

MIGLOU™ Focused Microwave Contouring. Webinar Summary.

MIGLOU⁺

Presented by **Dr. Hyunseok Nam***, Korea — board-certified family medicine and certified obesity specialist, Chief Doctor of OWN Aesthetic Clinic, Songdo. The science, technology, safety and clinical protocol behind 2.45 GHz focused microwave contouring.



1 The Science

Why microwave energy targets the fat layer

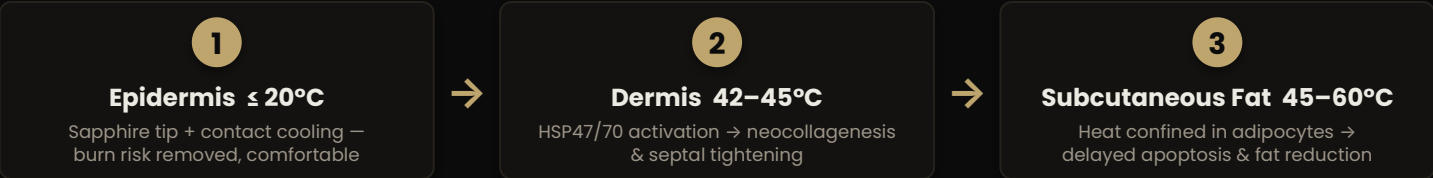
MIGLOU uses a GaN solid-state generator (not a magnetron) emitting 2.45 GHz microwave energy. It makes water and fat molecules vibrate, and the vibration becomes heat — dielectric heating that passes through the skin and builds up in the subcutaneous fat. Above 41°C adipocytes break down and are cleared by the lymphatic system.

● TOUCHING FAT vs. TARGETING FAT

Modality	Heating mechanism	Primary target	Effect on fat
HIFU	Focused ultrasound energy	SMAS layer	Side effect — risk of unwanted volume loss
RF	Resistive (Joule) — current follows the low-resistance path	Dermis; current prefers the septa	Indirect — energy spreads out
Microwave 2.45 GHz	Dielectric — ultra-fast dipole rotation of water	Subcutaneous fat	Primary target — fat is the destination

Why it spares skin: skin has low permittivity + high conductivity, so the wave passes through; fat has high permittivity + low conductivity, so the energy is stored there.

● ONE PASS, THREE LAYERS — THE DUAL CONTOURING EFFECT



2 The Difference

Focused Intensive Microwave (FIM) technology

HORN STRUCTURE · decides where the energy goes
A concave horn-shaped tip focuses the electric field toward a central point — reducing wave dispersion instead of sending energy straight down.

COMPLEX MATCHING · decides how it gets there without loss
Multi-layer impedance tuning to each skin layer's dielectric properties minimizes reflection and keeps heat at the target depth.

2.5×
STRONGER ELECTRIC FIELD
5,000 vs. 2,000 V/m (flat radiator), 100 W · 3 mm handpiece

~250%
TREATMENT EFFICIENCY
target temperature reached faster at the same energy

+83%
MICROWAVE PENETRATION
with stepwise multi-layer matching

21 mm
MAX. PENETRATION DEPTH
UESTC research, 0.5 W input

IMPEDANCE PATH
stepping stones, little reflection

εr ≈ 1 Air

,

εr ≈ 10 Sapphire tip

,

εr ≈ 50 Coupling gel

,

εr ≈ 60 Target skin

Source: “Beyond Fat Reduction: Focused Microwave Technology for Predictable Face & Body Contouring” — physician lecture by Dr. Hyunseok Nam*, OWN Aesthetic Clinic, Songdo, Korea.

3

The System

Three handpieces, one platform — and safety that does not depend on the operator

THREE HANDPIECES — CHOOSE BY DEPTH AND PURPOSE



LYFT 3 mm
PENETRATION · Ø40 TIP
2–4 mm
Dermis tightening
SKIN QUALITY



SHUEIP 7 mm
PENETRATION · Ø56 TIP
5–8 mm
Contour & firming
LIFTING



D-SHUEIP 12 mm
PENETRATION · Ø66 TIP
10–13 mm
Deep fat reduction
BODY CONTOURING

TRIPLE SAFETY SYSTEM

01 Contact Cooling

Sapphire tip holds the epidermis at 5°C — no burns, no anesthesia needed.

02 Gyro Motion Sensor

Energy cuts off if the handpiece stays still for more than 1.5 s — no local overheating.

03 Contact Recognition (CRT)

Reads the reflected wave and stops output as soon as the tip leaves the skin.

Operator shielding: dual EM shielding + frame grounding — off-axis leakage ≈ -40 dB, 6–10 dB (4–10×) lower than competitors (IoT Technology Support Center, Aug 2025).

4

The Clinic

Assessment, parameters and protocol from Dr. Nam's daily practice

PINCH TEST — SELECTING DEPTH & HANDPIECE

Fat layer (pinch)	Handpiece	Treatment depth	Typical indication
Thin ≤10 mm	LYFT 3 mm	≤ 3–4 mm	Skin quality, shallow facial areas
Medium 10–20 mm	SHUEIP 7 mm	6–9 mm	Jawline, double chin, contour
Thick ≥ 20 mm	D-SHUEIP 12 mm	max. 12 mm	Abdomen & body fat reduction

Clinical key point: the pinch value is the combined two-sided thickness — set target depth ≤ Pinch ÷ 2.

RECOMMENDED FACE PARAMETERS

GENERAL CARE · texture, fine lines, overall firmness

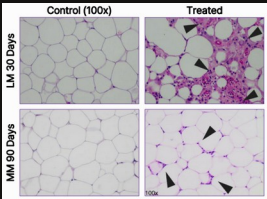
Handpiece: LYFT 3 mm (Ø40)
Power / dose: 100–120 W · 60–80 kJ
Time: 8–13 min

CONTOUR CARE · jawline, double chin, local tightening

LYFT 3 mm: 100–110 W · 60–80 kJ · 9–14 min
SHUEIP 7 mm: 80–100 W · 80–100 kJ
Tip: treat hollow-prone areas shallowly with LYFT

Protocol: 3 sessions at 3–4 week intervals; fine-tune energy to pinch-test thickness. Strategy — reach 45°C fast, then hold it.

RESULTS OVER TIME



Control (100x) Treated
LM 30 Days LM 90 Days

Fat cell breakdown peaks at day 30, settles by day 90 — 40% adipocyte survival after 3 min at 45°C.

BOTTOM LINE

Focused — horn + complex matching deliver 2.5× field intensity exactly at the target depth.

Predictable — pinch-test parameters and selective dielectric heating make results reproducible.

Versatile — three handpieces cover skin quality, facial contouring and body fat on one platform.

Comfortable — no anesthesia, no downtime, no marks or redness; patients return to normal life the same day.