

PROMOITALIA
WELLNESS RESEARCH





PROSLIMELT



ProSlimPrKn0707B2



Low frequency ultra sound technology for localised fat reduction



HISTORY

First developed in World War II to locate submerged objects, the technique is now widely used in virtually every branch of medicine.

In obstetrics, to study the age, sex, and level of development of the foetus and to determine the presence of birth defects or other potential problems.

In cardiology to detect heart damage.

In ophthalmology to detect retinal problems.

Also used to heat joints, relieving arthritic joint pain, and for procedures such as lithotripsy.



RATIONALE

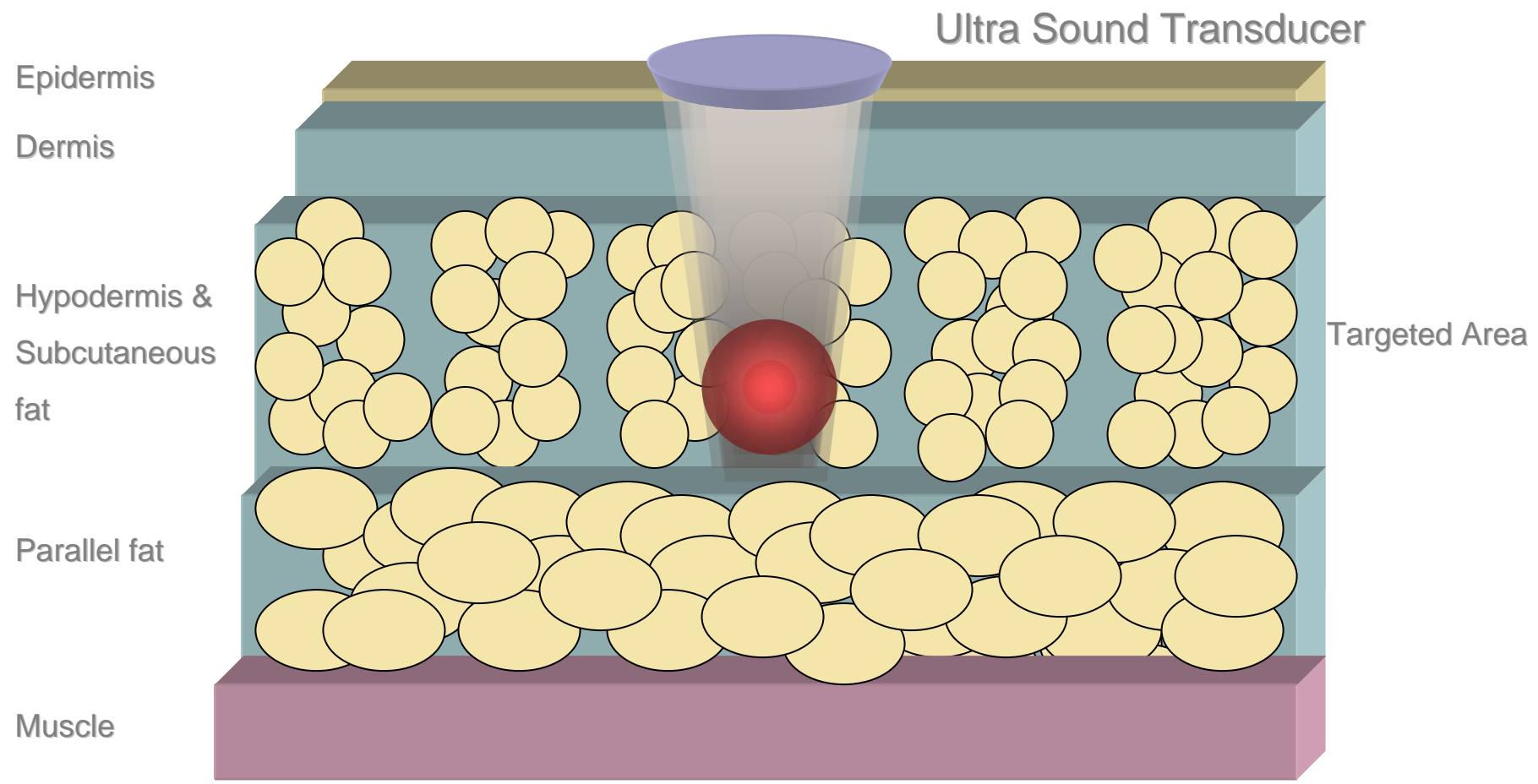
High-frequency therapeutic ultrasounds (1 to 3 MHz) have long been used for their analgesic, coagulating, de-fibrotic properties.

However high-frequency ultrasounds do not produce desired results on subcutaneous fat. Hence, the use of low-frequency ultrasounds for the treatment of lipodystrophies.

Ultrasound technology is non invasive, involves no radiation, and avoids possible hazards such as bleeding, infection, or reactions to chemicals.



TARGET = FAT





AESTHETIC APPLICATION

- ❖ Improve shape
- ❖ Reduce volume



FUNCTION

Low-frequency ultrasonics waves have three principal effects

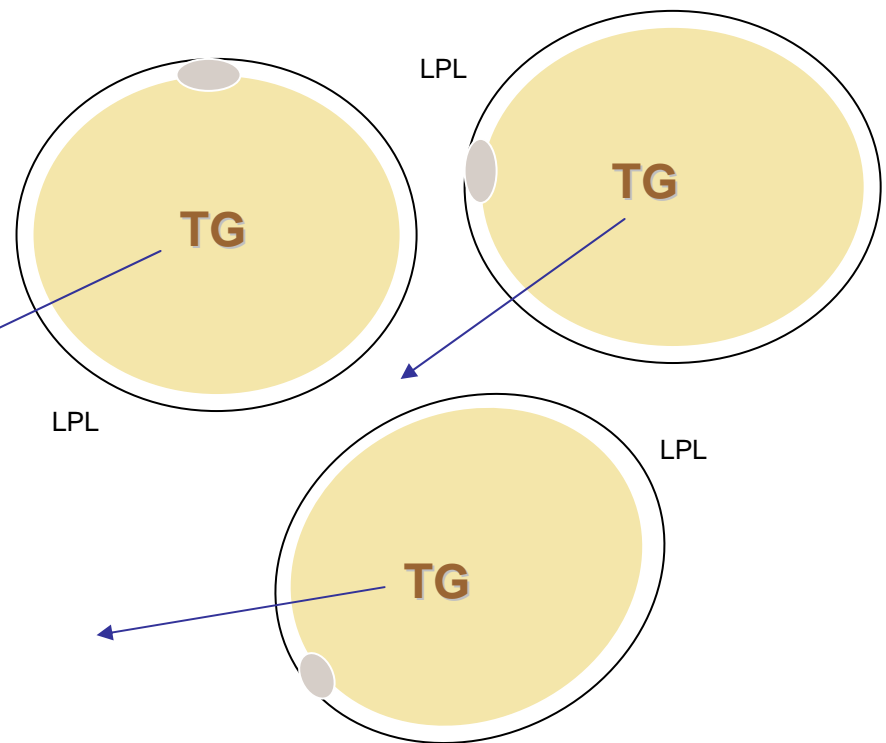
- Depolymerization or the molecular dislocation of triglycerides and the increase of their fluidity.
 - Lipolysis or the ejection of fatty acids from adipocyte cells due to stable cavitations and an increase in adipocyte cellular permeability.
- Adipocyte lysis (disruption)
- Defibrosis through the defibrinolytic mechanical action on bulk tissue present in the hypoderm.



Lipolysis & Fat reduction



Adipocytes



TG with LPL \rightarrow FFA +
Glycerol (water soluble)

FFA binds to Albumin (2 – 3
molecules of FFA binds to 1 of
albumin) transported away

FFA is metabolised by Liver



CAVITATION

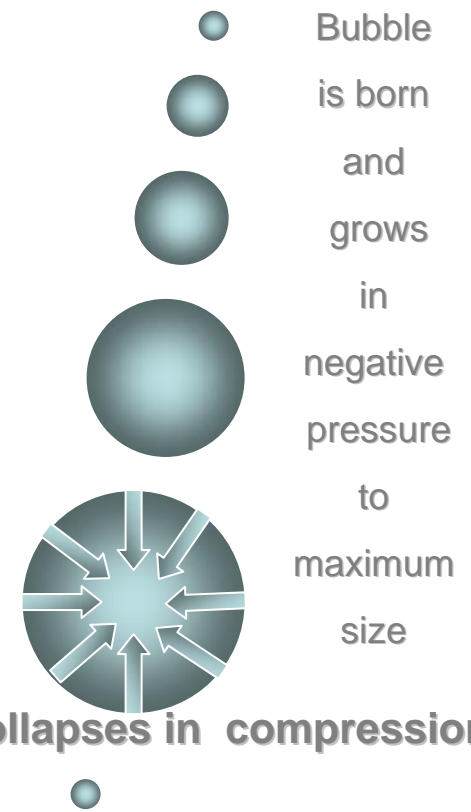
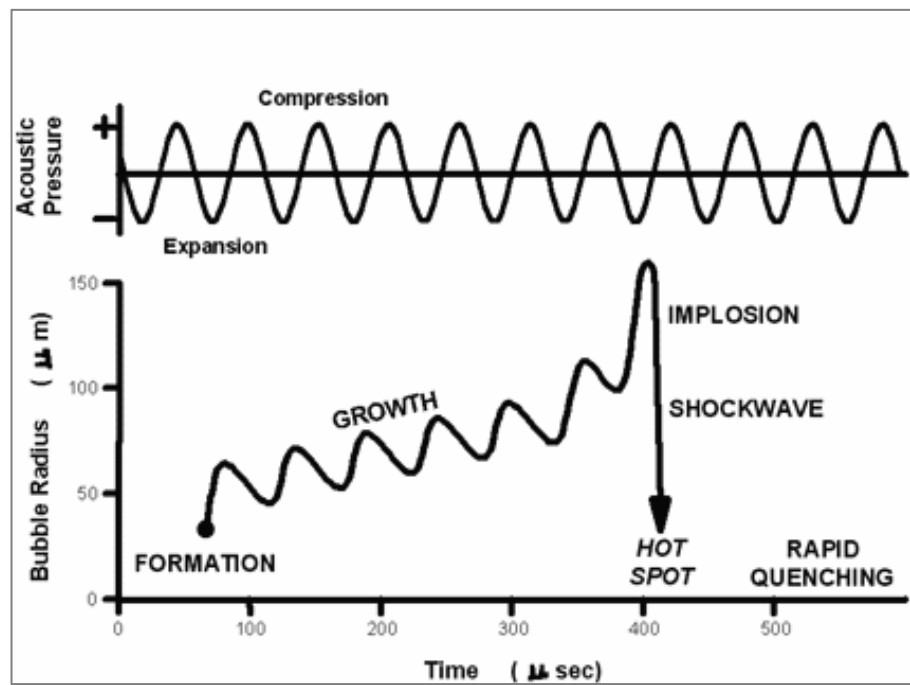
Acoustic cavitation occurs whenever a liquid is subjected to sufficiently intense sound or ultrasound (frequencies of 20 kHz up to 10 MHz).

When sound passes through a liquid, it consists of **expansion waves** (negative-pressure) and **compression waves** (positive-pressure). If the intensity of the sound field is high enough, it can cause the formation, growth, and rapid recompression of vapour bubbles in the liquid.

The implosive bubble collapse generates **localized heating**, a pressure pulse, and associated high-energy chemistry.



CAVITATION PHENOMENON



A new bubble is born & cycle repeats itself



SPECIFICITIES



Twin Transducers Technology
with spot surface = 17,5cm²



SPECIFICITIES

- ❖ Power : 3 watts / cm²
- ❖ Frequency : 30 khz – 70 khz
- ❖ Sweep Time: 3” – 30”
- ❖ Changeable parameters
 - ❖ Treatment time
 - ❖ Power
 - ❖ Sweep time

PROTOCOLS

Interval between treatment sessions 15 - 21 days (related to patient basal metabolism and lifestyle)

Total number of sessions 2 – 6 (4 on average) varies according to assesment of overall volume, area to treat and structure of tissue.

AVERAGE TREATMENT TIME PER AREA.

NOTE : SOME AREAS CAN BE DIVIDED (ACCORDING TO NEED AND OBJECTIVE) IN FOUR (4), THREE (3) OR TWO (2) SUB AREAS.

POSITION	SESSION TREATMENT TIME
PRONE	
AREA	PER AREA
BACK	15' x 4
LOWER BACK & BOTTOM	15' x 4
LATERAL EXTERNAL POSTERIOR THIGH	30' x 2
CALVES	15 - 20' x 2
SUPINE	
EXTERNAL ARMS	20 - 30' x 2
EXTERNAL PART BREAST/ PECTORAL	20' x 2
ABDOMEN 4 SEGMENT	15'x 4
INNER, MEDIUM THIGH	30 -40' X 2
INNER KNEE	15 - 20' X 2
EXTERNAL THIGH	30' x 2

CORRELATION BETWEEN POWER & DEPTH

<i>ADIPOSE TISSUE DEPTH</i>		<i>POWER/DEPTH</i>
0.8 -1.3 cm		20%
1.3 -1.8 cm		30%
1.8 - 2.3 cm		40%
2.3 - 2.8 cm		50%
2.8 - 3 cm		60%
3.0 - 3.5 cm		70%
3.5 - 4.0 cm	<u>WARNING!!</u>	80%
4.0 - 4.5 cm	<u>WARNING!!</u>	90%
4.5 - 5 cm	<u>WARNING!!</u>	99%

PROTOCOLS

<i>TISSUE TYPE</i>	<i>SWEEP TIME RANGE</i>	<i>POWER RANGE</i>
NORMAL ADIPOSE TISSUE	10"- 20"	30% - 70%
EDEMATOSE ADIPOSE TISSUE	20"- 30"	30% - 60%
FIBROSE ADIPOSE TISSUE	5"-10"	30% - 50%

POST SURGICAL

- These are options the surgeon can choose to use in order to complement the surgery (3 months to 1 year after surgery) so as to optimize the result of the surgery and prevent tissue transformation.
- When tissue has become uneven due to fibrosis (1 year after the surgery and more) the Proslimelt can be used to correct the condition and improve appearance.

POST LIPO		
3 mths – 1 year after surgery (1- 3 sessions)	5" - 20"	30% - 60%
1year and more after surgery (2 – 4 sessions)	5" - 20"	30% - 60%

NB: A Pre Liposuction treatment can be performed when appropriate as close as possible before the surgery to condition the tissue and facilitate and enhance the surgery.

PRE LIPO :(1session)10"- 20"30% - 70%



PROCEDURES

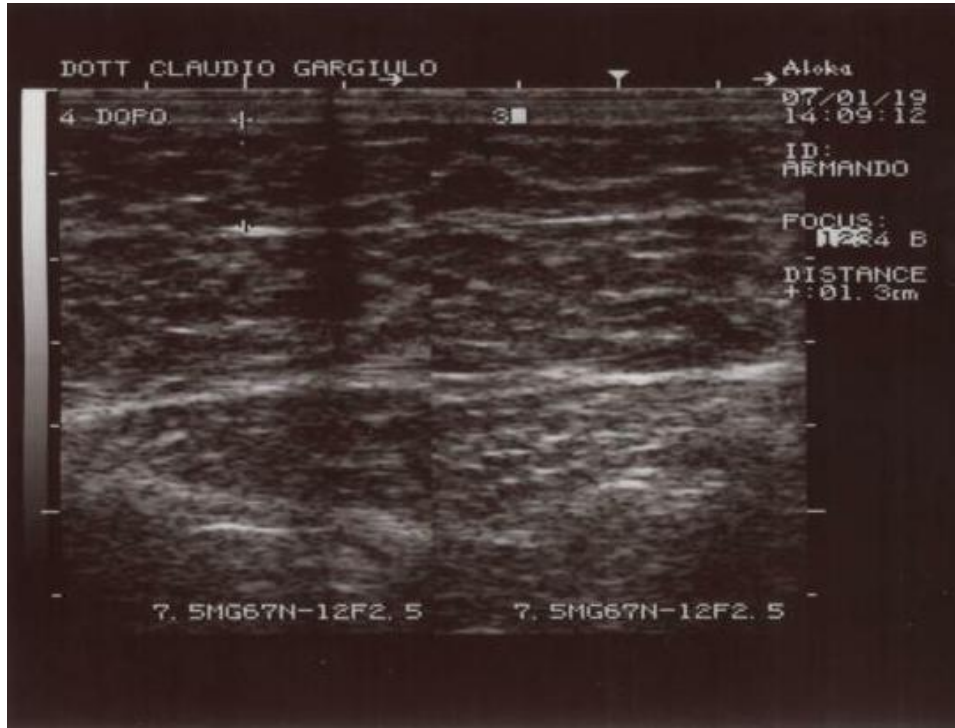
The selected area is treated following a grid pattern.

The transducer is moved over the grid slowly addressing each part of the grid with a circular motion for the determined seconds.

Treated areas: waist & abdomen, gluteus, outer thigh, posterior thigh, inner thigh and knee.



CLINICAL RESULTS





CAMERA PICTURES

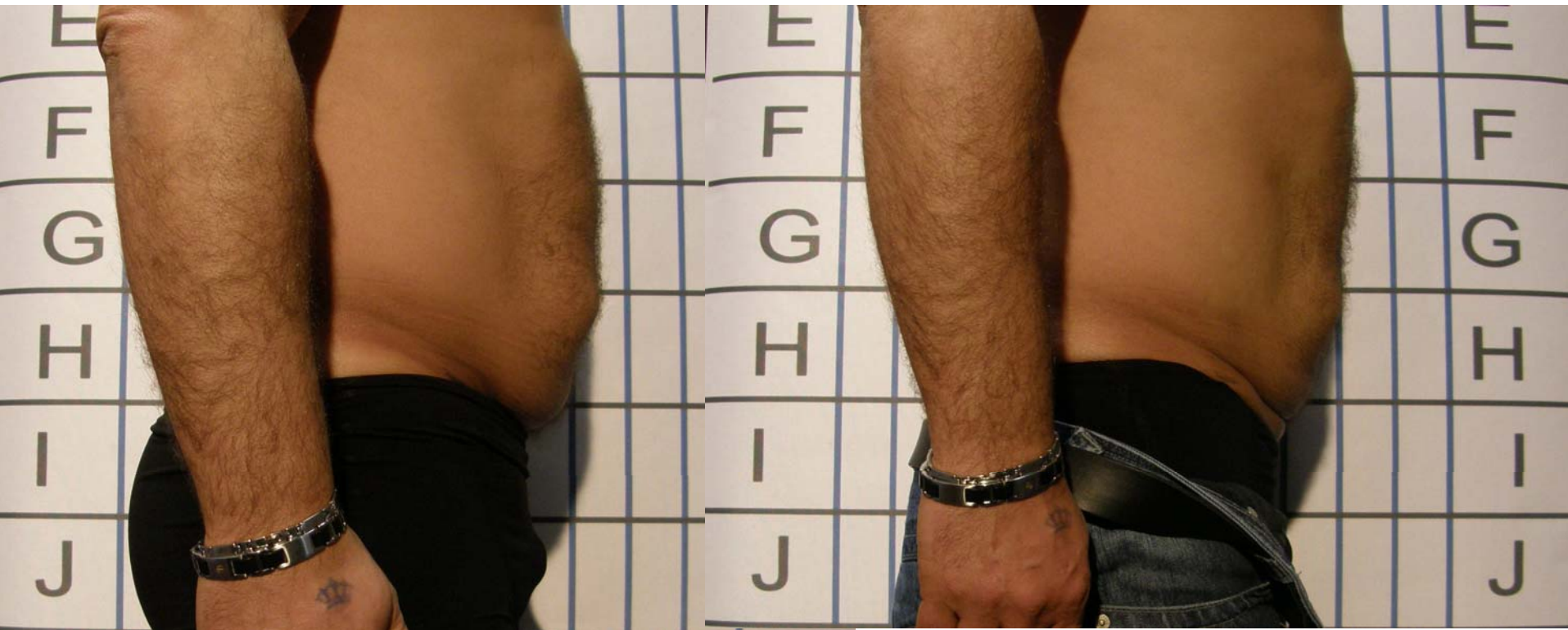
RESULTS
AFTER ONE SESSION



Before

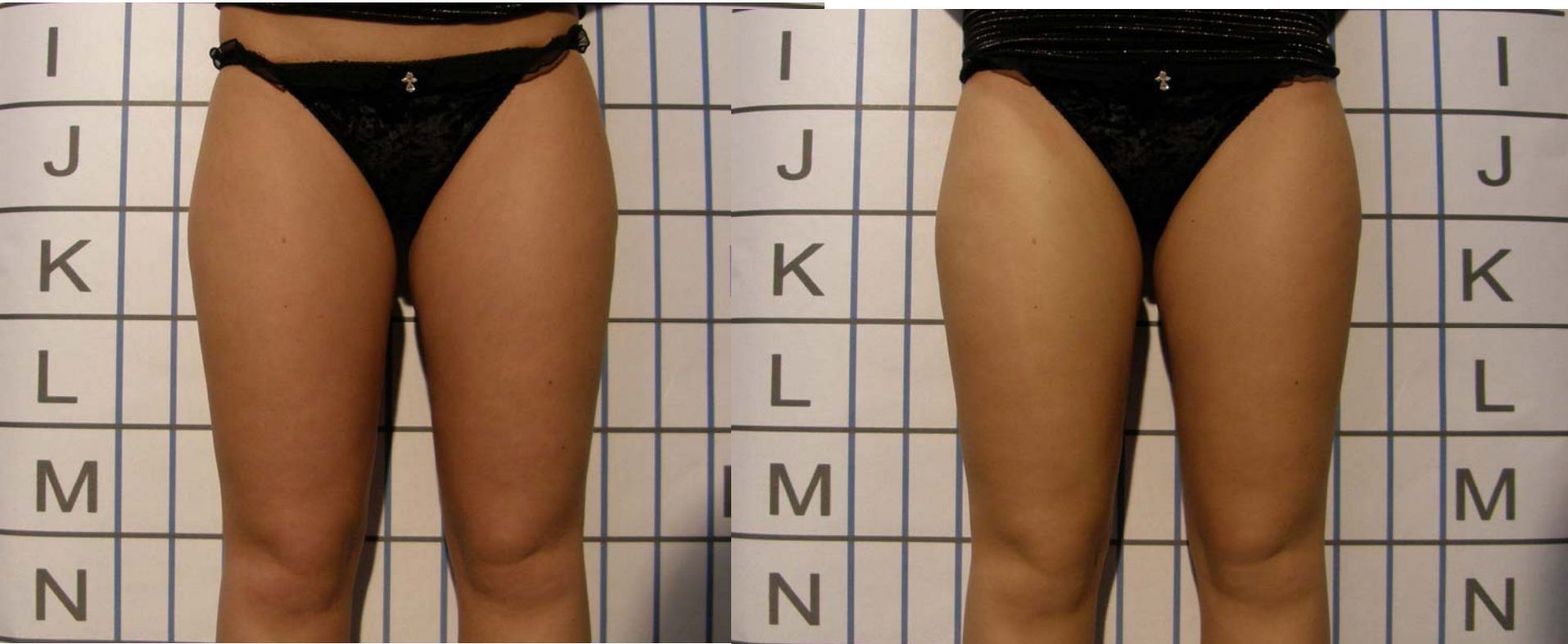


After



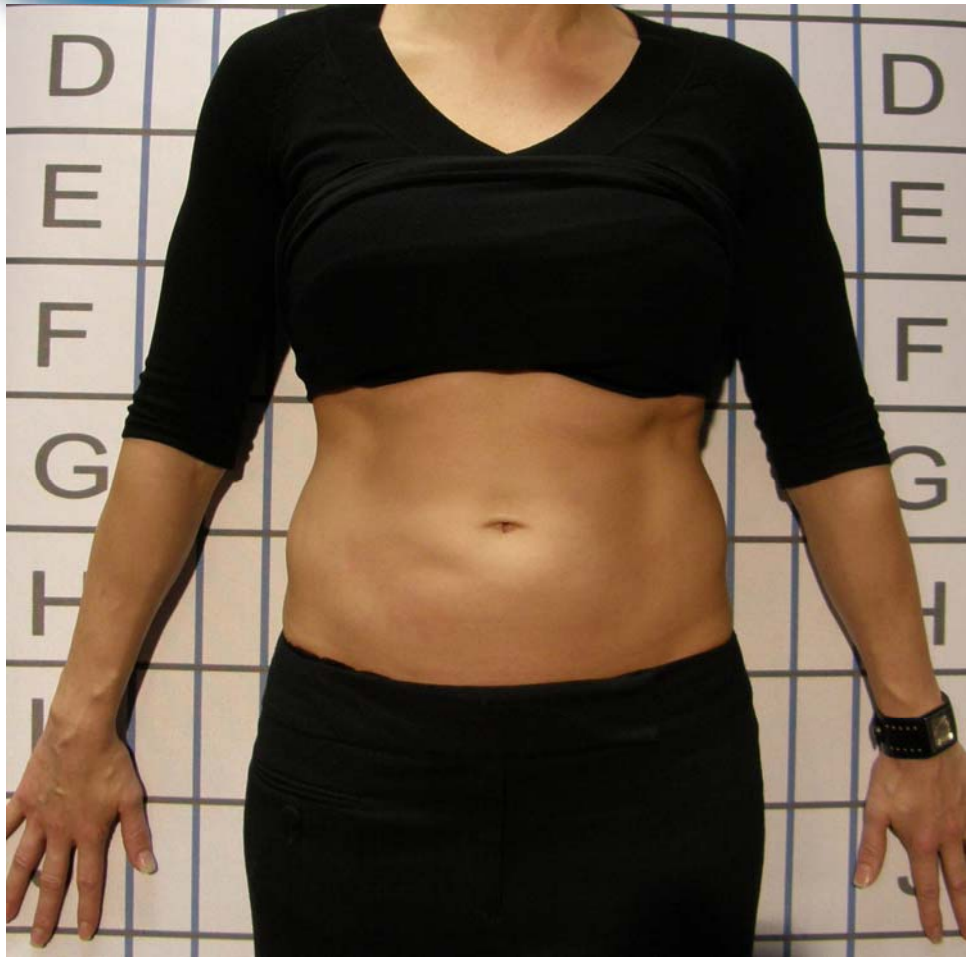
Before

After



Before

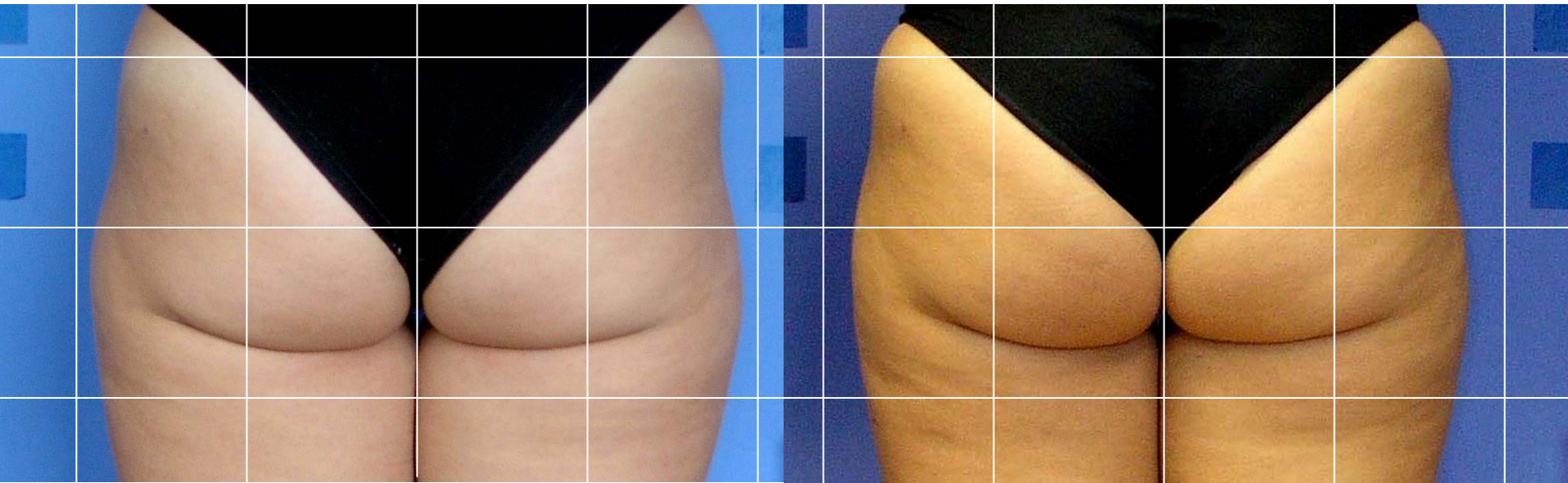
After



Before

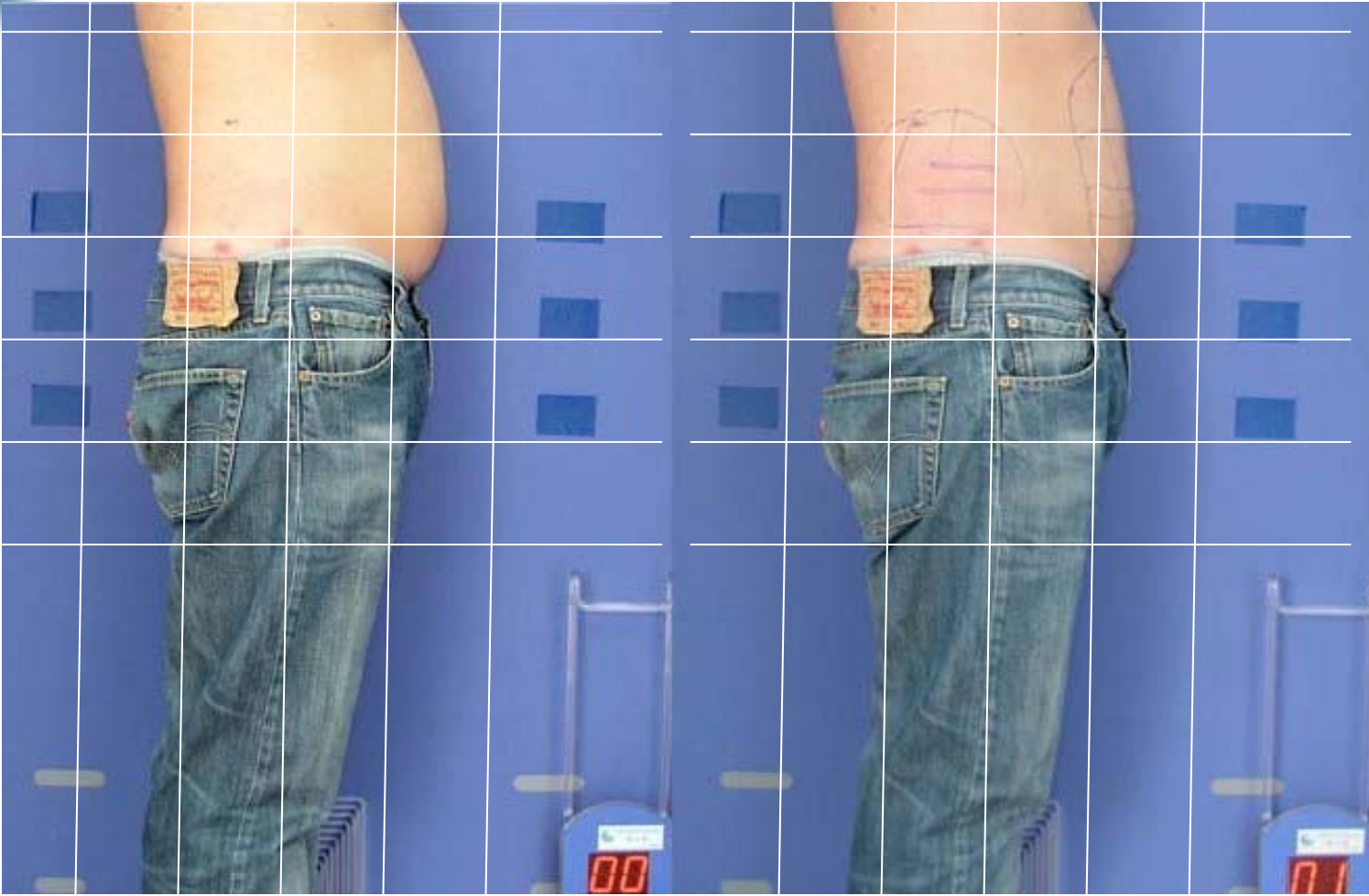


After



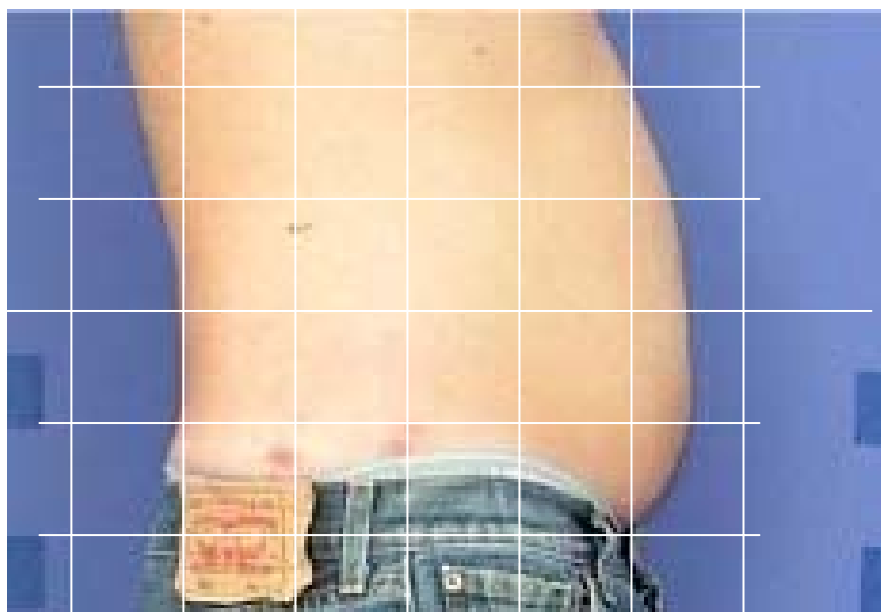
Before

After

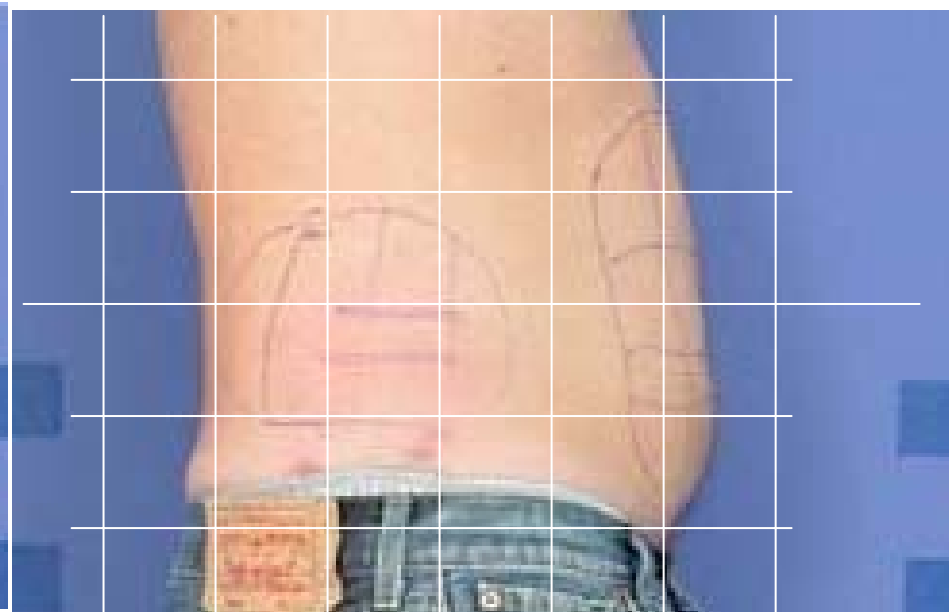


Before

After



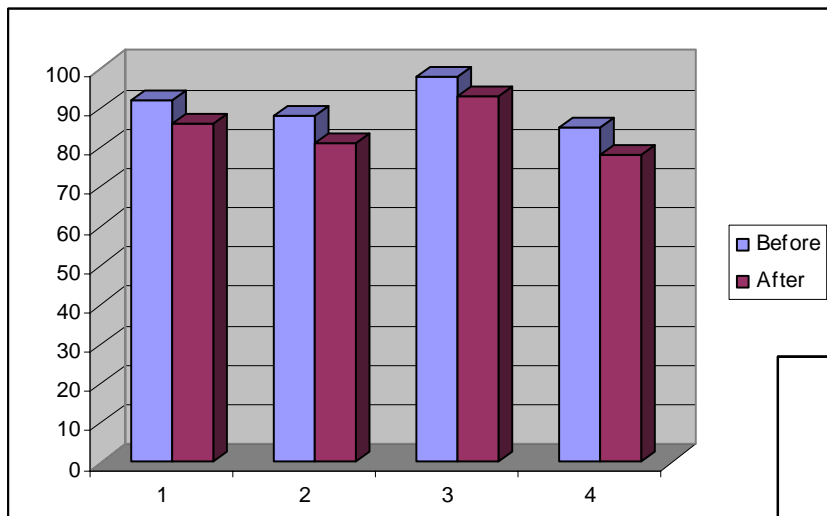
Before



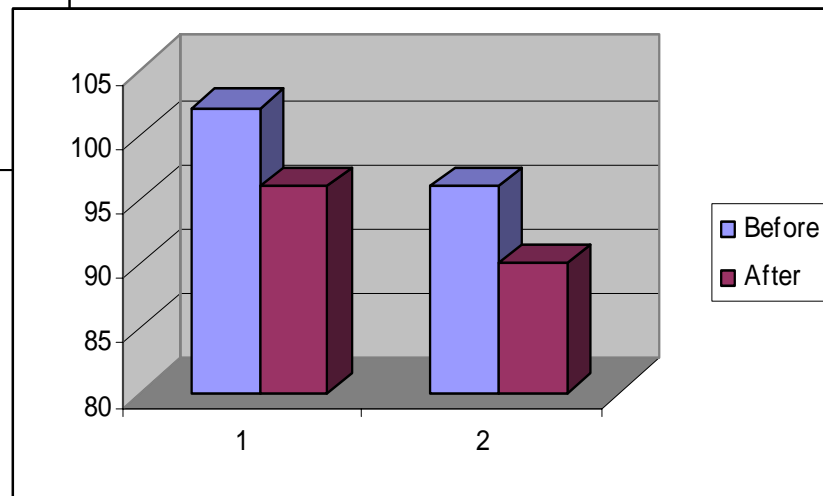
After



PERIMETRIC EVALUATION



Abdomen after 4 sessions



Thigh after 6 sessions



Echographic evaluation

Measurement of the subcutaneous fat layer

3



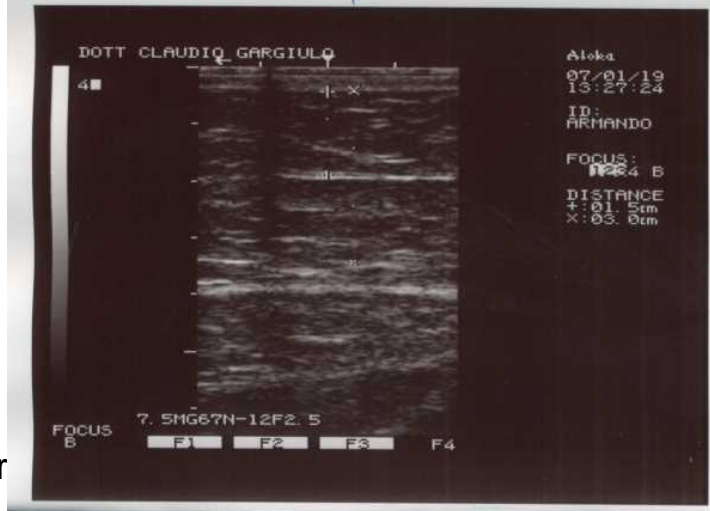
Abdominal area.

Initial : 1.5 mm

Post : 1.3mm

Perimetric reduction : 3 cm

4



4

5



Pr

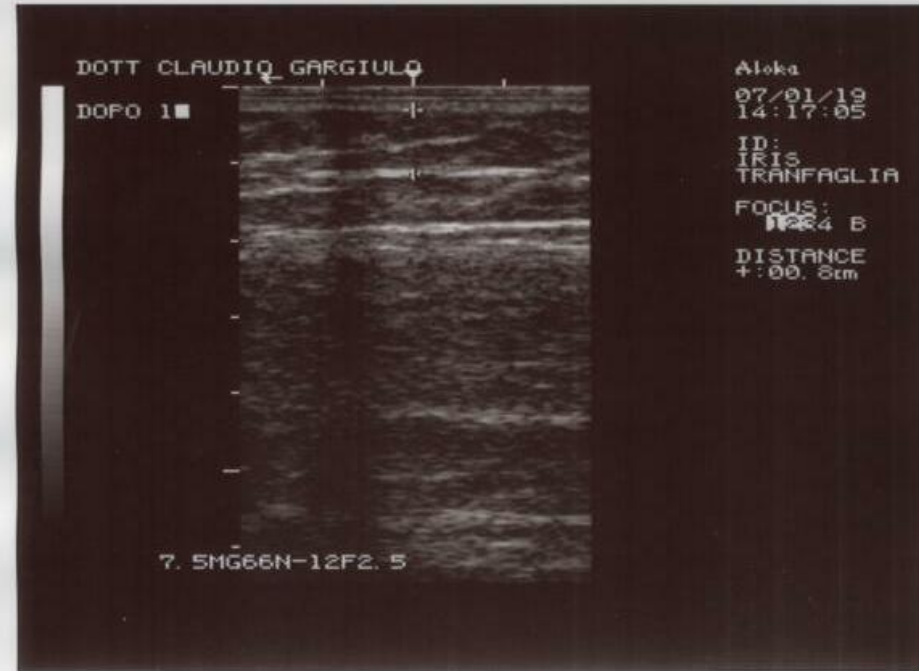


Upper flank area.

Initial : 0.9 mm

Post : 0.8mm

Perimetric reduction : 1 cm



The amount of fat loss is related to layer thickness

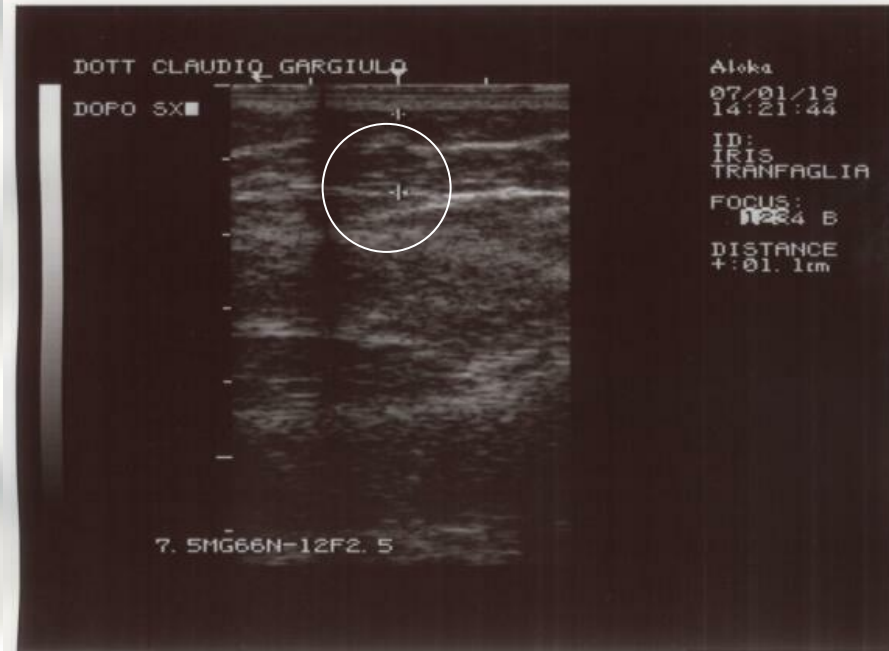
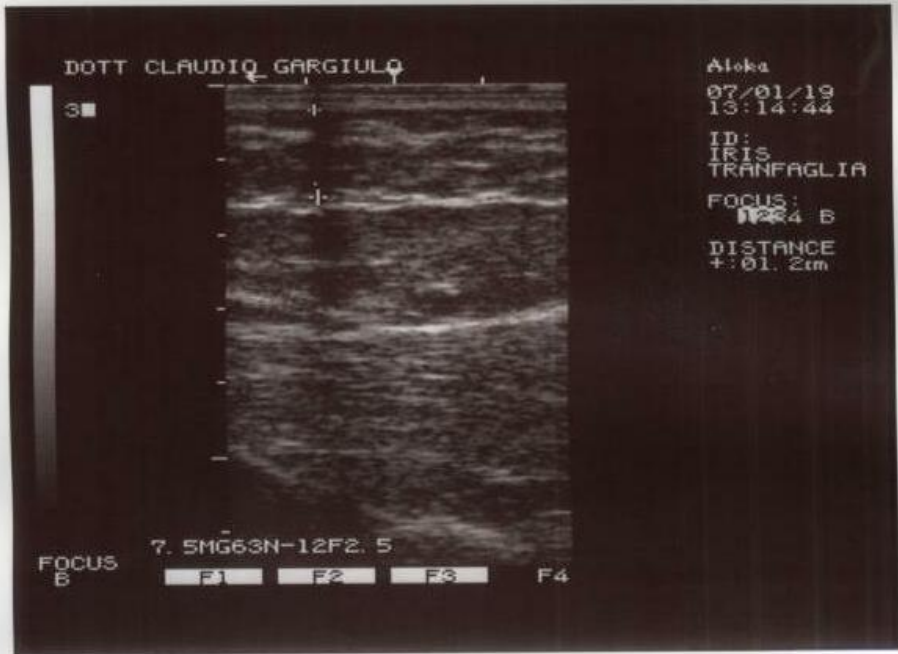


Mid flank area.

Initial : 1.2 mm

Post : 1.1mm

Perimetric reduction : 2 cm



Density loss due to adipocytes disruption with no damage to surrounding tissues

CONTRAINDICATIONS

ABSOLUTE

- Pregnancy
- Breast feeding
- Serious Liver disfunction
(Hepatitis, Cyrhosis)
- Serious kydney disfunction
- Evolutive disease
- Metal implant
- Pace maker

CONCLUSION

- ❖ Time efficient & non invasive procedure
 - ❖ Efficient & Safe body contouring treatment
 - ❖ Visible reduction of body circumference after each treatment
 - ❖ Adipose tissue lysed and cleared through natural mechanism
- ❖ No down time / Walk in procedure
- ❖ Office base treatment / no surgical theater
- ❖ No anesthesia / comfortable procedure
- ❖ Possibility to treat 2 areas at the same time

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