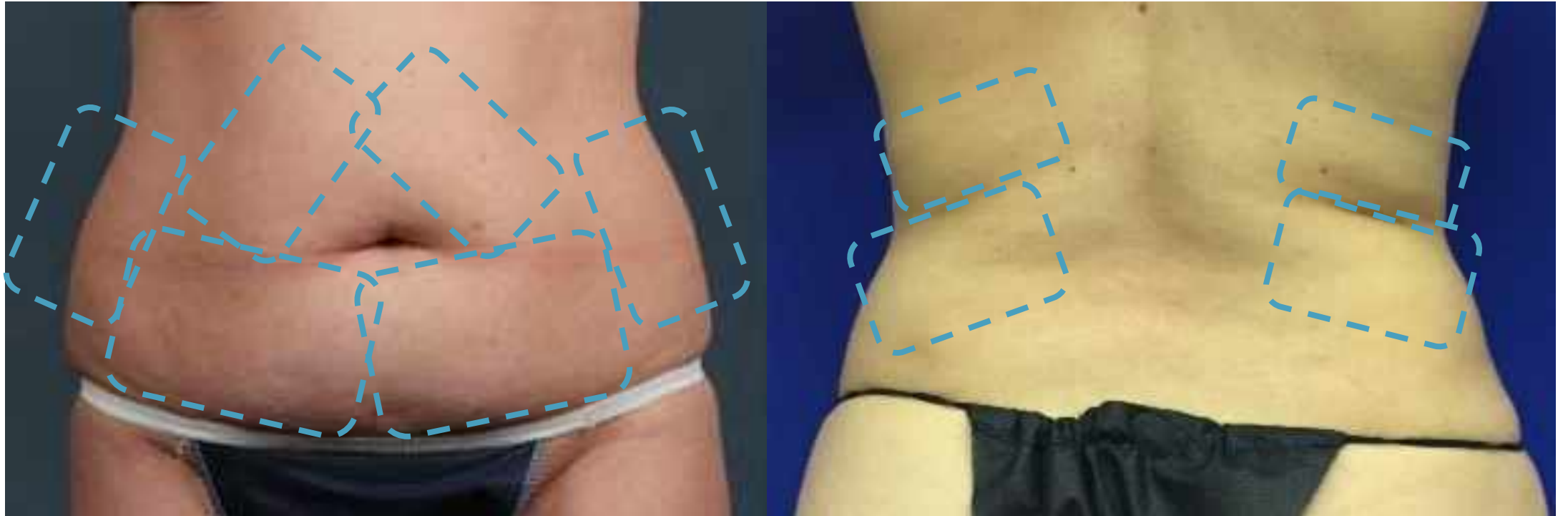
Assessment & Personalize  
Treatment Plan



Nerve injured

## Fat coverage

Ensure the bulge has assessed with fully coverage



**Goal: educate patient the reason of full coverage with maximum outcome**

*Tool: Full Size Mirror, Applicator Template, Treatment Planning Form*

## Fat coverage

Ensure the bulge has assessed with fully coverage



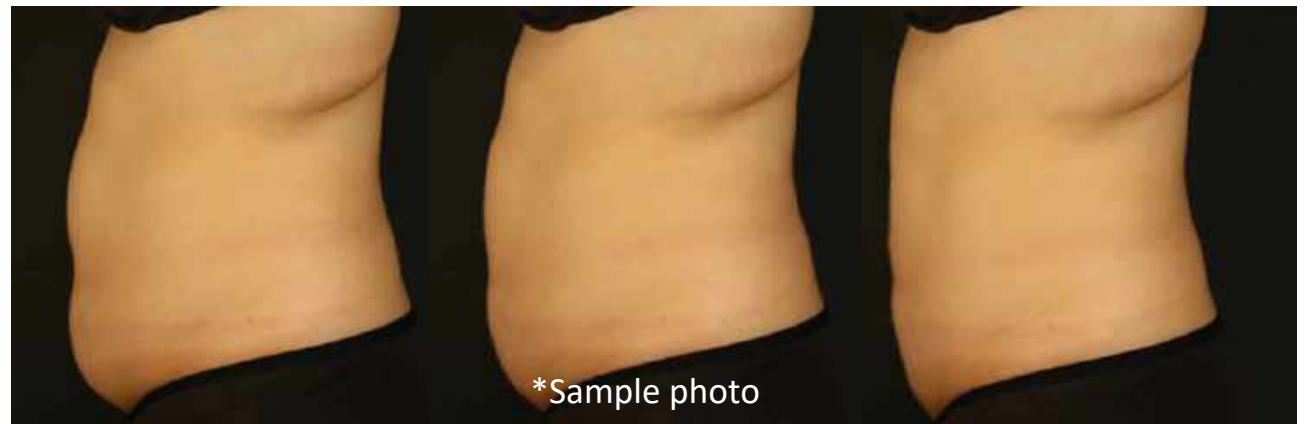
**Goal: educate patient the reason of full coverage with maximum outcome**

## Personalize Treatment Plan

- Understand the fat distribution and orientation.
- Make sure the bulges are totally covered.
- Provide 2 treatment plans to your patients. From the greatest result top down.
- Explain clearly with the result and price different (BIG SAVE!).
- Provide different phases B&A photo as a reference.
- Provide finance option if needed.
- Plan his/ her Cooltech Define schedule including treatment date and follow up.

**Goal: understand patient needs, educate and explain maximum outcome**

*Tool: Treatment Planning Form*



## Patient Position

The patient should be

- slight reclined for placement on the chin, axillary fold, chest, abdomen, anterior flank and outer thigh
- Stand for placement on the inner thigh
- Sit for placement on the arm
- Face down for placement on the posterior flank, back, banana roll

**Goal: tissue/ bulge gravity and estimate outcome with patient comfort**

## Patented CoolGel Pad

- RFID scanning
- Open the package
- Icon face up
- CoolGel pad fully attached onto skin
- Smooth the CoolGel Pad out with the back of the fingers.
- **CoolGel Pad is single application only**

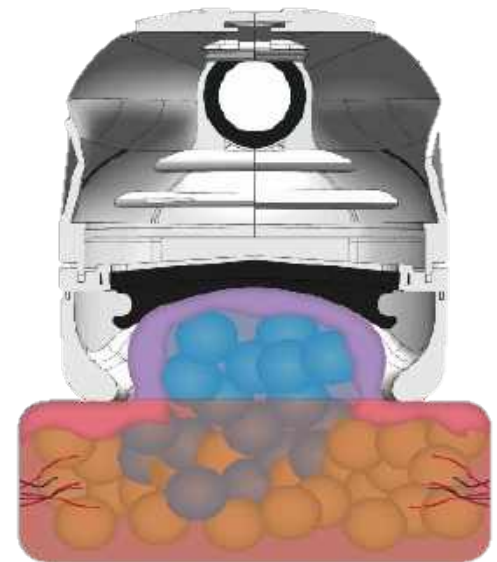


**Goal: patient protection**

*Tool: CoolGel Pad*

## Applicator Placement

- Ensure the patient with comfortable position.
- Center the applicator over the peak of the bulge. Align the applicator with the marking to determine angle placement.
- Turn on vacuum.
- Coolgel Pad security check.
- Stabilize the applicators with pillow and belt.



**Goal: best tissue draw according to the gravity and outcome with patient comfort**

*Tool: CoolGel Pad, Selected Applicator*



## Patient Expectation- During Treatment

**Prepare the patient before every step with the right expectation is key**

- Each placement is last 70 mins. It is the perfect balance of safety and efficacy.
- The patient will feel
  - Cold of the CoolGel Pad application.
  - Seep pulling, tugging, pinching, cold and stinging when the vacuum is being applied.
  - Numb due to the coldness.
  - In rare case, patient may experience nausea or dizziness which usually resolve within minutes.

**Ensure the patient is comfortable for the entire treatment time.**

**Goal: keep patient engages with entertainment or relax**

*Tool: Treatment Record*

## Patient Expectation- Immediate After Treatment

Prepare the patient before every step with the right expectation is key

- The treated area will look red, bruised or blanching for few hours.
- The treated area will feel temporary discomfort such as stiffness and stinging due to the circulation, naturally warmness and sensation returns to the treated area.
- In rare case, patient may experience lightheaded, which usually resolve within minutes. Suggest to help patient lie flat, place a pillow underneath his/ her legs for the blood returns to the head.

**Goal: preparation patient what can he/ she expect with reason**

## Post-procedure Massage

- 2-minute semi-auto massage by Cooltech Define Massager.
- Prepare patient he/ she may experience the uncomfort sensation due to the circulation, naturally warmness and sensation returns to the treated area.
- Explain to patient the massage is for maximize the outcome of the procedure.
- Suggest to clean and comfort the treated area by warm towel.

**Goal: prepare patient what to expect and what is the reason**

*Tool: Cooltech Define Massager, Warm Towels*

## Patient Expectation- After Treatment

Prepare the patient before every step with the right expectation is key. Remind patient what to expect in the coming days & weeks.

- Most patient can resume their daily activity without limitation.
- Explain and give patient the *Patient Take Home Guideline* for reference.
- Within the first 2 weeks patients may experience the following sensations:
  - Deep itching
  - Tingling
  - Numbness
  - Tenderness to the touch
  - Strong cramping
  - Muscle spasms
  - Aching and/or soreness
- Refer to the *User Manual* for rare side effects.

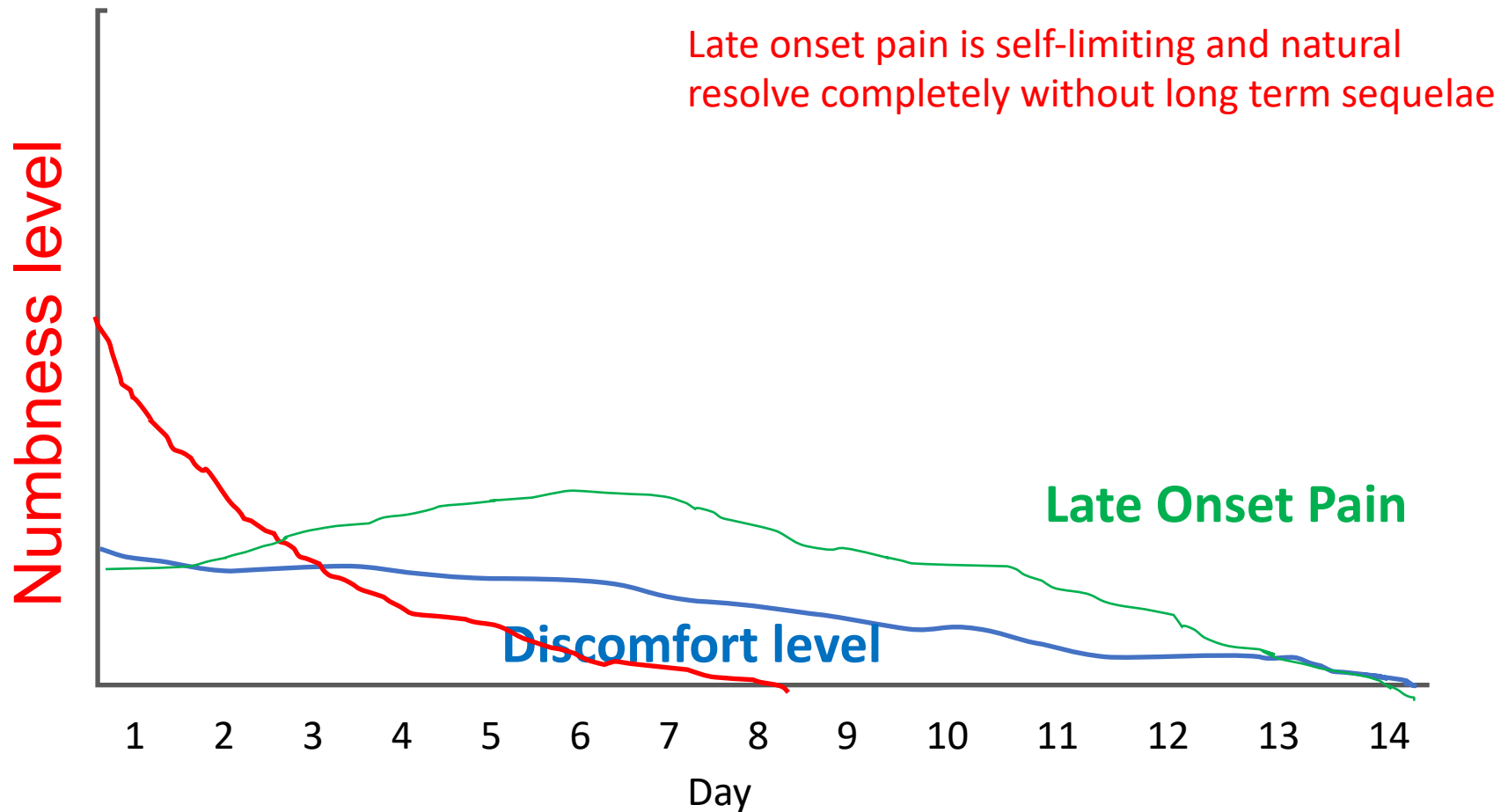
### Solutions

- Compression garments
- Cold compress
- Warm pad
- Stretching
- Medication if needed

**Goal: education patient with *Patient Take Home Guideline***

*Tool: Patient Take Home Guideline*

## The Discomfort Sensation vs Late Onset Pain



## Patient Follow Up & Repeat Treatment

Prepare the patient before every step with the right expectation is key. Remind patient what to expect in the coming days & weeks.

- Recommend a follow up call at least in 1, 7 , 14 and 45 days after treatment.
- Day 1 & 7: Check out patient's status, reminds of the information in *patient take home guideline*.
- Day 14: Check out patient's status, reminds patient the result usually appears as early as 3-4 weeks but will experience the most dramatic results after 2 to 3 months.
- Day 45: Invite patient come back in 6-8 weeks for follow up visit.
  - Take full set of after photos (8) for comparison.
  - Explain to patient about his/ her progress.
  - Discuss with patient his/ her desired outcome.
  - Re-assess, re-plan, re-treat your patient if needed.



**Goal: Post treatment service with patient education and treatment follow up**

*Tool: Patient Take Home Guideline*

## Rare Side Effect Subcutaneous Induration

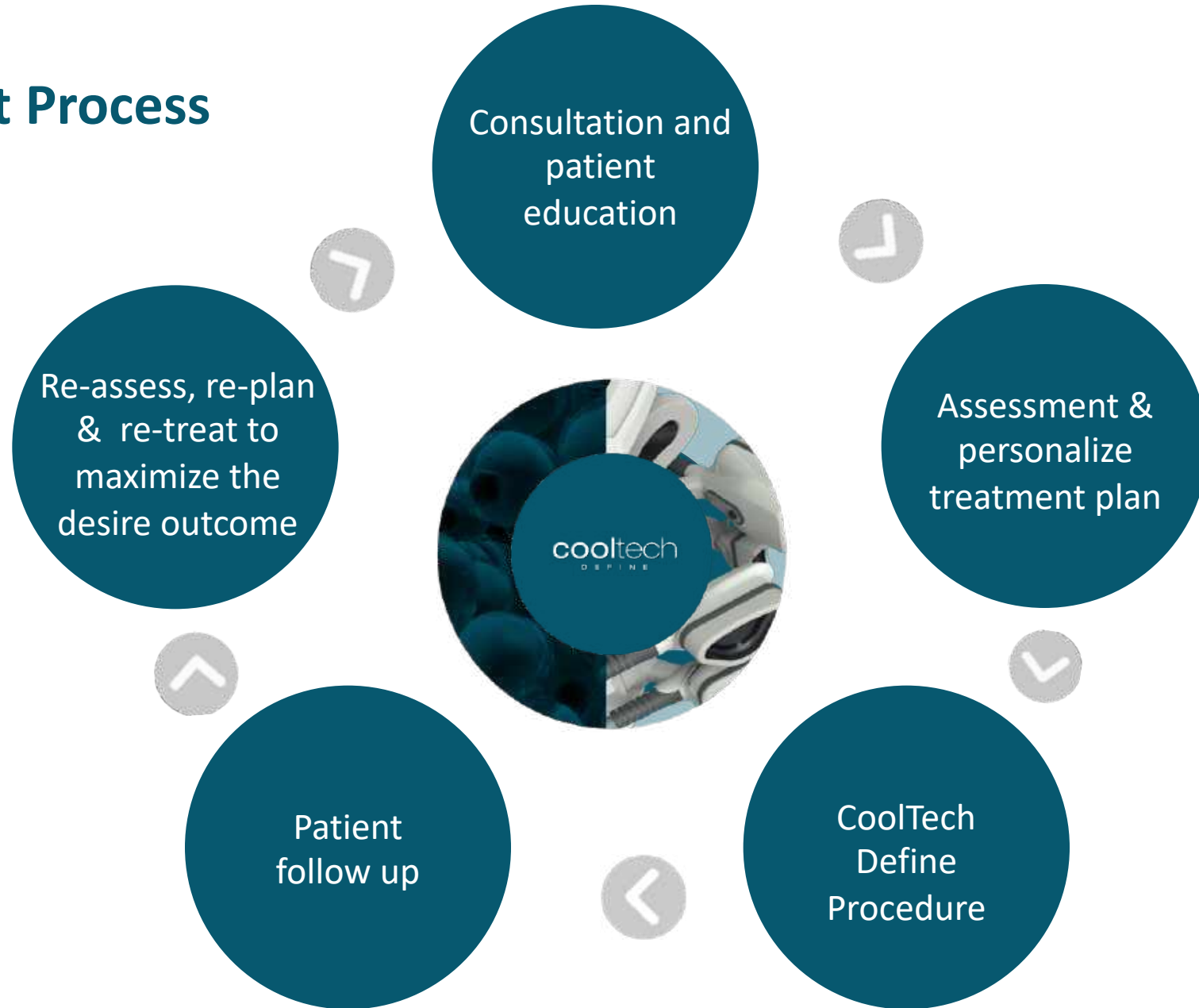
- What is subcutaneous induration?
- Generalized hardness or discrete nodules in treatment area
- Develops between 2 weeks to 2 months after treatment
- Generally resolves within 3 to 6 months
- 30 reported incidents over 460,000 cases
- Rate < 0.008%
- Etiology unknown, post-treatment inflammatory process ?
- Remedy ? Gentle massage to increase local blood circulation, oral medicine.

## Rare Side Effect Paradoxical Hyperplasia

- Visible enlargement of tissue in the treated area
- Onset: 2 – 3 months post tx with enlargement peaking at 4 -5 months post tx
- Non-tender or mild tenderness upon palpation
- Tissue described as firm, hard, non-mobile
- Pathology reveals normal fat with fibrous content
- Occurred on abdomen and flanks
- Self-limiting but not self-resolving
- 50 reported incidents over 600,000 cases
- Current incidence rate: ~0.0083%
- Resolution: liposuction or abdominoplasty
- Root cause investigation underway with MGH physicians



# The Patient Process





# Clinical Awareness

# Contraindications

## Cryoglobulinemia

A blood disease

An autoimmune disorder that affects the blood and various other body systems

Symptoms include unusual response to cold, skin abnormalities, weakness and blood problems



# Contraindications

## Paroxysmal Cold Hemoglobinuria

PCH is an extremely rare disorder

When cold blood returns to the warmer central circulation, the red blood cells are lysed with complement, causing intravascular hemolysis

Acute PCH tends to be transient and self-limited



# Contraindications

## Raynaud's Disease

In Raynaud's disease, smaller arteries that supply blood to your skin narrow, limiting blood circulation to affected areas (vasospasm).



# Contraindications

Pregnancy

Lactation



## Warnings

- Known sensitivity to cold such as cold urticaria
- Hernia
- Open or infected wounds
- Skin conditions such as eczema, dermatitis, or rashes in the area to be treated
- Neuropathic disorders such as post-herpetic neuralgia or diabetic neuropathy
- Impaired peripheral circulation or skin sensation
- Bleeding disorders or concomitant use of blood thinners
- Recent surgery or scar tissue
- The effect of performing treatments directly over active implanted devices, such as pacemakers and defibrillators, is not known
- Etc...



Cold urticaria



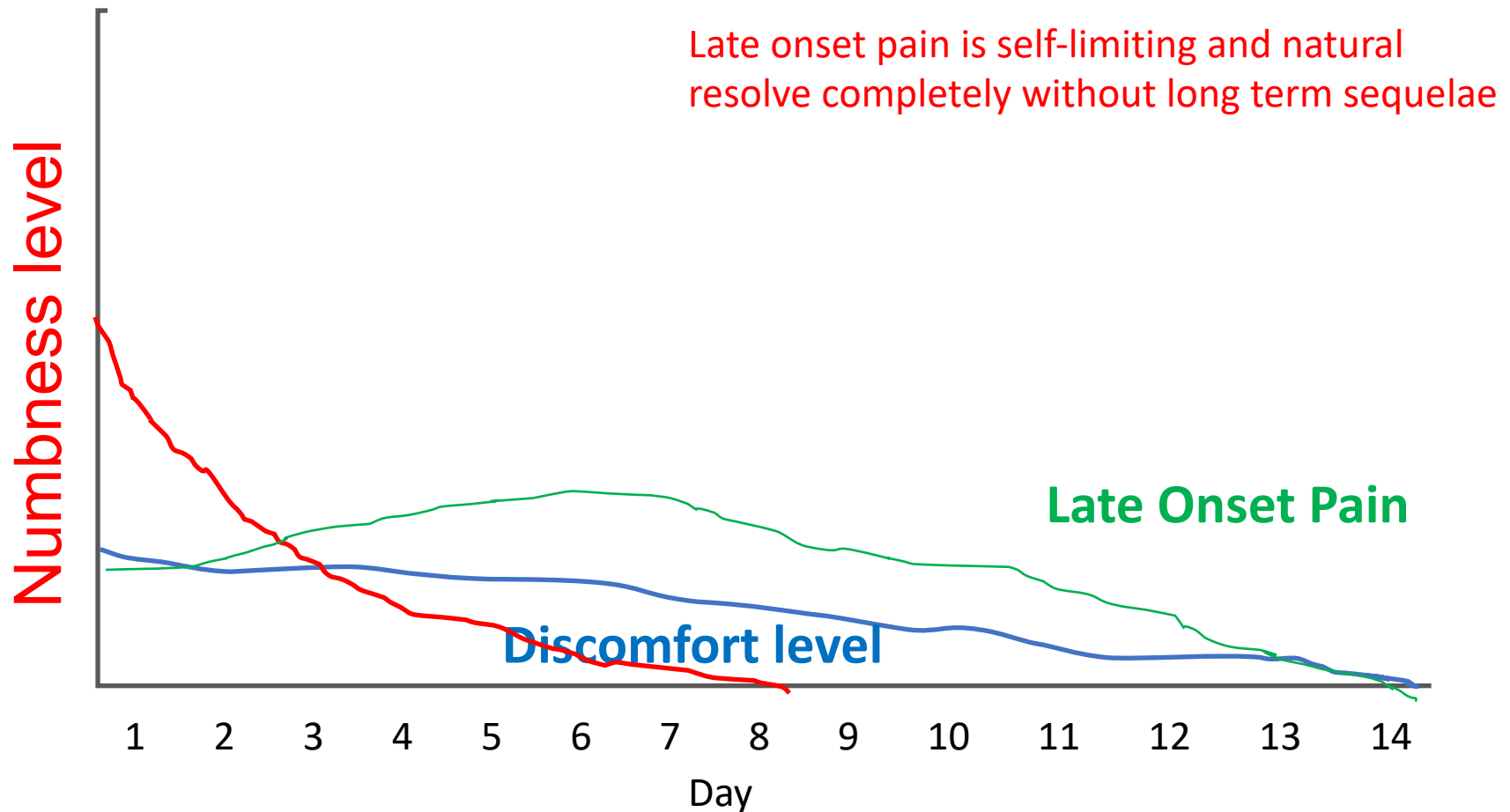
Hernia



Post-herpetic neuralgia

\*Please refer to the clinical guideline or user manual

# The Discomfort Sensation vs Late Onset Pain





# Rare Side Effect

## *Subcutaneous Induration*


- What is subcutaneous induration?
- Generalized hardness or discrete nodules in treatment area
- Develops between 2 weeks to 2 months after treatment
- Generally resolves within 3 to 6 months
- Clinical study rate < 0.008%
- Etiology unknown, post-treatment inflammatory process ?
- Remedy ? Gentle massage to increase local blood circulation, oral medicine.

## Rare Side Effect

### *Paradoxical Hyperplasia*

- Visible enlargement of tissue in the treated area
- Onset: 2 – 3 months post tx with enlargement peaking at 4 -5 months post tx
- Non-tender or mild tenderness upon palpation
- Tissue described as firm, hard, non-mobile
- Pathology reveals normal fat with fibrous content
- Occurred on abdomen and flanks
- Self-limiting but not self-resolving
- Clinical study rate: ~0.005%
- Resolution: liposuction or abdominoplasty
- Root cause investigation underway with MGH physicians



A white medical laser device, the Cooltech Define, is shown against a dark blue background. The device features a central screen, a control panel with a circular button, and two handpieces at the bottom. The brand name 'cooltech' and 'DEFINE' are visible on the front panel. The background is a close-up of human skin, which is dimly visible through the blue overlay.

# Clinical Evidence

# Study on the reduction of localized panniculus adiposus (adipocytolysis) through the use of a controlled cooling system

- No weight changed.
- A very noticeable result.
- Average fat thickness from 33.67mm down to 27.07mm.
- Maximum reduction was 12mm.
- 80% of subjects rated the procedure was comfortable.



# Seguridad Y Eficacia De La Adipólisis Por Congelación

- High patient satisfaction.
- Ultrasound measurement of average 21mm fat reduction.
- Average VAS scale 2.66 out of 10.
- Cryoadipolysis procedure was well tolerated.
- The side effect were very minimal and not affected patients' daily activity.

## Seguridad y eficacia de la adipólisis por congelación

Estudio observacional  
2002-2014  
Dr. José Ramón Vázquez Casas

### RESUMEN:

#### INTRODUCCIÓN

El exceso de grasa corporal, celular y asimilada, genera localizados con un problema importante en la sociedad actual. Los adipocitos y el tejido graso a diferencia de otros tejidos, tienen una alta susceptibilidad al frío. Esta condición de vulnerabilidad al frío ha permitido promover diversos procedimientos de destrucción de tejido graso por congelación. A partir de este nuevo procedimiento, el estudio se ha realizado utilizando el procedimiento Cryotechnology de manera que se aplica frío de una manera controlada a la zona de tratamiento para conseguir dañar el tejido adiposo subcutáneo de manera que este sea evacuado, posteriormente, del organismo, por medio de procesos naturales.

#### OBJETIVO

Valorar la seguridad y eficacia de la adipólisis por congelación, así como la reducción de tejido adiposo generada.

#### MÉTODO DE ESTUDIO

Estudio observacional prospectivo de cohortes de los primeros 15 pacientes sometidos a un tratamiento único de adipólisis por congelación a  $-8^{\circ}\text{C}$  utilizando el procedimiento Cryotechnology que genera una succión del tejido adiposo de la zona de tratamiento acompañada del tratamiento controlado del tejido subcutáneo. El estudio ha sido realizado en una clínica de medicina estética avanzada. Se sometió a todos los participantes, previo consentimiento informado, a congelación a  $-8^{\circ}\text{C}$  durante 60 minutos, en zonas abdominal y flanco, previamente succionadas. Previo al tratamiento se realizaron medidas antropométricas de perímetro abdominal y valoración ecográfica de la capa grasa subcutánea. Se registraron fotografías, datos demográficos, resultados y efectos secundarios. También se valoró el grado de satisfacción del cliente de una escala del 1 al 10. Todos los datos han sido tratados con el paquete estadístico SPSS.

#### RESULTADOS

Se analizaron 15 personas, 14 mujeres y un hombre en un periodo de seis meses (Octubre 2010- Marzo 2011). Edad media  $42.8 \pm 8.1$  años, con una reducción del perímetro abdominal a nivel unipolar de 21mm de media  $\pm 1.2$ . Reducción tejido graso por ecografía de  $6.2 \text{ mm} \pm 1.8$  mm. Índice de satisfacción media de  $8 \pm 3$ . Efectos secundarios: dolor medio por sesión  $2.66$  (rango procedimiento con media de  $2.66 \pm 1.2$ ,  $n = 7.7$ , puntajes media de 8 días  $\pm 3$  el último media de 4.30 horas  $\pm 1.3$ h).

#### CONCLUSIONES

La adipólisis por congelación fue bien tolerada por todos los clientes, no habiéndose de interrumpir ningún procedimiento. El dolor intratécnico puntúa un nivel bajo en la escala de dolor visual analógica. Los efectos secundarios fueron mínimos, no interfiriendo en la vida habitual de los clientes. Hubo reducción de medidas antropométricas y de grosor de grasa subcutánea por medida ecográfica. El índice de satisfacción fue elevado.

# Cryoadipolysis-A Technique That Delivers Results

- 2 sessions, 6 months follow up.
- 27.4% fat reduction.



# Reducción Del Tejido Adiposo Localizado Mediante Frío Controlado En La Zona Abdominal

- 20 subjects, 3 months follow up.
- 5.3cm  $\pm$  1.3 cm circumference reduction.
- Very visible result of the circumference and the consequent reduction of the adipose tissue located in the abdomen

## REDUCCIÓN DEL TEJIDO ADIPOSO LOCALIZADO MEDIANTE FRÍO CONTROLADO EN LA ZONA ABDOMINAL

Dr. Xavier Sánchez Tarrago, diplomado en medicina estética y envejecimiento

### HISTORIA

Nuevos procedimientos para obtener una reducción del tejido graso y reafirmar el tejido están continuamente mejorando sus prestaciones y métodos de trabajo. Desde varios años atrás hasta estos días, el tratamiento invasivo más utilizado para eliminar el tejido adiposo es mediante liposucción. El resultado de este proceso está contrastado pero no exento de riesgo relativo al tratamiento. Esta es la razón que impulsa a mejorar los procesos no invasivos con el propósito que conviertan en alternativas reales para reducir y eliminar el tejido graso, celulitis y reafirmar y modelar la silueta. En esta línea, el equipo Cooltechnology (Cryotechnology) utiliza el novedoso y no invasivo tratamiento aplicando frío controlado, a muy bajas temperaturas hasta -8°C, de una forma controlada para obtener un beneficio estético reduciendo la celulitis, el tejido adiposo y la obesidad localizada.

### OBJETIVO

El principal objetivo del presente estudio clínico pretende evaluar la eficacia del tratamiento CoolTech® utilizando la aplicación del frío controlado a través del contacto con la piel y el sistema de succión para obtener una reducción beneficiosa del tejido adiposo localizado y generalizado, celulitis y obesidad localizada en el abdomen como zona de tratamiento del presente estudio. El estudio también pretende evaluar la seguridad del tratamiento, analizando los posibles efectos adversos producidos después del tratamiento y realizando el seguimiento de la evolución durante las posteriores visitas.

### MÉTODO DE ESTUDIO

Durante un periodo de 3 meses, un grupo de un determinado número de pacientes (47 pacientes) se sometió al tratamiento de frío controlado y succión, utilizando el equipo Cooltechnology (Cryotechnology) con el objetivo de evaluar la reducción del abdomen. El tratamiento CoolTech® aplica una temperatura de -8°C para llevar a cabo el estudio. Durante la evolución del estudio clínico, el seguimiento de todos los tratamientos se realizó tomando fotografías y medidas de la circunferencia en la zona tratada en la base y durante las visitas posteriores. Finalmente, el estudio evaluó los posibles efectos secundarios aparecidos durante el proceso.

### RESULTADOS

Los resultados finales de los 20 pacientes al final del periodo de 3 meses se analizaron mediante diferentes gráficos. La media de reducción de tejido graso medida a través de la circunferencia de la zona tratada (abdomen) fue de 5.3 cm  $\pm$  1.3 cm. Los resultados visibles después de finalizar el análisis demuestran que el área tratada sufre una reducción de la circunferencia y la consecuente reducción del tejido adiposo localizado en el abdomen. Los efectos secundarios más comunes durante el tratamiento fueron analizados de acuerdo a la respuesta del paciente y las sensaciones después del tratamiento y durante las visitas posteriores.

### CONCLUSIÓN

El tratamiento CoolTech® aplicando frío controlado y vacío en la zona tratada garantiza grandes resultados de una manera no invasiva en la reducción del tejido adiposo, celulitis y obesidad localizada en el paciente. El estudio concluye que la reducción de tejido adiposo y los resultados visibles son más beneficiosos que los posibles riesgos aparecidos durante el tratamiento.

Author(s): X Tarrago

Source: Diplomado em Medicina Estética y envejecimiento

## Efficacy and Safety of Subcutaneous Fat Reduction by Cryoadipolysis

- The procedure has no effect on blood lipid levels or liver functions.
- Cryoadipolysis is an excellent non-invasive for localized fat reduction.
- The procedure's promising results have been confirmed in clinical study of efficacy.
- Cryoadipolysis is a generally well-tolerated treatment with mild transient side effects.
- Most patients have no complaints about these side effects and feel that it presents no disruption to their daily life.

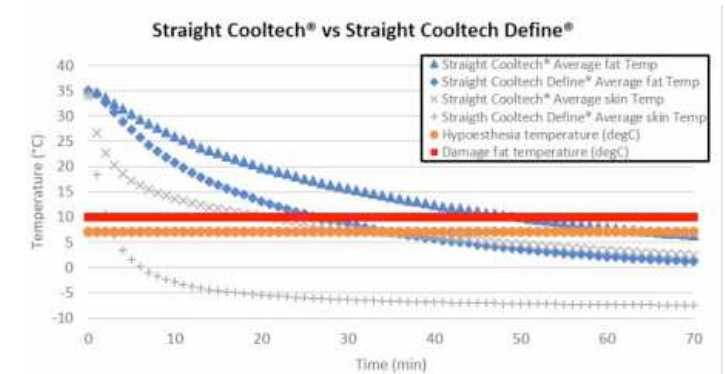




# New Cooltech Define® Cryoadipolysis Applicators: A Scientific and Comparative Study with Cooltech® Applicators



- Better performance compare with Cooltech (the 1<sup>st</sup> generation)
- Quicker cooling
- Faster reach to numb temperature leads to greater patient comfort
- Faster reach to crystallization temperature and longer apoptosis time leads to better result



**Table 4.** Comparative table of mean times at which crystallization temperatures were reached

| Series           | Applicator Model | Time for fat to reach crystallization temperature (10.38 °C) |
|------------------|------------------|--------------------------------------------------------------|
| Cooltech®        | Straight         | 48                                                           |
|                  | Tight            | 26                                                           |
|                  | Double           | 28                                                           |
| Cooltech Define® | Straight         | 25                                                           |
|                  | Tight            | 17                                                           |
|                  | Double           | 19                                                           |

°C: degrees Celsius.

**Table 5.** Comparative table of mean times at which hypoesthesia temperatures were reached

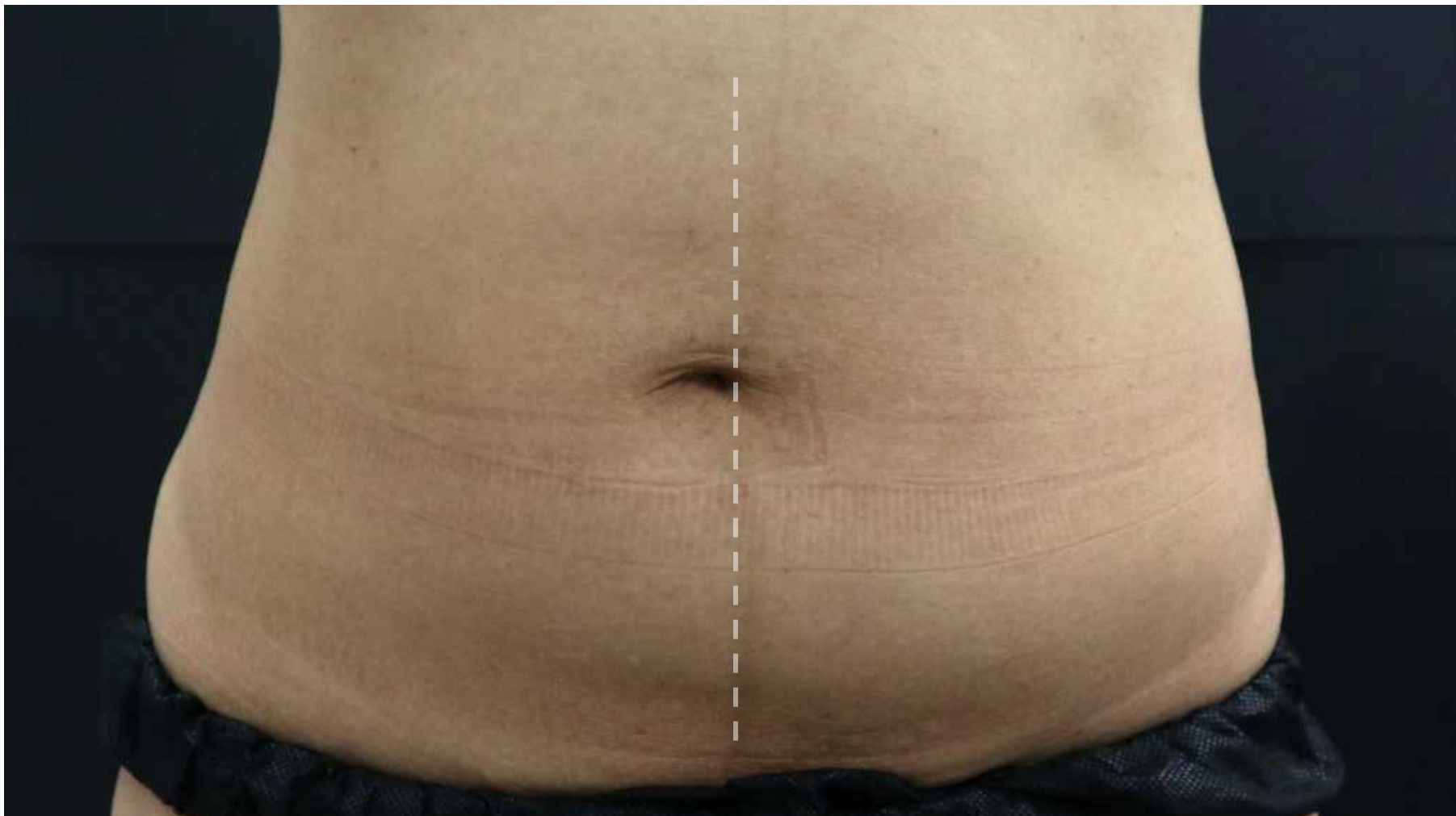
| Series           | Applicator Model | Time required for 50% of the skin to reach a temperature below 7 °C (min) |
|------------------|------------------|---------------------------------------------------------------------------|
| Cooltech®        | Straight         | 26                                                                        |
|                  | Tight            | 9                                                                         |
|                  | Double           | 8                                                                         |
| Cooltech Define® | Straight         | 3                                                                         |
|                  | Tight            | 3                                                                         |
|                  | Double           | 3                                                                         |

°C: degrees Celsius; min: minutes.

## Safety, Efficacy and Patient Tolerance of the New 360° Cryoadipolysis Device for Multiple-Area Fat Removal

- The new generation cryoadipolysis device with new 360° homogenous cooling plate design and features 4 applicators for providing up to 4 simultaneous treatments.
- Decreases tissue temperature more quickly than previous generation cryoadipolysis device and 36% quicker to reach cold hypoesthesia.
- After one cryoadipolysis session, the average skin fold reduced 7.80mm with a maximum reduction was 20mm or 50% reduction.
- The average circumference reduction was 32.3 mm with the highest result achieved in this study being 80 mm.
- Comparing with the previous generation cryoadipolysis device, Cooltech Define achieved greater results for localized fat reduction while simultaneously providing greater patient comfort.





2 months after  
1 session



Untreated



Before

8 weeks after  
1 session





Before

8 weeks after  
1 session

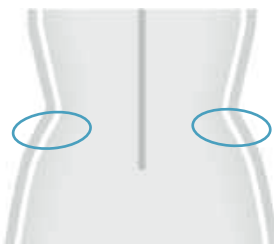




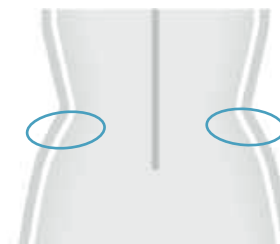
Day 1  
Immediate after treatment



6 weeks after  
1 session



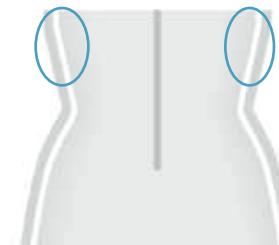
6 weeks after  
2 session





Day 1  
Immediate after treatment

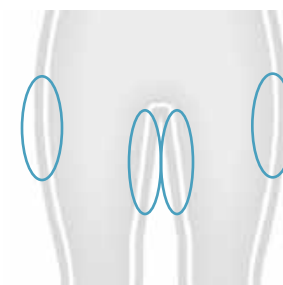
10 weeks after  
1 session



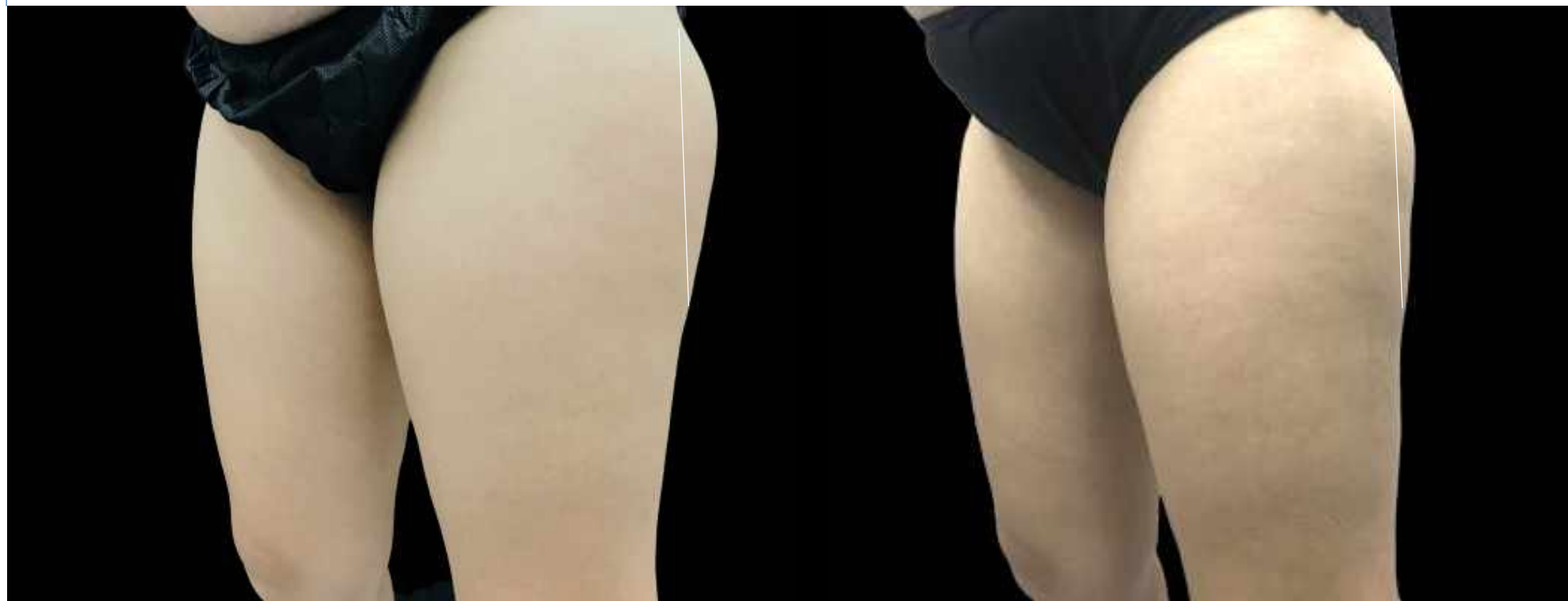


Before

8 weeks after  
1 session

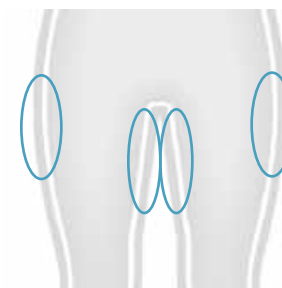






Before

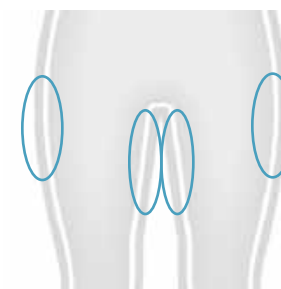
8 weeks after  
1 session





Before

8 weeks after  
1 session

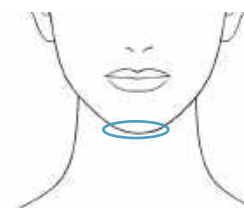




Before



10 weeks after  
1 session

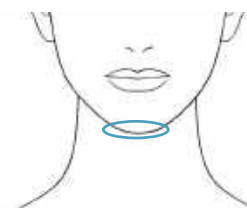




Before

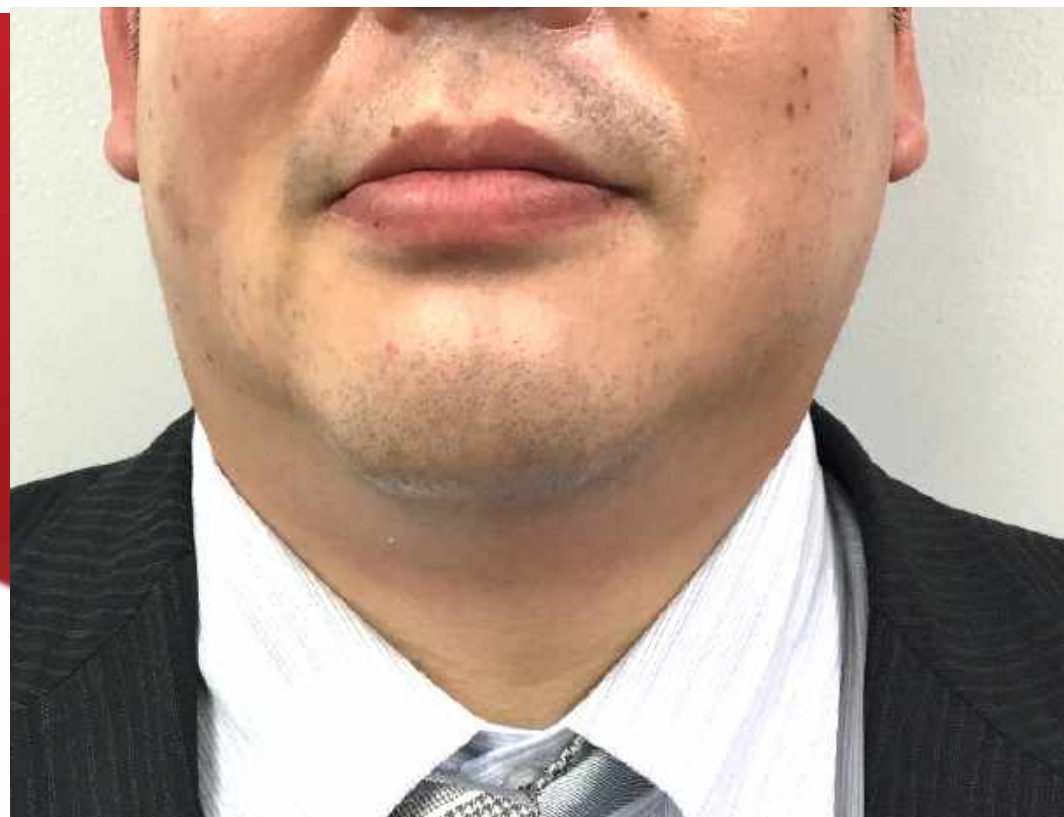


10 weeks after  
1 session

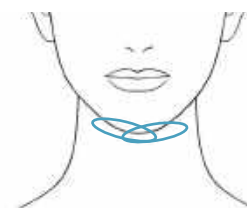




Before



10 weeks after  
1 session

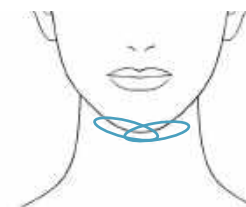




Before



10 weeks after  
1 session





**1** device, multiple possibilities

**2<sup>nd</sup>** generation, even better result

**360°** coverage cooling

**4** simultaneous applicators operations

**1/5** R&D expert

**60** countries

**70** mins, long lasting result

**8** years of Cryoadipolysis expertise

**9** handpieces and templates, adapts to all areas







cooltech  
D E F I N E