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Z Y E



Presentation ZYE YAG®

CONTINUING MEDICAL EDUCATION PROGRAM

Prepared by **Clarissa Bravin, Renata Novais**
reviewed and approved by **Antonio Olivatto**

proprietary and confidential

see more at:

vydence
LASER ACADEMY **tv**



Z Y E

ZYE[®]:
features & technology

ZYE®: LASER SUPER PLATFORM

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THE WORLD'S FIRST LASER SUPER PLATFORM

- **LASER platform + the gold standard solution in hair removal, vascular lesions and skin tightening:** 755 nm ALEXANDRITE or 1064 nm Nd:YAG;
- **Smart - confidence and profitability:** remote diagnosis and management reports - all online;
- **Versatile:** 4 exclusive handpieces, compatible with ETHEREA-MX handpieces and with multiple treatment indications;
- **High profitability:** exclusive trade-in program for customers.



ZYE®: LASER SUPER PLATFORM

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THE WORLD'S FIRST LASER SUPER PLATFORM

- Two models of internal cavity LASER available:
- **ZYE YAG:** LASER platform with a high-power and versatile YAG cavity, with nearly 20 spots available in three different operating modes for multiple indications.
- **ZYE ALX:** LASER platform with a super-versatile ALEXANDRITE cavity for hair removal and pigmented lesions.



ZYE®: LASER SUPER PLATFORM

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FEATURES & TECHNOLOGY



	ZYE YAG
Wavelength	1.064 nm
Available Spots <i>Plug-and-Play</i>	3 to 24 mm
Available Spots <i>Digital Zoom</i>	3 to 18 mm
Power Output	100 J
Pulse Time	200 µs to 300 ms
Repetition Rate	DYNAMICS: up to 20 Hz LongPulse: up to 3 Hz INTENSE: continuous
Cooling	sapphire window or air cooling
Consumables	No
Platform	Yes

8-18/HR
Contact cooling through a sapphire window (to 4°C), square spot of up to 18 mm, top hat beam and digital optical zoom.



3-24/HR
11 plug-and-play spots available, up to 24 mm, and an adapter for external cooling.



5-15/LT
Controlled heating of the skin through a continuous wave of 1064 nm Nd:YAG, for skin tightening



3-10/VL
Contact cooling through a sapphire window (to 4°C), square spot of up to 10 mm, top hat beam and digital optical zoom.



ZYE®: LASER SUPER PLATFORM

THE WORLD'S FIRST LASER SUPER PLATFORM



3-24/HR

Hair removal



8-18/HR

Hair removal



5-15/LT

LASER
tightening



3-10/VL

Vascular
lesions

*Not available for ZYE ALX®

Handpiece	Spot Sizes		Specifications	Treatment indications	Temperature control or cooling	Operating mode
<p>3-24/HR</p> 	3 mm 5 mm 6 mm 10 mm 12 mm 14 mm	16 mm 18 mm 20 mm 24 mm +26 mm	<ul style="list-style-type: none"> ✓ Air-Cooling ✓ Plug-and-Play Spots 	<ul style="list-style-type: none"> ✓ PFB/ Hair removal ✓ Vascular lesions (YAG) ✓ Pigmented lesions (ALX) ✓ Non-ablative skin resurfacing (YAG) ✓ Rosacea (YAG) ✓ Onychomycosis (YAG) 	Adapter for external cooling	<p><u>DYNAMICS</u> 200 to 1.000 μs 20 Hz</p> <p><u>Long Pulse</u> 1 to 300 ms 3 Hz</p>
<p>8-18/HR</p> 	8 mm 10 mm 12 mm 14 mm 16 mm 18 mm		<ul style="list-style-type: none"> ✓ Cool-&-Clear® Sapphire ✓ Telescope® Zoom ✓ Flat-Frame® Lenses 	<ul style="list-style-type: none"> ✓ PFB/ Hair removal 	Sapphire with cooling to 4°C	<p><u>Long Pulse</u> 1 to 300 ms 3 Hz</p>
<p>5-15/LT</p>  <p>NOT AVAILABLE FOR ZYE ALX®</p>	5 mm 10 mm 15 mm		<ul style="list-style-type: none"> ✓ Air-Cooling ✓ Plug-and-Play Spots ✓ Accusense® Thermometer 	<ul style="list-style-type: none"> ✓ Skin tightening ✓ Non-ablative skin resurfacing ✓ Rosacea (YAG) ✓ Onychomycosis (YAG) 	T°C skin monitoring and bar graph viewer	<p><u>DYNAMICS</u> 200 to 1.000 μs 20 Hz</p> <p><u>Intense</u> Continuous</p>
<p>3-10/VL</p> 	3 mm 5 mm 6 mm 8 mm 10 mm		<ul style="list-style-type: none"> ✓ Cool-&-Clear® Sapphire ✓ Telescope® Zoom ✓ Top Hat Beam 	<ul style="list-style-type: none"> ✓ PFB/ Hair removal ✓ Vascular lesions (YAG) ✓ Pigmented lesions (ALX) ✓ Non-ablative skin resurfacing (YAG) ✓ Rosacea (YAG) ✓ Onychomycosis (YAG) 	Sapphire with cooling to 4°C	<p><u>DYNAMICS</u> 200 to 1.000 μs 20 Hz</p> <p><u>Long Pulse</u> 1 to 300 ms 3 Hz</p>

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ETHEREA-MX
FULLY COMPATIBLE

Z Y E


etherea^{MX}





 etherea^{MX}

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ZYE®: LASER SUPER PLATFORM

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THE WORLD'S FIRST LASER SUPER PLATFORM

HANDPIECES AVAILABLE FOR ETHEREA-MX® AND ZYE®



IPL-Sq®
IPL system with 7
wavelengths



LongPulse®
1064 nm Nd:YAG
long pulse LASER



ACROMA-QS®
1064/532 nm Nd:YAG
Q-Switched LASER



ProDeep®
1340 nm Nd:YAP
non-ablative
fractional LASER



GoSmooth®
1540 nm Er:Glass
non-ablative
fractional LASER



DualMode®
2940 nm Er:YAG
ablative fractional
LASER

HANDPIECES EXCLUSIVE TO ZYE®



5-15/LT
1064 nm Nd:YAG
with continuous
pulse for LASER
Tightening



3-10/VL
Nd:YAG or
Alexandrite with
long pulse for
vascular lesions



8-18/HR
Nd:YAG or
Alexandrite with
long pulse for hair
removal



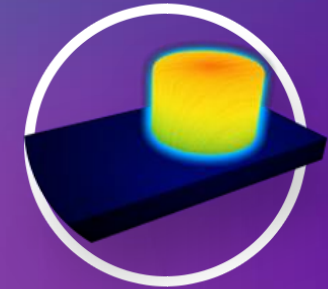
3-24/HR
Nd:YAG or
Alexandrite with
long pulse for hair
removal

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ZYE YAG[®] 3-10/VL: features & technology

ZYE YAG®: 3-10/VL HANDPIECE

ZYE TELESCOPE® DIGITAL OPTICAL ZOOM



HOMOGENOUS BEAM
WITH TOP HAT SHAPE

LASER GUIDE WITH
CONTRAST AND
INTENSITY
ADJUSTMENT



COOL-&-CLEAR®
SIMULTANEOUS COOLING

ZYE YAG: 3-10/VL HANDPIECE

ZYE TELESCOPE® DIGITAL OPTICAL ZOOM



- More practicality during sessions with ZYE TELESCOPE® Digital optical zoom technologies;
- 5 sizes available, providing more effectiveness in treating vessels;
- No consumables.

FEATURES & TECHNOLOGY

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TECHNICAL CHARACTERISTICS



	3-10/VL
Wavelength	Nd:YAG 1.064 nm
Operating mode	LongPulse, DYNAMICS®
Maximum energy	Up to 140 J/cm ² (DYNAMICS®) and 500 J/cm ² (LongPulse)
Pulse time	200 µs to 300 ms
Operating frequency	Up to 3 Hz (LongPulse) and 20 Hz (DYNAMICS®)
Spots	3 mm 8 mm 5 mm 10 mm 6 mm
Additional	Cooling with sapphire window Digital optical zoom system Top Hat Beam

FEATURES & TECHNOLOGY

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INDICATIONS



- Gold standard for treating **vascular lesions**;
- Good option for **hair removal**, mainly for darker skin tones;
- DYNAMICS Mode for **non-ablative skin resurfacing**, **rosacea control** and **onychomycosis**.

FEATURES & TECHNOLOGY

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OPERATING MODE

Two operating modes with different pulse times to deliver energy more **aggressively** in long pulses or more **comfortably**, accumulating heat in short pulses.

	LONGPULSE®	DYNAMICS®
DEFINITION	Long pulses, in milliseconds (ms)	Short pulses, in microseconds (μ s) to 1 ms
PULSE TIME	3 to 300 ms	200 μ s to 1 ms
INDICATION	<ul style="list-style-type: none">• Vascular lesions• Hair removal	<ul style="list-style-type: none">• Non-ablative skin resurfacing• Rosacea control• Onychomycosis
ACTION	Selective photothermolysis	Accumulation of heat, heating, collagen stimulation
CHARACTERISTICS	More aggressive	More comfortable

FEATURES & TECHNOLOGY

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MECHANISM OF ACTION - LONGPULSE® MODE



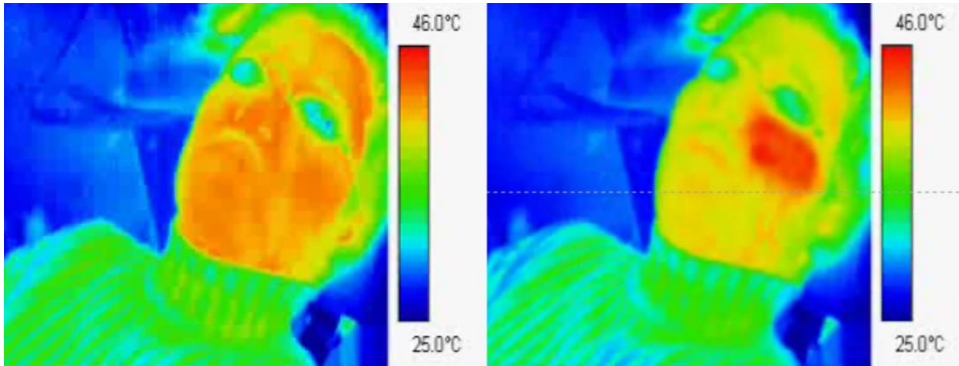
Photothermal effects: light absorption leads to the destruction of the target chromophore (selective photothermolysis) by high temperature.

- ✓ Vascular lesions
- ✓ Hair removal

FEATURES & TECHNOLOGY

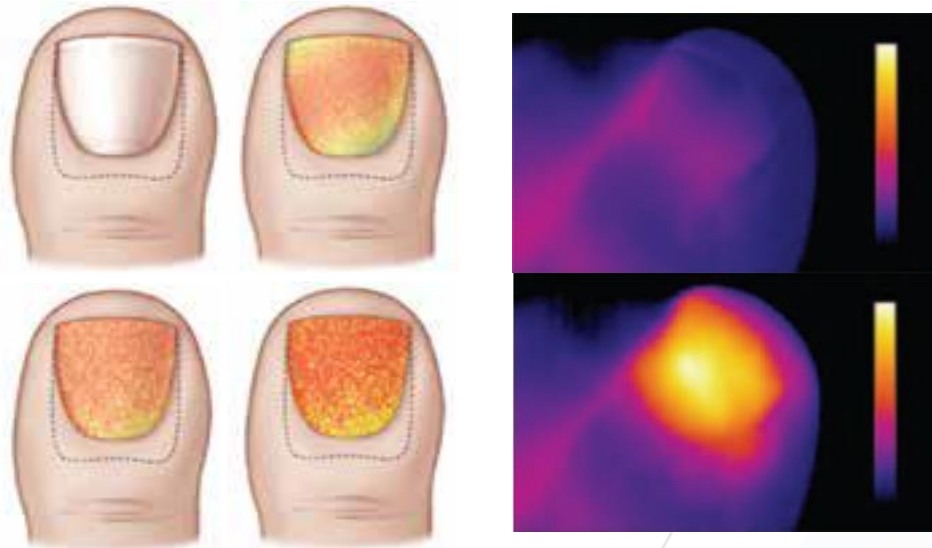
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MECHANISM OF ACTION – DYNAMICS MODE



DYNAMICS® mode:
generates homogenous
and controlled heating,
indicated for:

- ✓ non-ablative skin resurfacing;
- ✓ rosacea control;
- ✓ onychomycosis



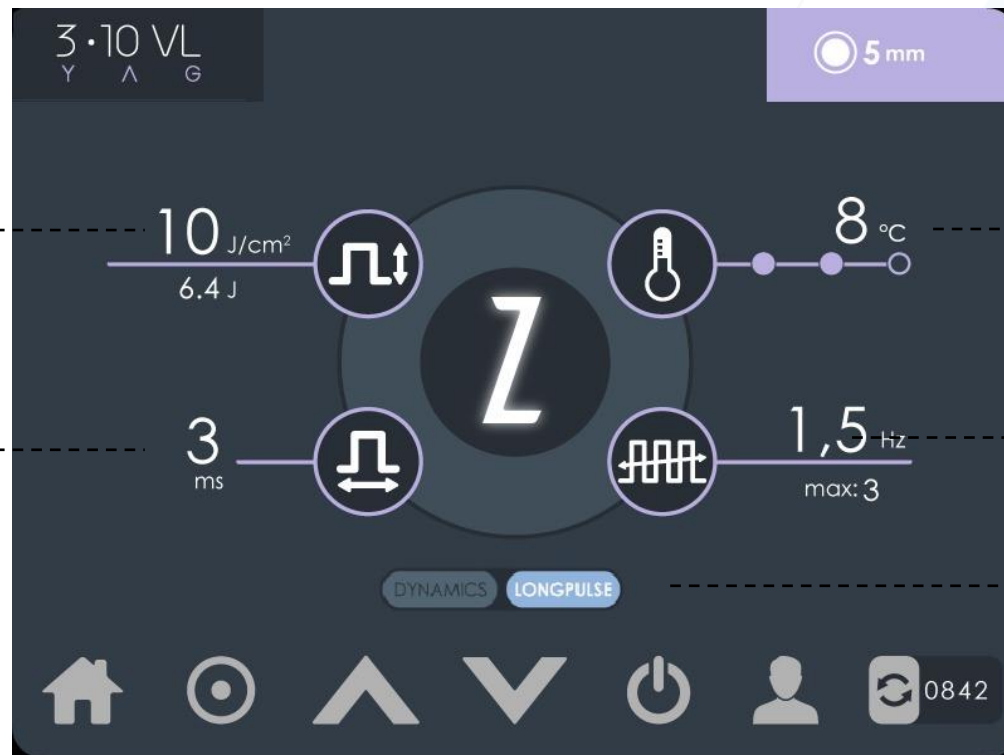
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ZYE YAG[®] 3-10/VL: interface and parameterization

INTERFACE AND PARAMETERIZATION

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LONGPULSE® MODE



automatic recognition of the **handpiece** and **spot**

fluence: energy delivered by area (J/cm^2)

cooling: sapphire cooling level

pulse time: time for the fluence to be delivered

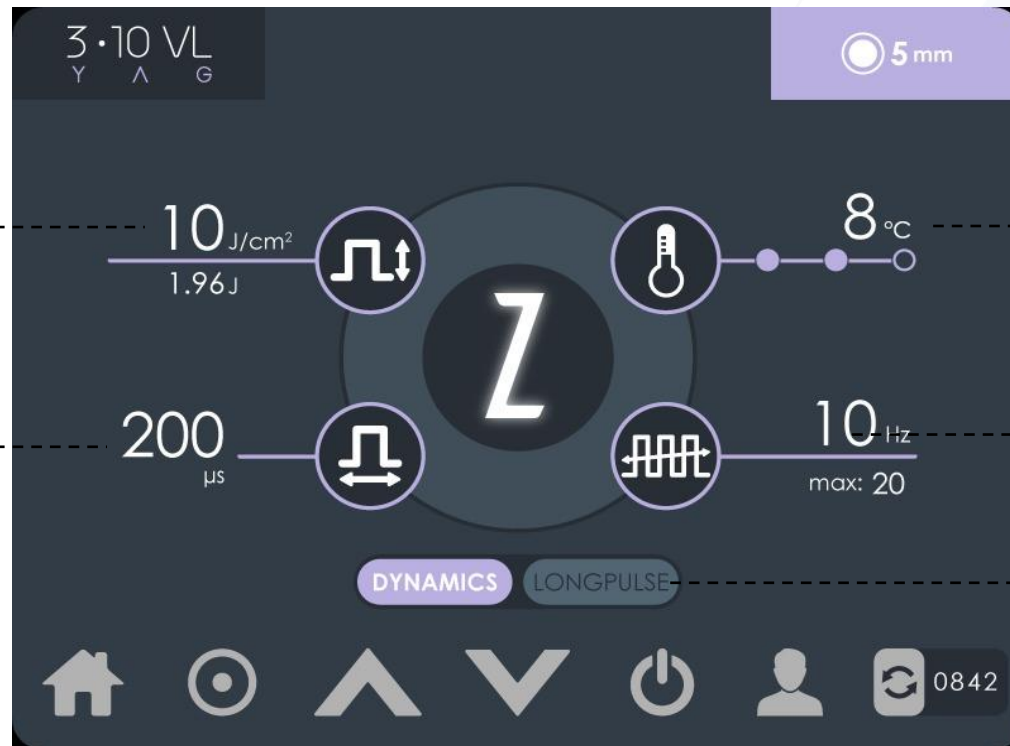
frequency: or repetition rate between shots

selection of **operating mode** - DYNAMICS or LONGPULSE

INTERFACE AND PARAMETERIZATION

Z Y E

DYNAMICS® MODE



automatic recognition of the **handpiece** and **spot**

fluence: energy delivered by area (J/cm^2)

pulse time: time for the fluence to be delivered

temperature: real-time monitoring

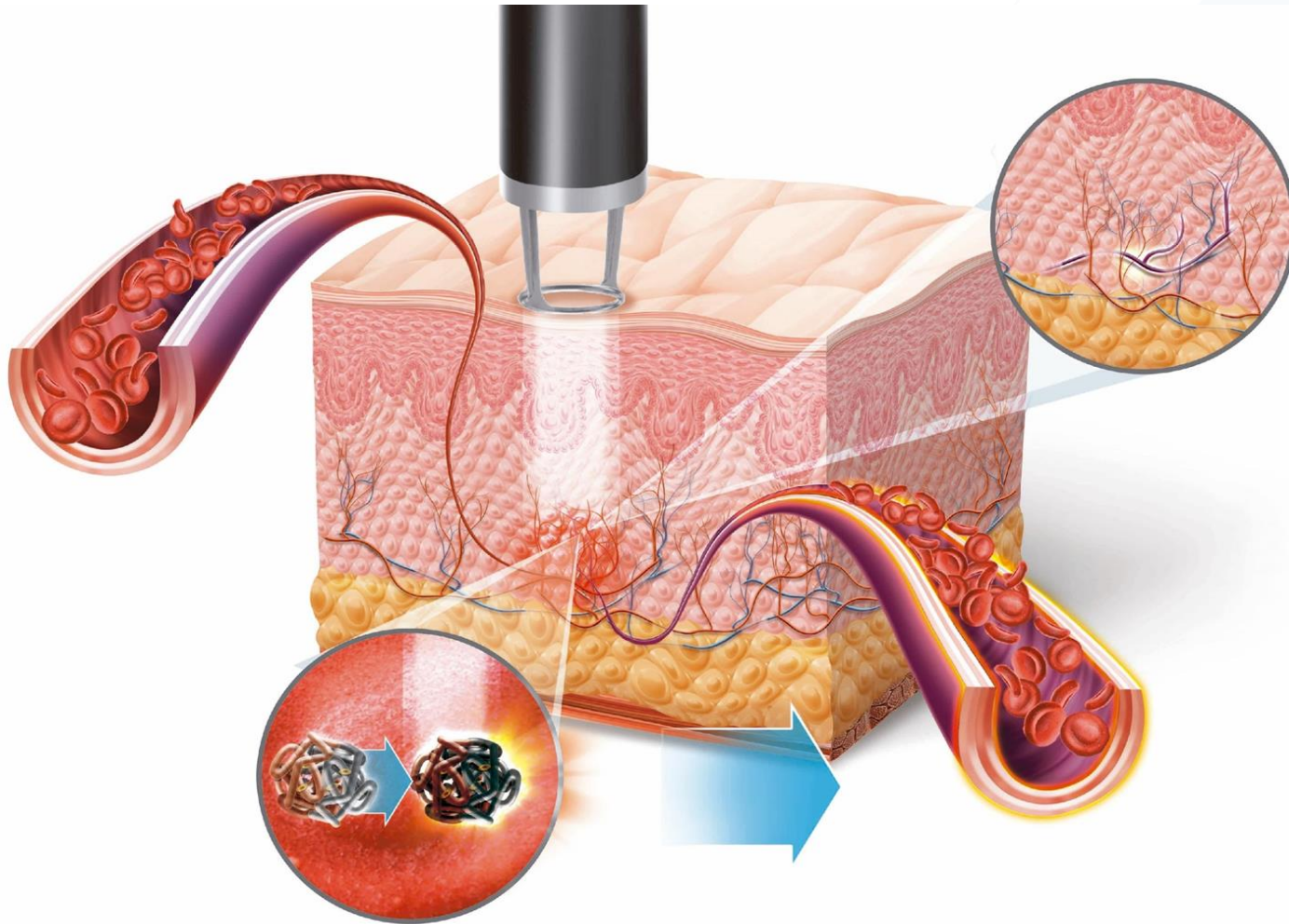
frequency: or repetition rate between shots

selection of **operating mode** - DYNAMICS or LONGPULSE

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About LASERs and light:
science and technology
VASCULAR LESIONS

TISSUE INTERACTION - SELECTIVE PHOTOTHERMOLYSIS



SCIENCE AND TECHNOLOGY

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THREE PILLARS FOR EXCELLENT TREATMENT

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EFFICACY



Wavelength
Beam quality
Pulse time
Fluence

COMFORT



Cooling

SPEED



ZYE Telescope®
Repetition rate
LASER guide

Efficacy: fewer sessions (+ ROI) and guaranteed satisfaction;

Comfort: higher adherence to the treatment;

Speed: less time in the office/treatment time.

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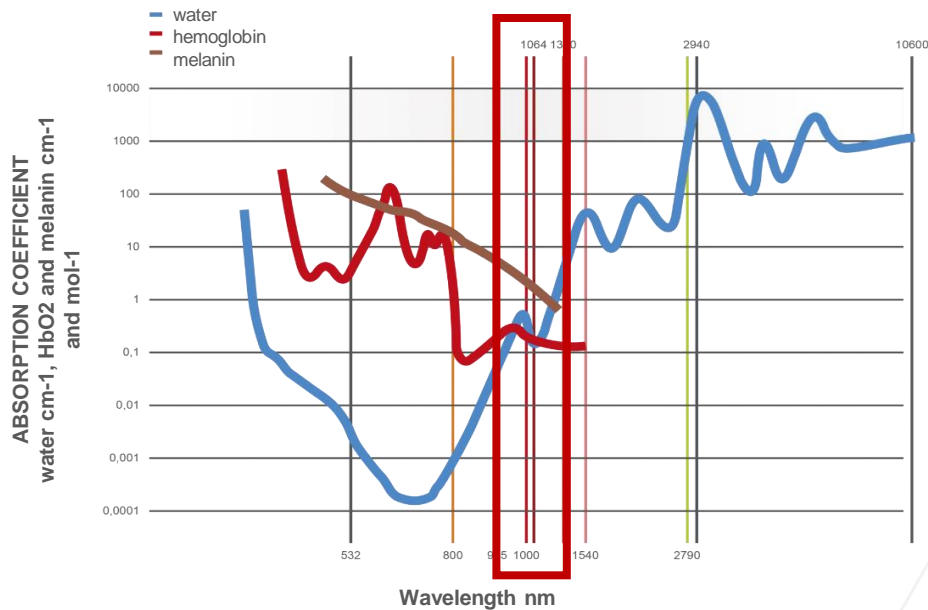
ZYE YAG[®] 3-10/VL: 1. Efficacy

Wavelength
Beam quality
Pulse time
Fluence

1. EFFICACY

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WAVELENGTH



- Relationship of target chromophore and absorption curve as a function of wavelength;
- High affinity for hbo and meta-hb;
- Has an affinity for melanin – even though low;
- Greater penetration, lower affinity for water vs. melanin;

*Manstein et al. FRACTIONAL PHOTOTHERMOLYSIS: A NEW CONCEPT FOR CUTANEOUS REMODELING USING MICROSCOPIC PATTERNS OF THERMAL INJURY. *LASERS Surg Med* 2004;34:426-38.

1. EFFICACY

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WAVELENGTH

TYPE OF LASER	WAVELENGTH	ABSORPTION COEFFICIENT	DEPTH OF PENETRATION
DIODO	980 nm	0,0448 per mm	3200 µm
Nd:YAG	1064 nm	0,0177 per mm	81100 µm
Nd:YAG	1320 nm	0,2040 per mm	7000 µm
Nd:YAG	1340 nm	1,5900 per mm	3400 µm
DIODO	1450 nm	3,0400 per mm	470 µm
Er:GLASS	1540 nm	1,1800 per mm	1200 µm
Er:YAG	2940 nm	1220,0 per mm	1,20 µm
CO2	10.600 nm	84,400 per mm	17 µm

DEPTH OF PENETRATION AS A FUNCTION OF A LASER WAVELENGTH. Nelson et al. 2002

1. EFFICACY

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WAVELENGTH

Lasers in Surgery and Medicine 30:154–159 (2002)
DOI 10.1002/lsm.10028

Comparative Pilot Study Evaluating the Treatment of Leg Veins With A Long Pulse ND:YAG Laser and Sclerotherapy

Charlotte M. Coles, CRC, Richard S. Werner, MD, and Brian D. Zelickson, MD*
Abbott Northwestern Hospital, Center for Cosmetic Care, Edina, Minnesota

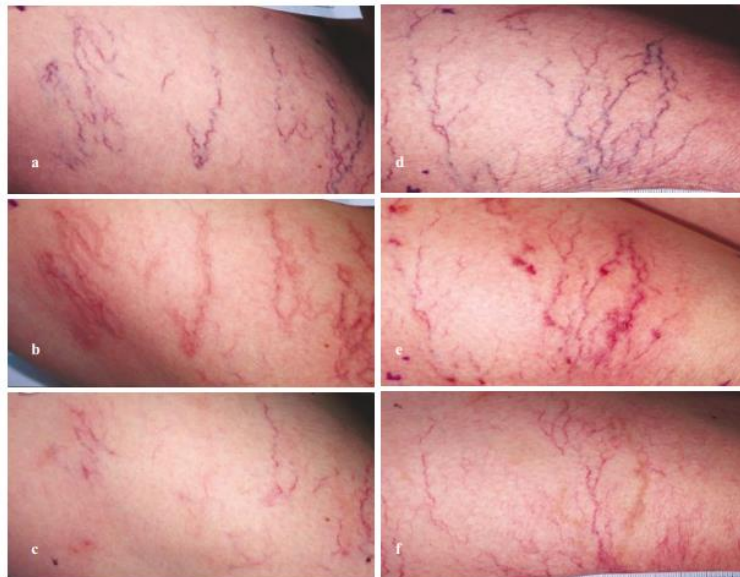


Fig. 1. a: Pre-operative laser treatment, 1-mm vessels treated at 170 J/cm^2 , 70 millisecond, 5-mm spot size, (b) immediate post-operative laser treatment, (c) 3-month post laser treatment, (d) pre-operative sclerotherapy, injection of 5 cc Sotradecil, vessels ranging 1–1.5 mm, (e) immediate post-operative sclerotherapy, (f) 3-month post sclerotherapy.

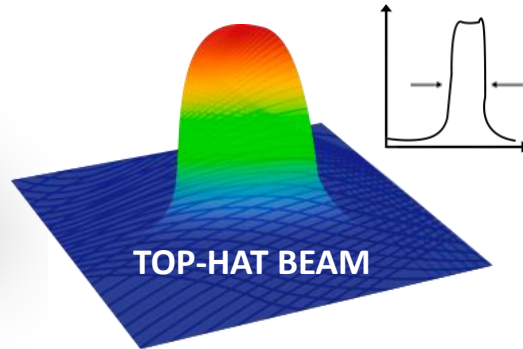
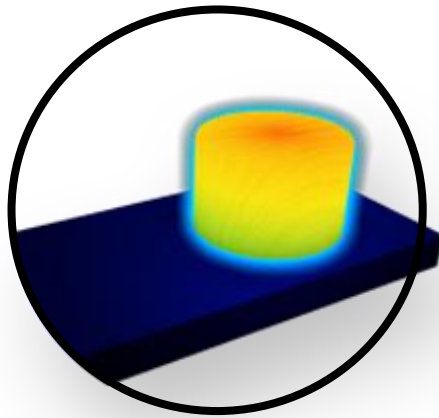
Results obtained with Nd:YAG LASER treating varicose veins in the legs proved comparable to sclerotherapy.

Considered the most-recommended technology for Fitzpatrick scale V-VI skin types. Secure and effective treatment, even for tanned patients.

1. EFFICACY

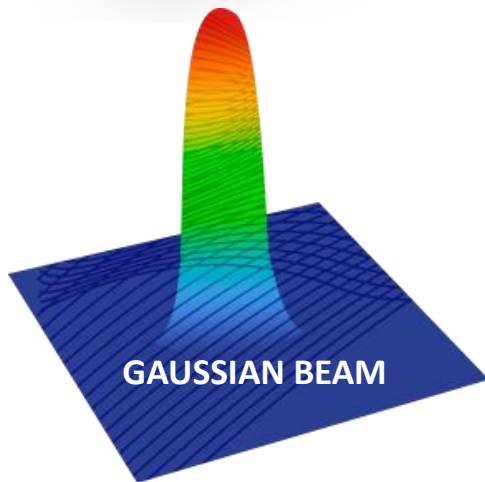
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BEAM QUALITY

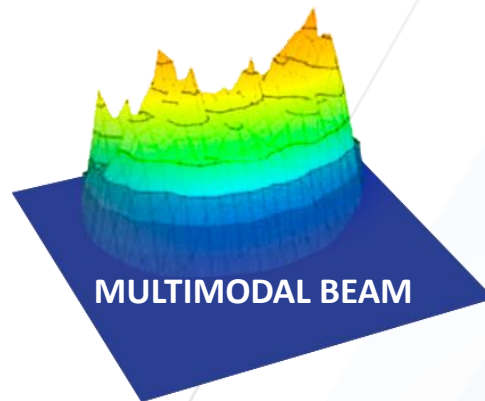


TOP-HAT BEAM

HOMOGENEOUS BEAM WITH TOP-HAT FORMAT: No overheating or under-treatment points, better coverage density depending on the square shape of the beam. More homogeneity, safety and efficiency.



GAUSSIAN BEAM



MULTIMODAL BEAM

1. EFFICACY

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PULSE TIME AND FREQUENCY

Spots with broad options for pulse times and fluence for personalized treatments.

AVAILABLE FLUENCES																
SPOT (mm)	PULSE TIME															
	3	5	10	15	20	30	40	50	60	70	80	90	100	200	300	
3	100 to 500 J/cm ²													-	-	
5	40 to 180 J/cm ²	40 to 250 J/ cm ²													-	-
6	40 to 120 J/cm ²	40 to 200 J/cm ²	40 to 250 J/ cm ²													
8	10 to 70 J/cm ²	10 to 110 J/cm ²	10 to 140 J/ cm ²													
10	10 to 45 J/cm ²	10 to 70 J/cm ²	10 to 110 J/ cm ²													

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ZYE YAG[®] 3-10/VL: 2. COMFORT

Cooling

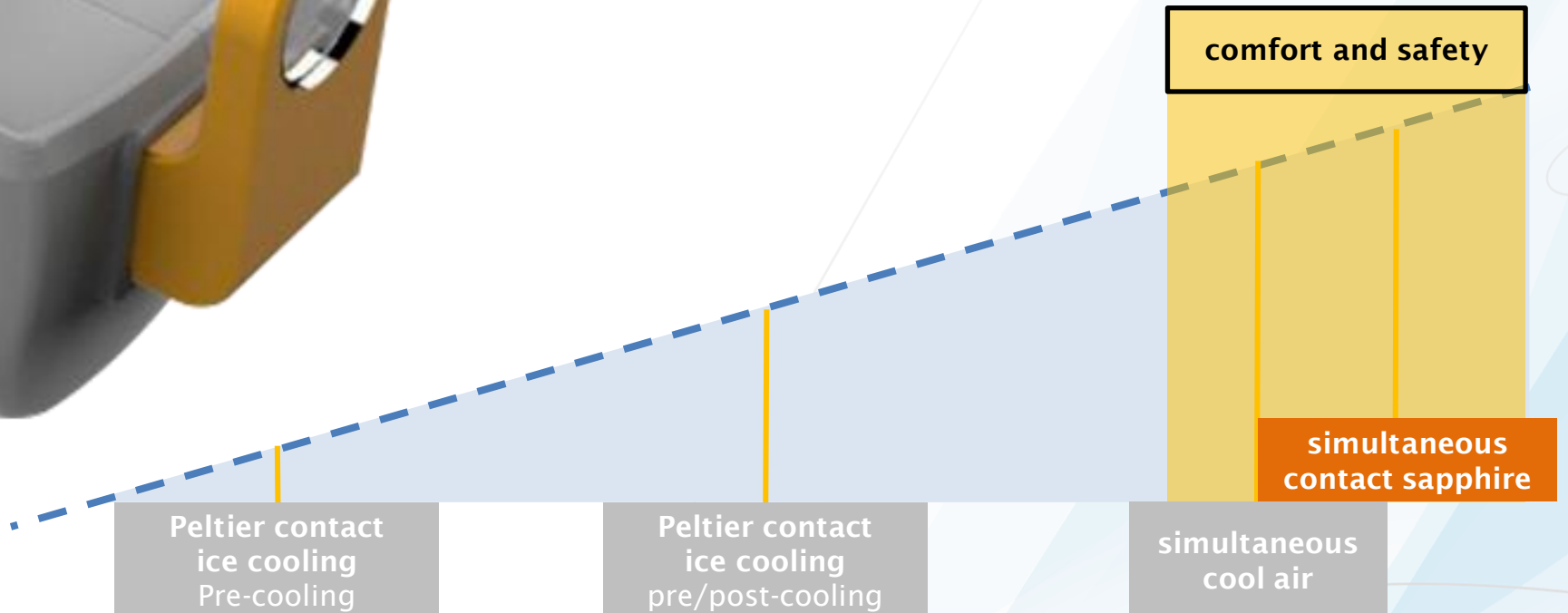
2. COMFORT

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COOLING



COOL-&-CLEAR® SIMULTANEOUS COOLING with a Sapphire cooling window for greater patient comfort and safety.



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ZYE YAG[®] 3-10/VL: 3. SPEED

ZYE Telescope[®]
Frequency
LASER guide

3. SPEED

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ZYE TELESCOPE® AND REPETITION RATE



- **ZYE TELESCOPE® DIGITAL OPTICAL ZOOM** integrated into the handpiece, with easy adjustment of the spot size and automatic recognition. More practicality for the session.
- **FREQUENCY:** shot repetition rate of up to 3 Hz, or in other words, up to 3 shots per second, providing faster treatments.

3. SPEED

Z Y E

LASER GUIDE

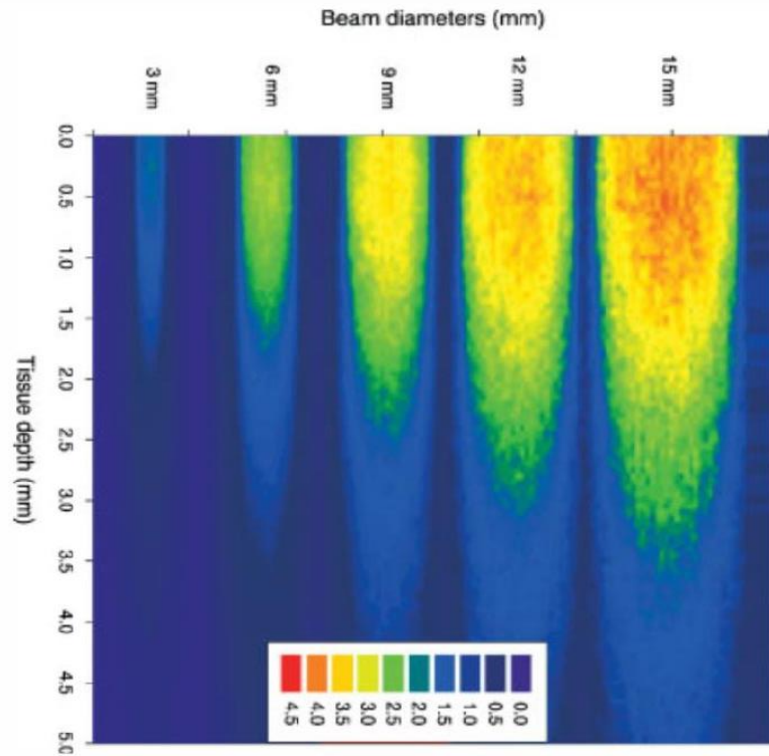


- LASER GUIDE with contrast and intensity adjustment and CONTACT BY SAPPHIRE that allows **the visualization of the treatment area**, increasing the handpiece's usability.

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ZYE YAG[®] 3-10/VL:
practice and training
VASCULAR LESIONS

PARAMETERIZATION - SPOT SIZE



SPOT	PENETRATION
1 mm	0,8 mm
3 mm	1,5 mm
7 mm	3 mm
10 mm	4 mm
12 mm	4,5 mm
18 mm	5 mm

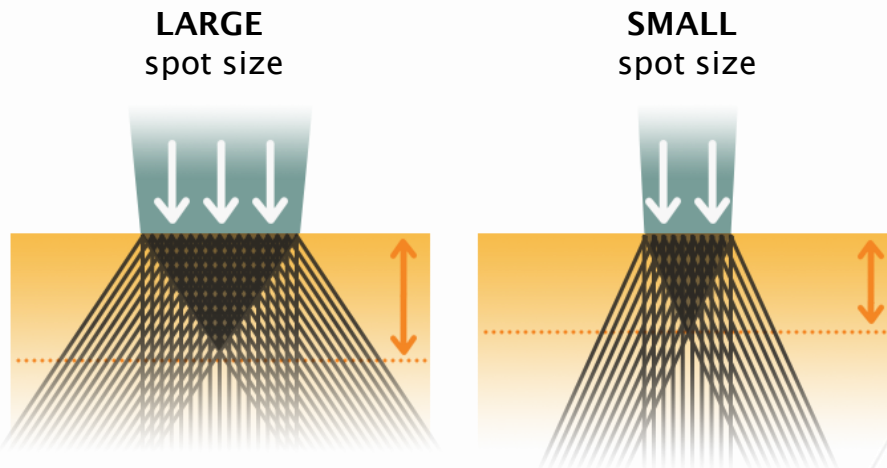
Fig. 4. It shows the distributions of fluence rate in dermis at 1,064-nm laser irradiation for 3-, 6-, 9-, 12-, and 15-mm beam diameters.

LASERs Surg Med. 2005 Feb;36(2):105-16. LASER TREATMENT OF LEG VEINS: PHYSICAL MECHANISMS AND THEORETICAL CONSIDERATIONS. Ross EV1, Domankevitz Y.

PARAMETERIZATION - SPOT SIZE

Difference between depth of penetration

The effective penetration of the laser beam is directly related to the size of the spot and the fluency used.



LARGER SPOTS	Deep lesions	Reticular veins
SMALLER SPOTS	Superficial lesions	Face and lower member telangiectasia

PRACTICE AND TRAINING

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PARAMETERIZATION - SPOT SIZE



STRUCTURE	THERMAL RELAXATION TIME
TELANGIECTASIA	10 to 20 ms
VENULECTASIS	20 to 30 ms
RETICULAR VEINS	30 to 60 ms

MORE DILATED VEINS

Longer pulse times

LESS DILATED VEINS

Shorter pulse times

PARAMETERIZATION - FLUENCE

$$\text{Fluence (J/cm}^2\text{)} = \frac{\text{Energy (J)}}{\text{Area (cm}^2\text{)}}$$

- Larger spots need more energy to have the same fluence as smaller spots.



- 3 mm
- 5 mm
- 6 mm
- 8 mm
- 10 mm

SPOT	ENERGY	FLUENCE
3 mm	7,0 J	100 J/cm ²
5 mm	19,6 J	100 J/cm ²
6 mm	28,2 J	100 J/cm ²
8 mm	50,2 J	100 J/cm ²
10 mm	78,5 J	100 J/cm ²

PRACTICE AND TRAINING

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PARAMETERIZATION - FLUENCE VS PULSE TIME

+
TARGET/CHROMOPHORE



-
TARGET/CHROMOPHORE



PARAMETERIZATION

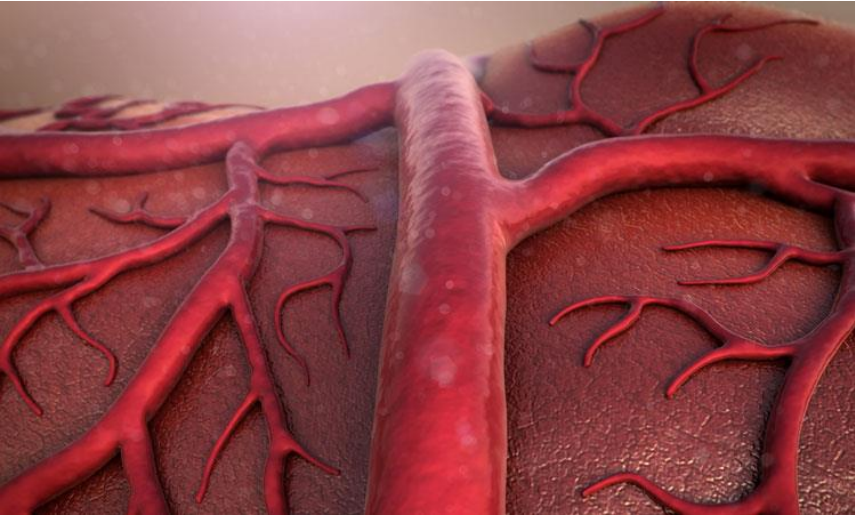
CHOICE OF PARAMETERS FOR TREATING VESSELS

What is the depth?	Superficial vessels Reticular vessels	Smaller spots, 2 or 3 mm Larger spots, 6 mm
What is the dilation of the vessel?	Finer, up to 1 mm More dilated, > 1 mm	Pulse time 10–30 ms Pulse time 30–60 ms
How much chromophore?	Red vessels Purple/blue vessels	Higher fluence Lower fluence

PARAMETERIZATION

PARAMETER	INCREASE	DECREASE
1st SPOT	Deep vessels Dilated vessels	Superficial vessels Finer vessels
2nd PULSE TIME	Dilated vessels With high blood volume	Finer vessels With low blood volume
3rd FLUENCE	Pink/red vessels Finer vessels Superficial vessels Smaller spots Vessels with higher pressure With high blood volume	Purple/blue vessels Dilated vessels Deep vessels Larger spots Flaccid vessels

PARAMETERIZATION



A single vessel can have different diameters and depth over the course of its trajectory. It can therefore be necessary to change the spot and adjust parameters several times over the course of a session.

EFFICACY VS TYPE OF VESSELS

Efficacy related to the type of vessels that will be treated:

COLOR OF THE VESSEL	% OF THE AREA WITH SIGNIFICANT IMPROVEMENT
Blue	100 %
Red	100 %
Blue/red	60 %

SIZE OF THE VESSEL	% OF THE AREA WITH SIGNIFICANT IMPROVEMENT
Reticular veins 2 to 4 mm	100 %
Venulectasis 1 to 2 mm	83 %
Spider veins 0.25 to 1 mm	58 %

Dermatologic Surgery. 2002 Mar;28(3):220-3. 1,064-NM ND:YAG COOLGLIDE® EXCEL LASER IRRADIATION FOR LOWER EXTREMITY TELANGIECTASIAS & SMALL RETICULAR VEINS: EFFICACY AS MEASURED BY VESSEL COLOR AND SIZE. Rogachefsky AS, Silapunt S, Goldberg DJ

PHLEBOSCOPE



PHLEBOSCOPE

Cutaneous transillumination

The light issued is absorbed by the vessels, making them darker and allowing their path to be seen.

Very effective in dealing with feeder veins, which often are not visible, but are responsible for the appearance and maintenance of micro-vessels.

APPLICATION TECHNIQUE



- The application must always be **perpendicular** to the skin;
- Always **begin the treatment with the reticular vessels** before the telangiectasias;
- The use of an **external cooler** is always recommended for greater comfort and safety for the patient;
- **You can pass again;**
- **Do not use stacking.**

PRACTICE AND TRAINING

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CLINICAL GUIDE



USAGE PARAMETERS

Spot:	3, 5, 6 or 8 mm
Operating mode:	LongPulse
Fluence:	70 to 300 J/cm ²
Pulse time:	10 to 60 ms
Cooling:	T°C minimum (4°C)
Use of Siberian:	Yes
Sessions:	2 to 4
Interval:	30 days for the same area

ENDPOINT



Endpoint of the vascular lesions:

- Erythema of the lesions;
- Collapse of the vessel or
- Alteration of its color (gray, blue, purple...)
- No visible alteration in the adjacent tissue.

GUIDELINES

CONTRAINDICATIONS	PRETREATMENT	PÓS-TRATAMENTO
<ul style="list-style-type: none">• Pay attention to skin tone and to patients with an active tan!	<ul style="list-style-type: none">• Remove creams and/or lotions before the application;• Remove hair from the region if there is significant hair;• Observe the clinical response and pay attention to patient pain	<ul style="list-style-type: none">• Apply local topical corticoid, if necessary;• Avoid exposure to the sun for at least 30 days.

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ZYE YAG[®] 3-10/VL:
practice and treatment
OTHER INDICATIONS

PRACTICE AND TRAINING

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CLINICAL GUIDE – HAIR REMOVAL



USAGE PARAMETERS

Spot:	6, 8 or 10 mm
Operating mode:	LongPulse
Fluence:	20 to 70 J/cm ²
Pulse time:	20 to 50 ms
Cooling:	T°C minimum (4°C)
Use of SIBERIAN-FIT®:	Optional
Sessions:	4 to 8
Interval:	30 to 60 days

ENDPOINT - HAIR REMOVAL



Endpoint of the hair:

- Perifollicular erythema or edema in finer hair;
- Carbonization in thicker hair;
- No visible alteration in the adjacent tissues.

PRACTICE AND TRAINING

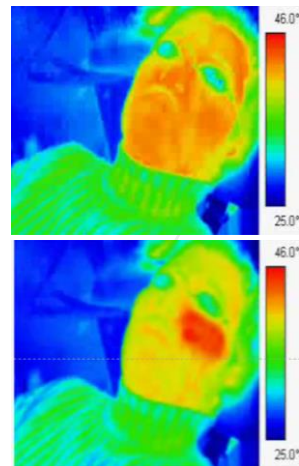
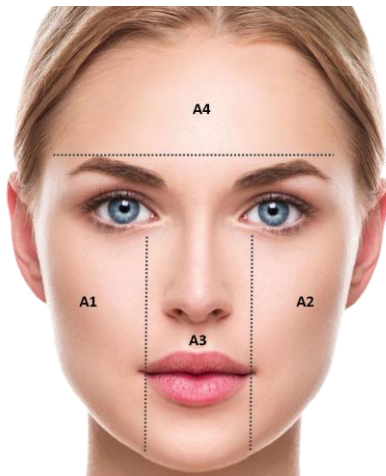
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ROSACEA CONTROL



USAGE PARAMETERS

Spot:	3, 5, 6, 8 or 10 mm
Operating mode:	DYNAMICS®
Fluence:	8 to 40 J/cm ²
Pulse time:	200 to 650 μs
Frequency:	3 to 10 Hz
Shots:	500 to 1.000 per quadrant
Use of SIBERIAN-FIT®:	No
Sessions:	1 to 8
Interval:	15 to 30 days



PRACTICE AND TRAINING

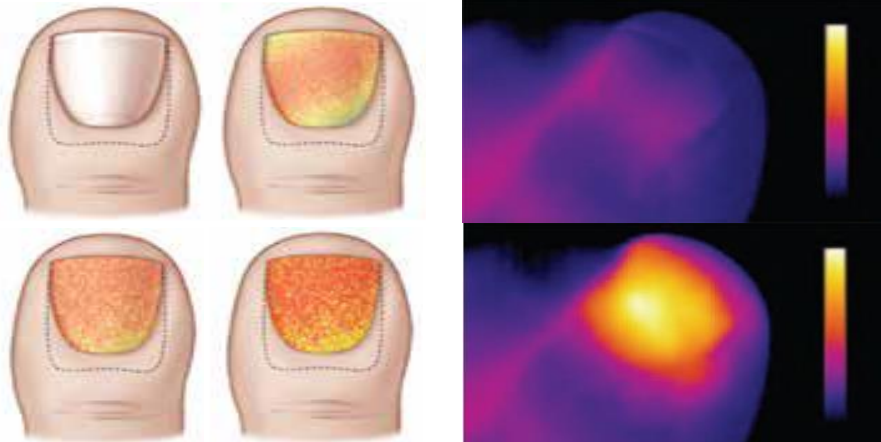
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ONYCHOMYCOSIS



USAGE PARAMETERS

Spot:	3 mm
Operating mode:	DYNAMICS®
Fluence:	10 to 40 J/cm ²
Pulse time:	300 µs
Frequency:	3 to 10 Hz
Shots:	300 to 600 per compromised nails
Use of SIBERIAN-FIT®:	No
Sessions:	2 to 8
Interval:	15 to 30 days



GUIDELINES

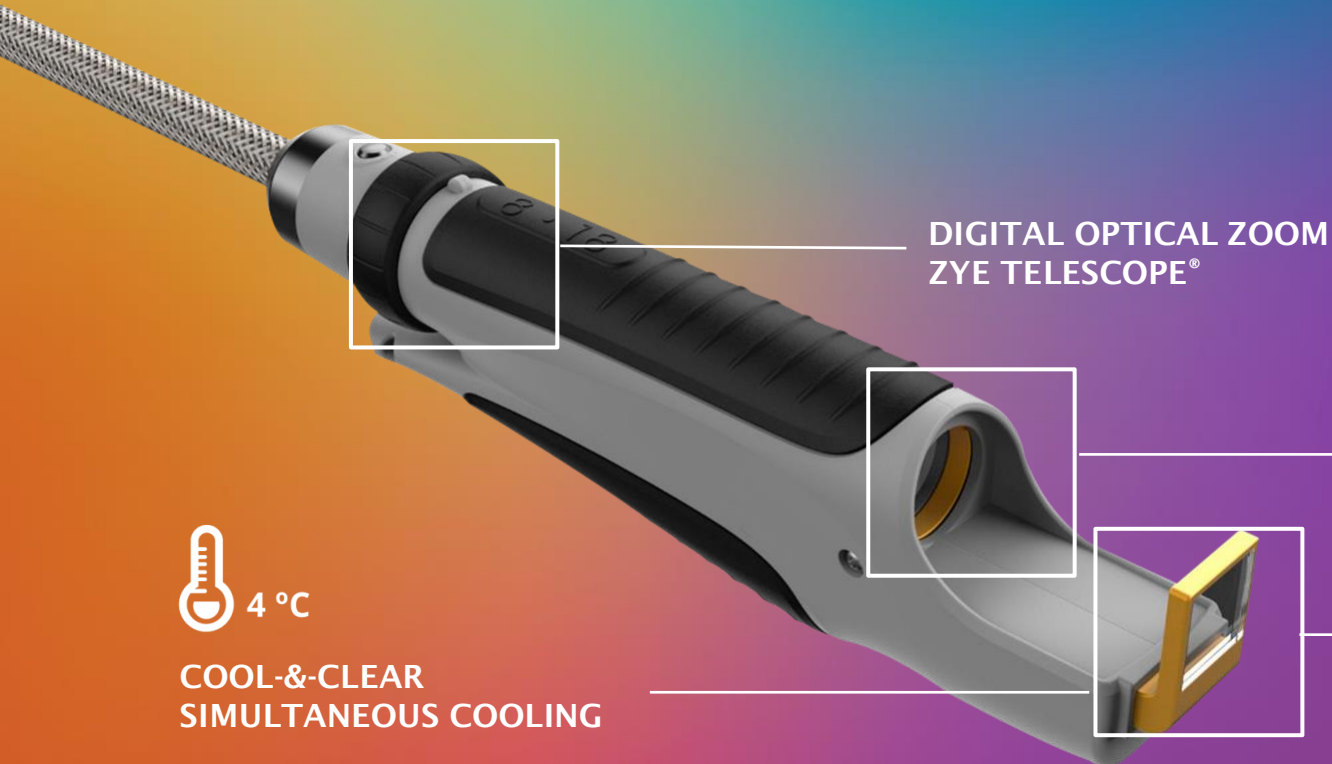
CONTRAINDICATIONS	PRETREATMENT	POSTTREATMENT
<ul style="list-style-type: none">• Pregnant or Nursing patients; Systemic, autoimmune or immunodeficiency illnesses;• Acute infections and/or active infectious processes;• Wounds or malignant lesions in the treatment area;• Area filled with nonabsorbable substances;• Use of photosensitizing drugs;• Skin sensitized by the sun;• Change of the sensitivity of the area to be treated.	<ul style="list-style-type: none">• Remove creams and/or lotions before the application;• For the treatment of nails, completely remove polish and creams and thin them;• Do not use anesthetics;• For thermal peeling, cooling the area is not recommended during or after use of the laser;• Always use the protective glasses that accompany the handpiece and place the lead glasses on the patient;• Herpes prophylaxis, if necessary.	<ul style="list-style-type: none">• Light to moderate erythema, which can last for up to three hours, is expected;• Drug delivery can be done immediately afterward;• Avoid using nonsteroidal anti-inflammatories;• Tell the patient to use sunscreen and to avoid exposure to the sun during the weeks following the treatment.

Z Y E

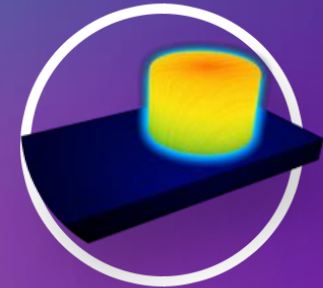
ZYE YAG[®] 8-18/HR: features & technology

ZYE YAG: 8-18/HR HANDPIECE

COOL-&-CLEAR COOLING AND FLAT-FRAME® SQUARE SPOT



DIGITAL OPTICAL ZOOM
ZYE TELESCOPE®



FLAT-FRAME® OPTICAL
TECHNOLOGY

LASER GUIDE WITH
CONTRAST AND
INTENSITY
ADJUSTMENT



COOL-&-CLEAR
SIMULTANEOUS COOLING

ZYE YAG: 8-18/HR HANDPIECE

COOL-&-CLEAR COOLING AND FLAT-FRAME® SQUARE SPOT



- Sapphire cooling, with expanded instantaneous comfort, visibility of the treatment area and protection against hair dispersion;
- System for changing the spot directly on the handpiece, with a highly homogenous, square, top hat beam.

FEATURES & TECHNOLOGY

Z Y E

TECHNICAL CHARACTERISTICS



	8-18/HR	
Wavelength	YAG 1064 nm	
Operating mode	LongPulse®	
Maximum fluence	Up to 130 J/cm ²	
Pulse time	3 to 300 ms	
Operating frequency	Up to 3 Hz	
Spots	8 mm 10 mm 12 mm	14 mm 16 mm 18 mm
Additional	Sapphire cooling Digital optical zoom Top Hat beam	

FEATURES & TECHNOLOGY

Z Y E

INDICATIONS

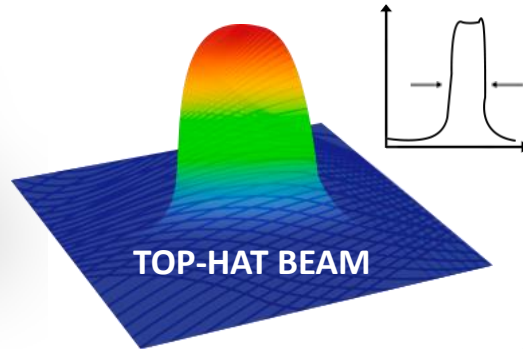
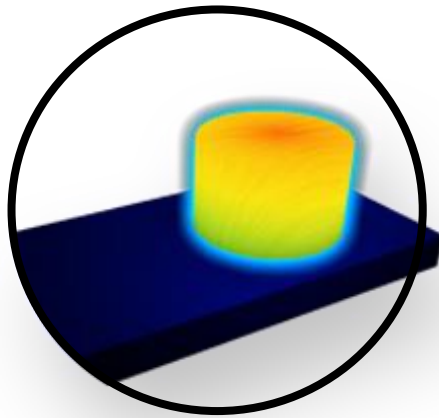


- Gold standard for epilation in phototypes I to V;
- World standard: effectiveness and safety;
- Efficient on thick hair and even the finest hair.

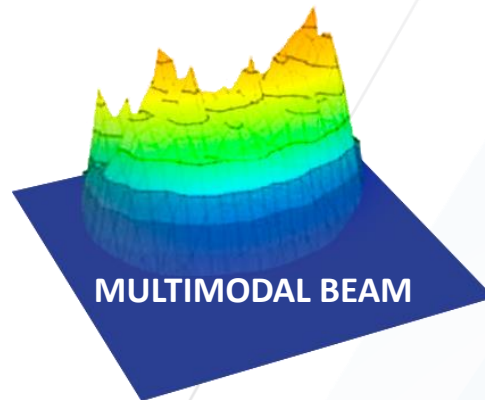
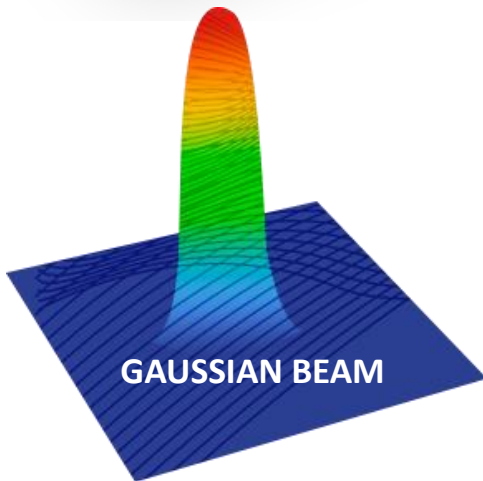
FEATURES & TECHNOLOGY

Z Y E

BEAM QUALITY



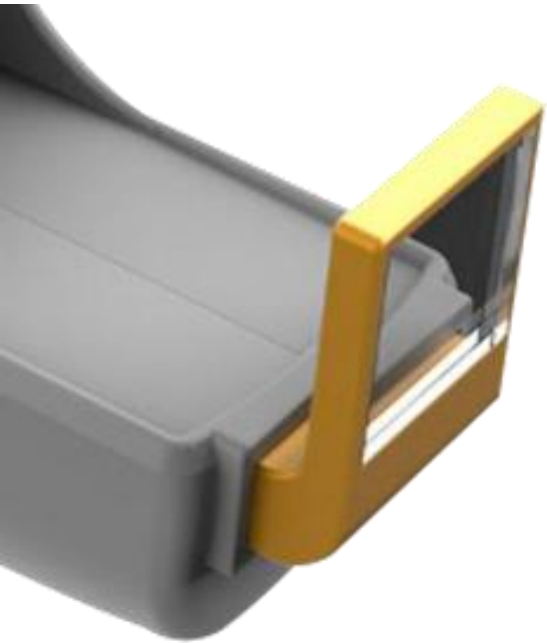
HOMOGENEOUS BEAM WITH TOP-HAT FORMAT: No overheating or under-treatment points, better coverage density depending on the square shape of the beam. More homogeneity, safety and efficiency.



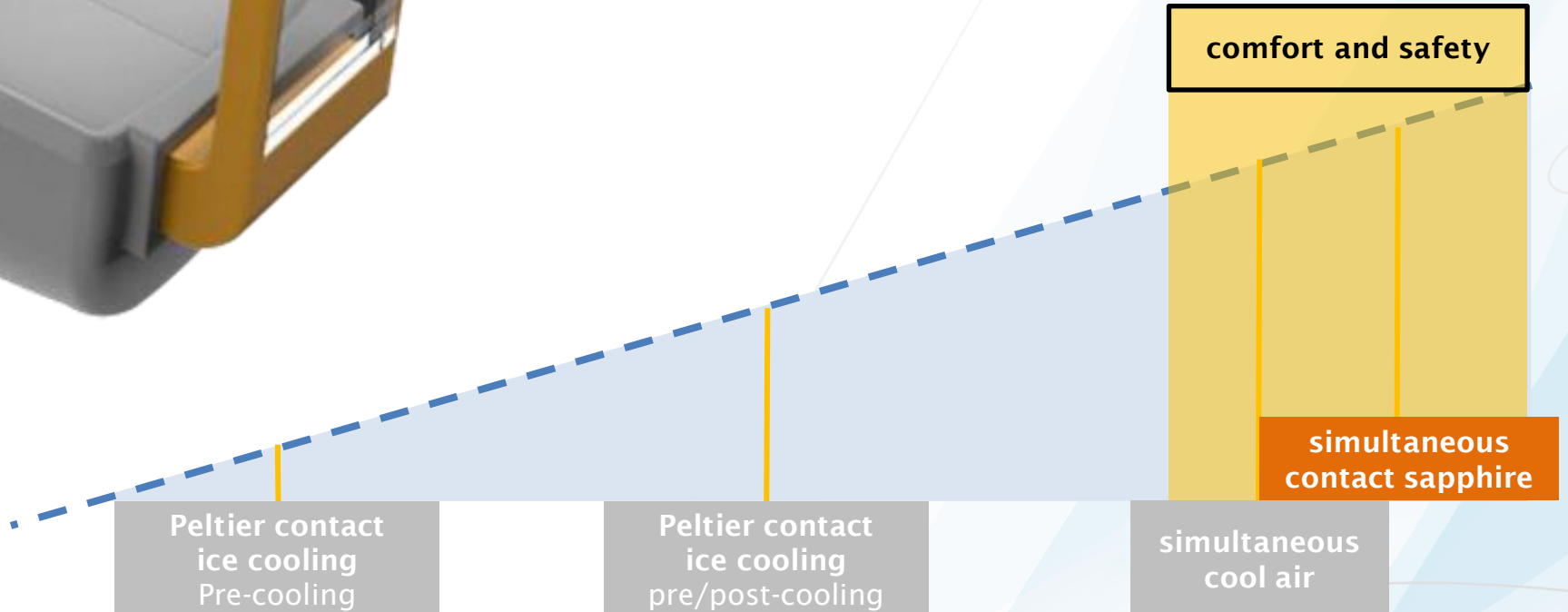
FEATURES & TECHNOLOGY

Z Y E

COOL-&-CLEAR® SIMULTANEOUS COOLING



COOL-&-CLEAR® SIMULTANEOUS COOLING with a Sapphire cooling window for greater patient comfort and safety.



***DCD/spray: consumable, with a risk of frostbite**

FEATURES & TECHNOLOGY

Z Y E

COOL-&-CLEAR® SIMULTANEOUS COOLING



- **DCD/spray:** consumable, with a risk of frostbite;
- **Ice:** not practical, slower procedure and still risky;
- **Contact, Peltier:** there is not simultaneous contact between the cold and the shots;
- **Air cooling:** high efficiency but requires an outside source;
- **Contact, sapphire window:** high efficiency, with simultaneous contact and visibility of the area treated.

FEATURES & TECHNOLOGY

Z Y E

ZYE TELESCOPE®



- ZYE TELESCOPE® DIGITAL OPTICAL ZOOM integrated into the handpiece, with **easy adjustment of the spot size and automatic recognition**. More practicality for the session.;

FEATURES & TECHNOLOGY

Z Y E

LASER GUIDE

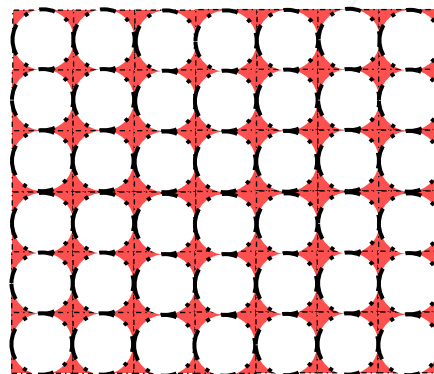
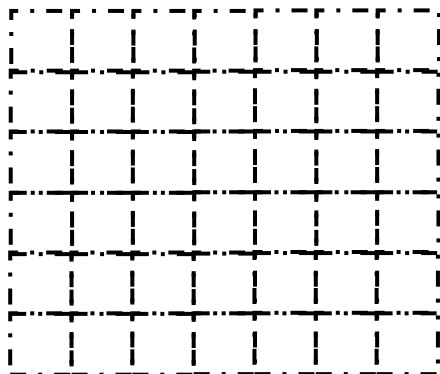
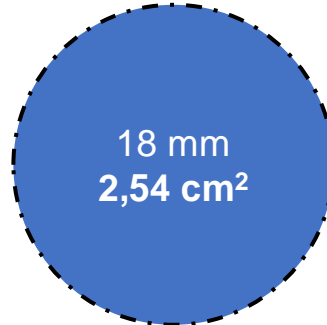
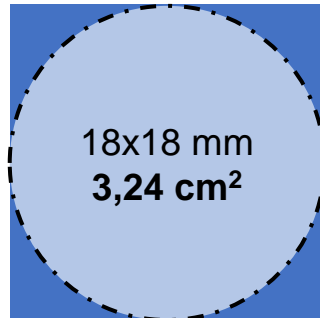


- LASER GUIDE with contrast and intensity adjustment and CONTACT BY SAPPHIRE that allows **the visualization of the treatment area**, increasing the handpiece's usability.

FEATURES & TECHNOLOGY

Z Y E

SPOT FEATURES AND FREQUENCY



- Square spot: 25% larger area than round spots, as well as providing **more uniform treatment**;
- Ample treatment area, with a **beam of up to 18 mm**;
- Frequency: shot repetition rate of up to 3 Hz, or in other words, **up to 3 shots per second**, providing faster treatments.

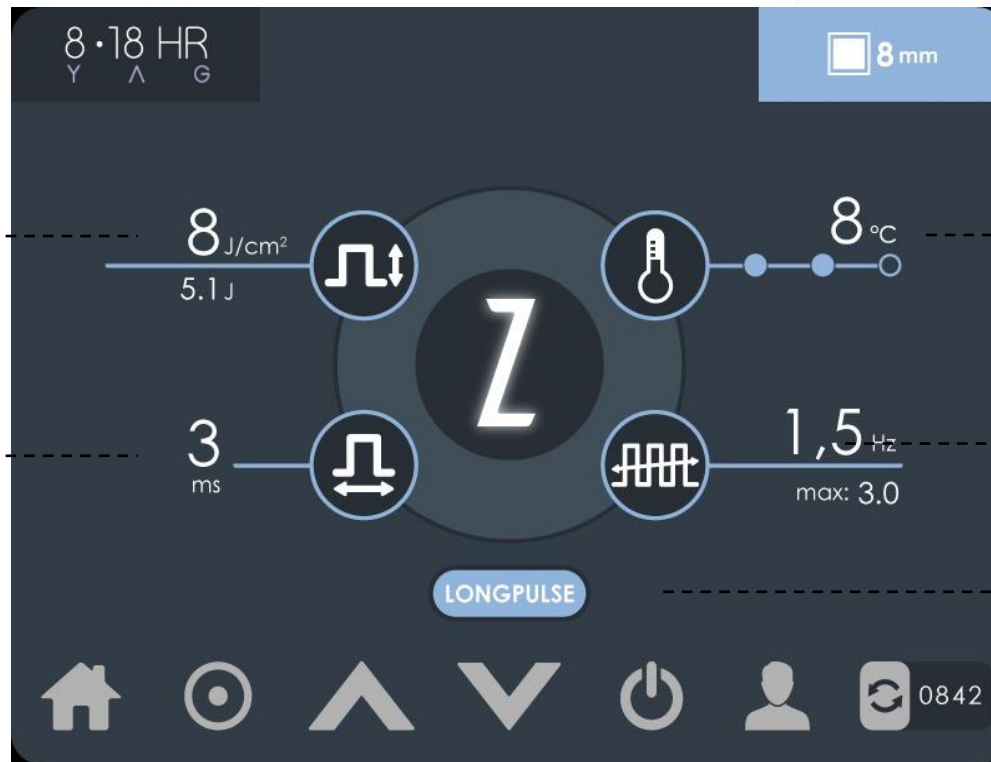
Z Y E

ZYE YAG[®] 8-18/HR: interface and parameterization

INTERFACE AND PARAMETERIZATION

Z Y E

LONGPULSE® MODE



automatic recognition of the handpiece and spot

fluence: energy delivered by area (J/cm²)

pulse time: time for the fluence to be delivered

cooling: sapphire cooling level

frequency: or repetition rate between shots

operating mode: LONGPULSE

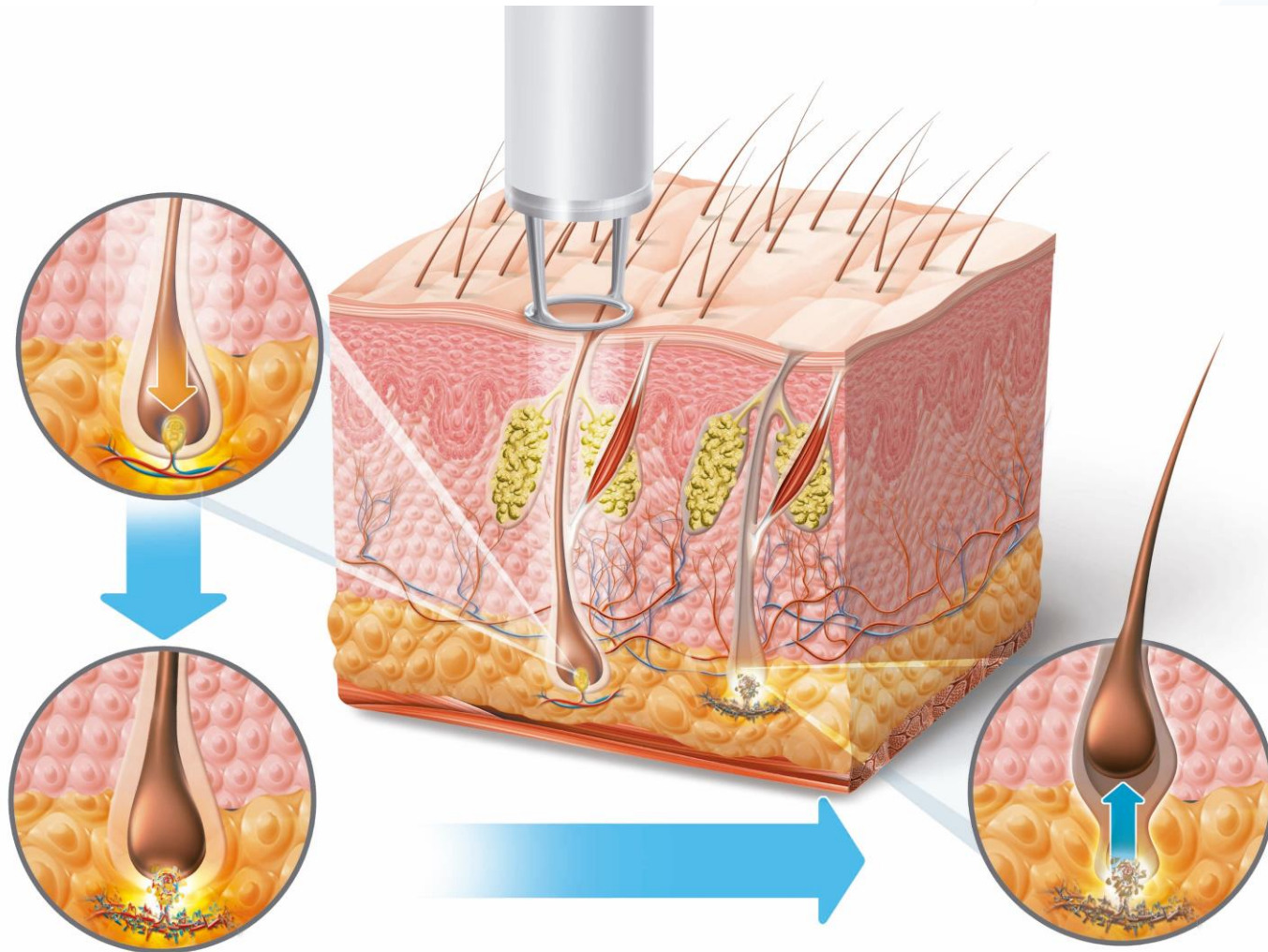
Z Y E

ZYE YAG[®] 8-18/HR:
practice and training
HAIR REMOVAL

PRACTICE AND TRAINING

Z Y E

TISSUE INTERACTION - SELECTIVE PHOTOTHERMOLYSIS



APPLICATION TECHNIQUE



- The application must always be **perpendicular (90°)** and **in complete contact** with the skin surface;
- It is recommended to always use the **minimum cooling level (4°C)** for greater patient comfort and safety;
- A little **gel can be used for the Sapphire to slide**, preferably with a soothing substance (such as aloe vera);
- Use **plastic film** for hair removal in intimate areas;
- **Do not do stacking.**

PRACTICE AND TRAINING

Z Y E

CLINICAL GUIDE



USAGE PARAMETERS

Spot:	8 to 18 mm
Fluence:	2 to 50 J/ cm ²
Pulse Time:	20 to 50 ms
Cooling:	Minimum
Sessions	4 to 8
Interval:	4 to 8 weeks

ENDPOINT



Endpoint of the hair:

- Perifollicular erythema or edema in finer hair;
- Carbonization in thicker hair;
- No visible alteration in the adjacent tissues.

GUIDELINES

CONTRAINDICATIONS	PRETREATMENT	POSTTREATMENT
<ul style="list-style-type: none">• Pregnancy• Tanned skin, tattoos in the area of application or pigmentary lesions;• Active herpes;• Be attentive to patients with difficulty healing;• Be careful with active tanning.	<ul style="list-style-type: none">• 6 weeks before the treatment: do not use wax, tweezers or any other hair removal method that pulls hair by the roots;• Use only razors for hair removal before the treatment;• Skin must be clean and completely dry.	<ul style="list-style-type: none">• Use aloe vera gel;• Topical corticoid, if necessary;• SPF 30+ sunscreen.

Z Y E

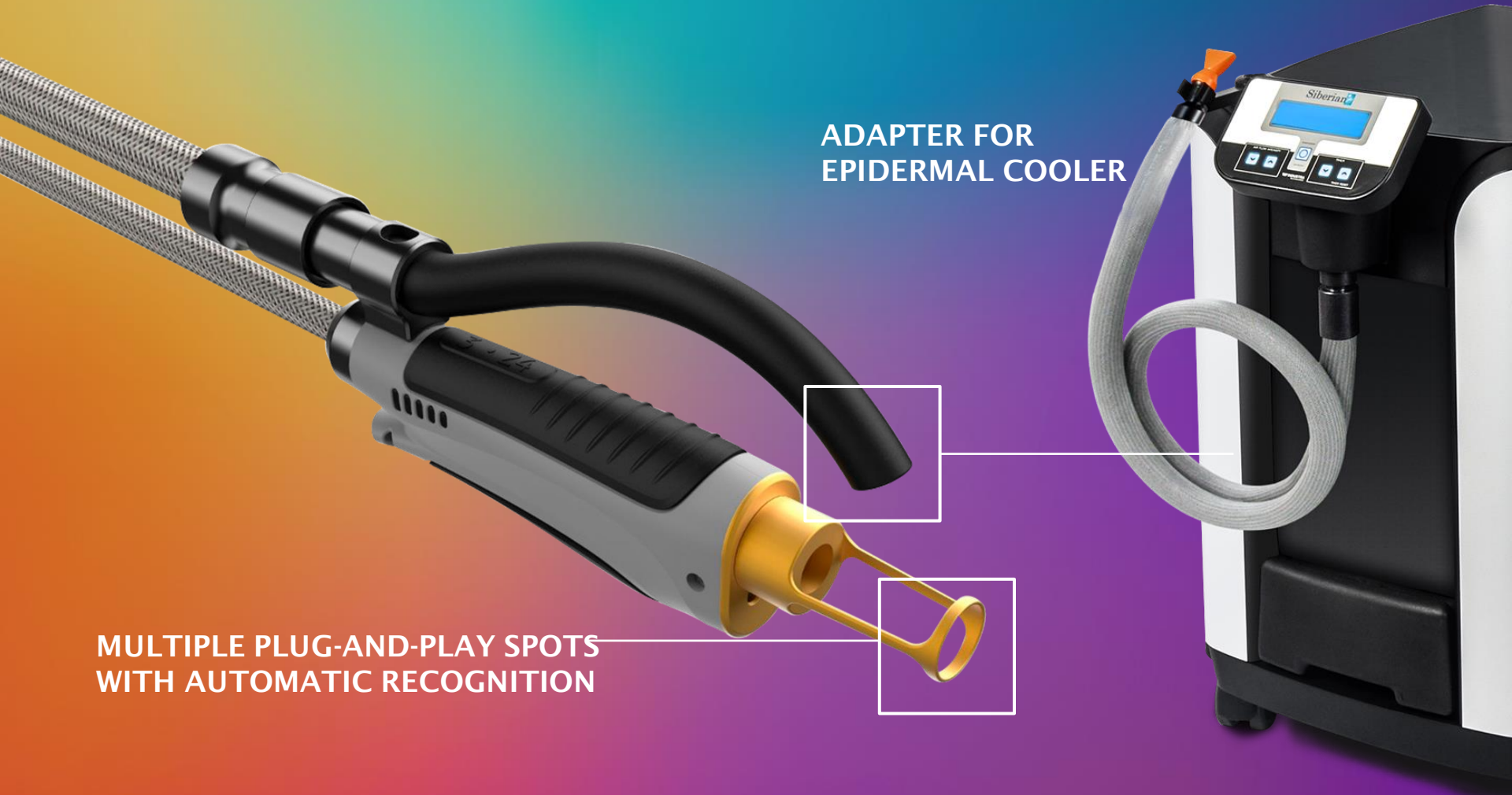
ZYE YAG[®] 3-24/HR: features & technology

ZYE YAG: 3-24/HR HANDPIECE

PLUG-AND-PLAY SPOT UP TO 24 mm AND AIR COOLING

ADAPTER FOR
EPIDERMAL COOLER

MULTIPLE PLUG-AND-PLAY SPOTS
WITH AUTOMATIC RECOGNITION



ZYE YAG: 3-24/HR HANDPIECE

PLUG-AND-PLAY SPOT UP TO 24 mm AND AIR COOLING



- 11 plug-and-play spots available, with a broad range of available sizes.
- Adapter for epidermal cooling, which allows the use of an attached device and does not require consumables.



FEATURES & TECHNOLOGY

Z Y E

TECHNICAL CHARACTERISTICS



	3-24/HR	
Wavelength	Nd:YAG 1064 nm	
Operating mode	LongPulse®, DYNAMICS®	
Maximum energy	Up to 500 J/cm ² (LongPulse®) Up to 140 J/cm ² (DYNAMICS®)	
Pulse time	200 µs to 300 ms	
Operating frequency	Up to 3 Hz (LongPulse®) and 20 Hz (DYNAMICS®)	
Spots	3 mm 5 mm 6 mm 10 mm 12 mm 14 mm	16 mm 18 mm 20 mm 24 mm + 26 mm
Additional	Adapter for integrated cooling	

FEATURES & TECHNOLOGY

Z Y E

INDICATIONS



- **Gold standard for hair removal** for Fitzpatrick scale skin types I through V;
- Worldwide standard: effectiveness and safety;
- Efficient on thick hair and even on the finest hair.
- Also allows for the treatment of **vascular lesions**;
- DYNAMICS® mode, for **non-ablative skin resurfacing, rosacea control and onychomycosis**.

FEATURES & TECHNOLOGY

Z Y E

OPERATING MODES

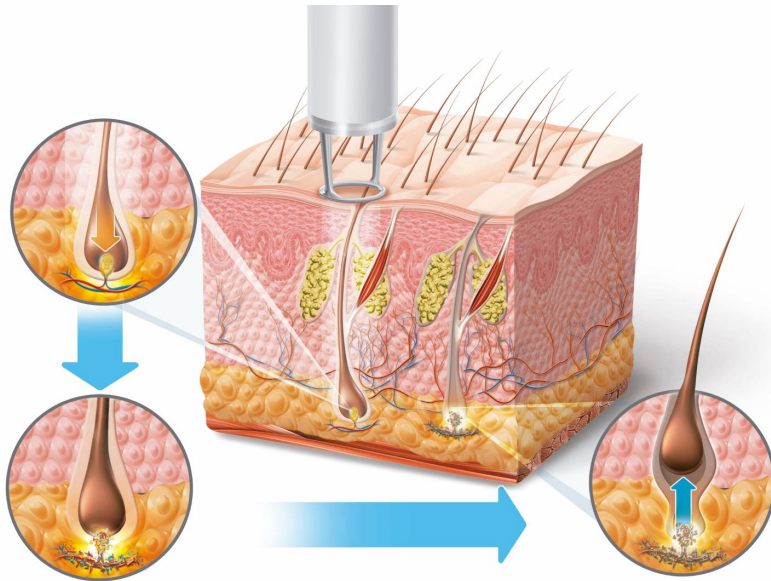
Two operating modes with different pulse times to deliver energy more **aggressively** in longer pulses or more **comfortably** by accumulating heat in short pulses.

	LONGPULSE	DYNAMICS®
DEFINITION	Long pulses, in milliseconds (ms)	Short pulses, in microseconds (μ s)
PULSE TIME	3 to 300 ms	300 μ s to 1 ms
INDICATION	<ul style="list-style-type: none">• Hair removal• Vascular lesions	<ul style="list-style-type: none">• Non-ablative skin resurfacing• Rosacea• Onychomycosis
ACTION	Selective photothermolysis	Accumulation of heat, heating, collagen stimulation
CHARACTERISTICS	More aggressive	More comfortable

FEATURES & TECHNOLOGY

Z Y E

ACTION MECHANISM – LONGPULSE® MODE



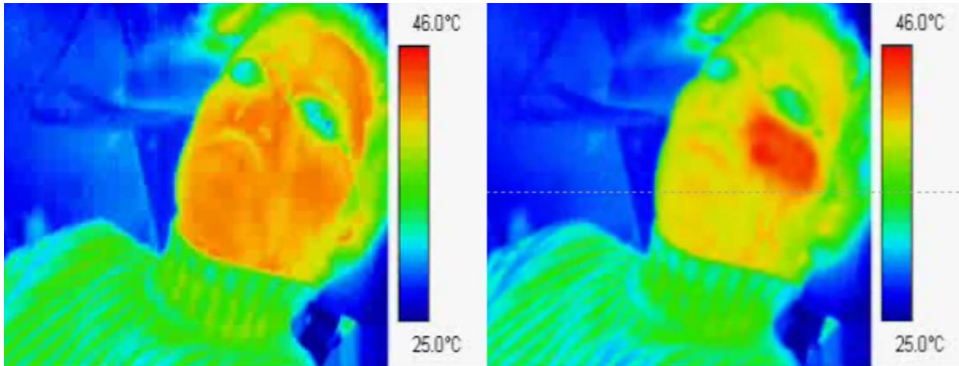
Photothermal effect: light absorption leads to the destruction of the target chromophore (selective photothermolysis) by high temperature.

- ✓ Vascular lesions
- ✓ Hair removal

FEATURES & TECHNOLOGY

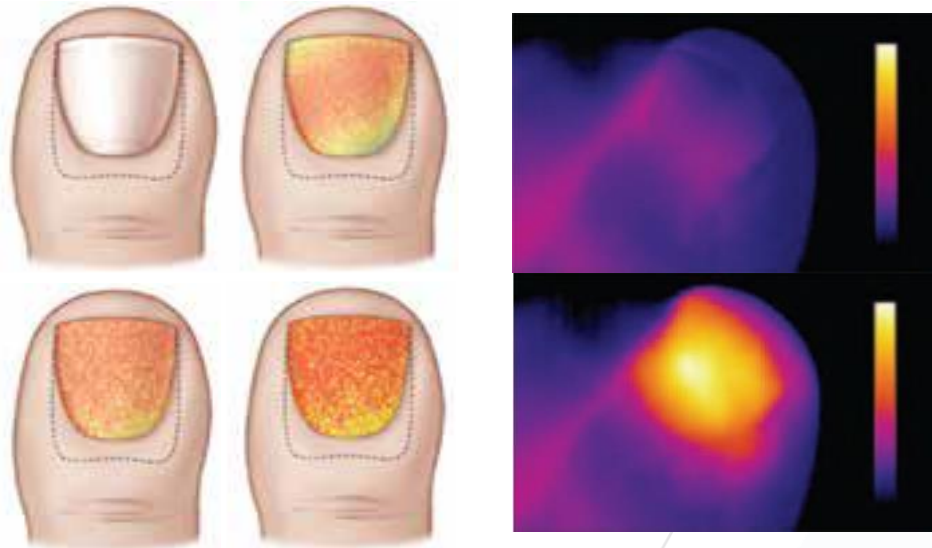
Z Y E

ACTION MECHANISM – DYNAMICS® MODE



DYNAMICS® mode:
generates homogenous
and controlled heating,
indicated for:

- ✓ non-ablative skin resurfacing;
- ✓ rosacea control;
- ✓ onychomycosis



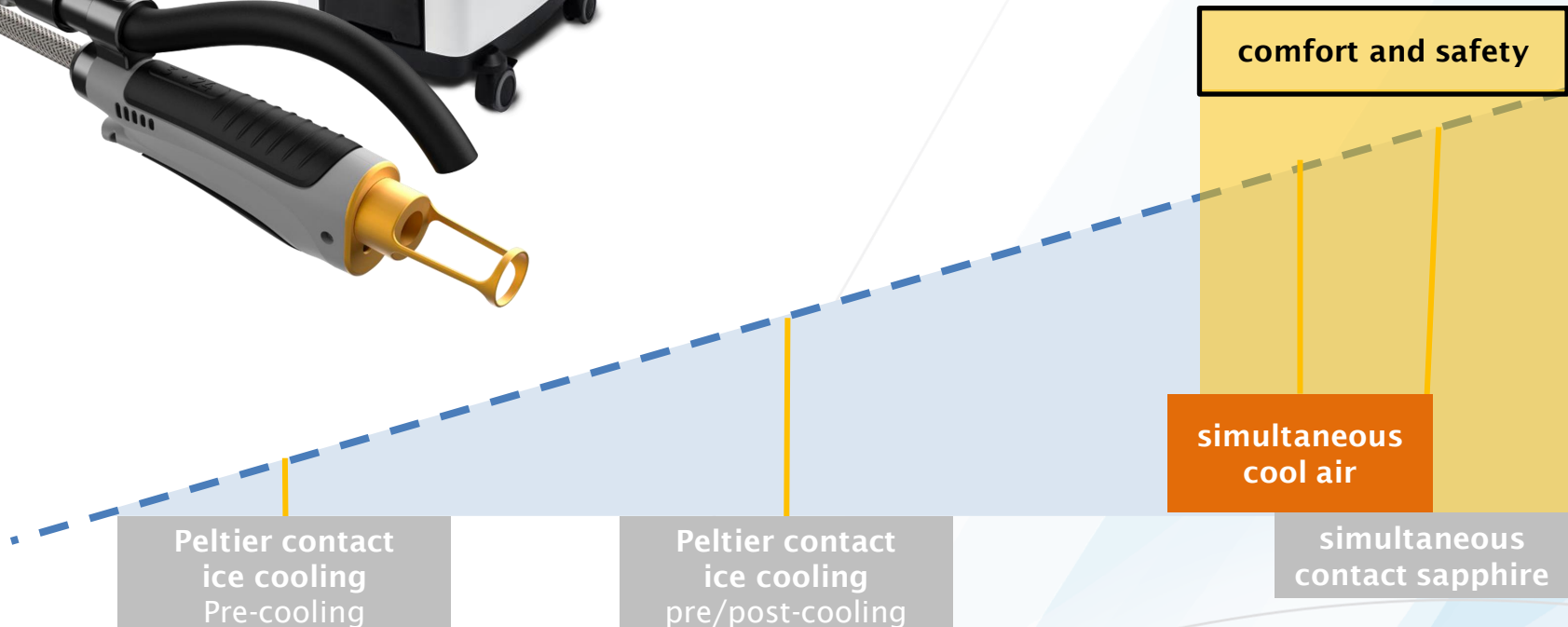
FEATURES & TECHNOLOGY

Z Y E

ADAPTER FOR EPIDERMIC COOLER



Adapter for epidermal cooling, which allows the use of an attached device and does not require consumables.



FEATURES & TECHNOLOGY

Z Y E

ADAPTER FOR EPIDERMAL COOLER



- **DCD/spray:** consumable, with a risk of frostbite;
- **Ice:** not practical, slower procedure and still risky;
- **Contact, Peltier:** there is not simultaneous contact between the cold and the shots;
- **Air cooling:** high efficiency, no consumables;
- **Contact, sapphire window:** good efficiency, with simultaneous contact and visibility of the area treated.

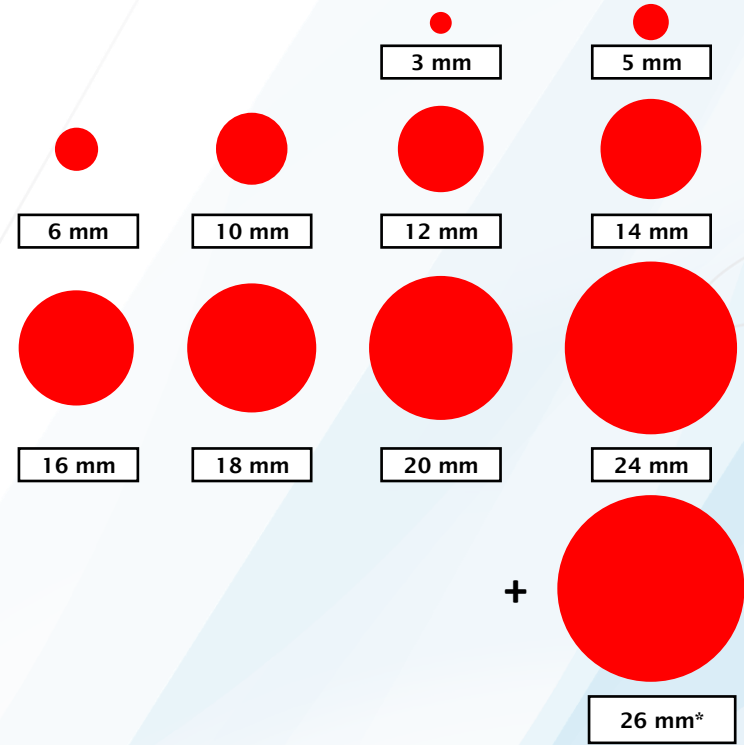
FEATURES & TECHNOLOGY

Z Y E

SPOT DIAMETERS AND REPETITION RATE



11 Plug-and-Play Spots available up to 26 mm and with a repetition rate of up to 3 Hz.



* Spot optional

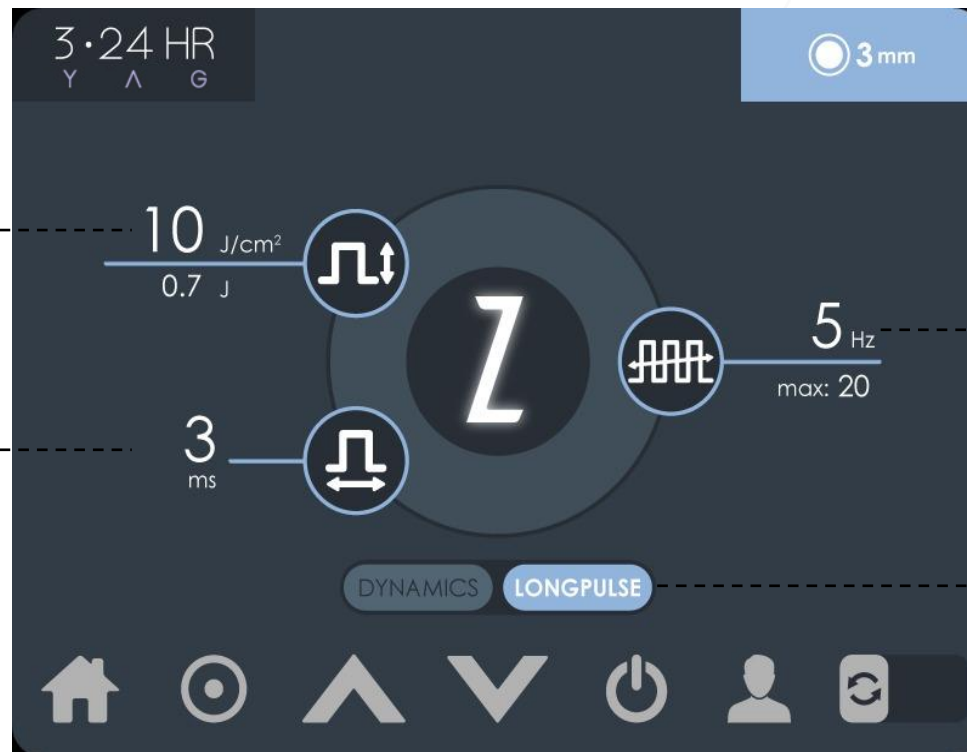
Z Y E

ZYE YAG[®] 3-24/HR: interface and parameterization

INTERFACE AND PARAMETERIZATION

Z Y E

LONGPULSE® MODE



fluence: energy delivered by area (J/cm²)

pulse time: time for the fluence to be delivered

automatic recognition of the **handpiece and spot**

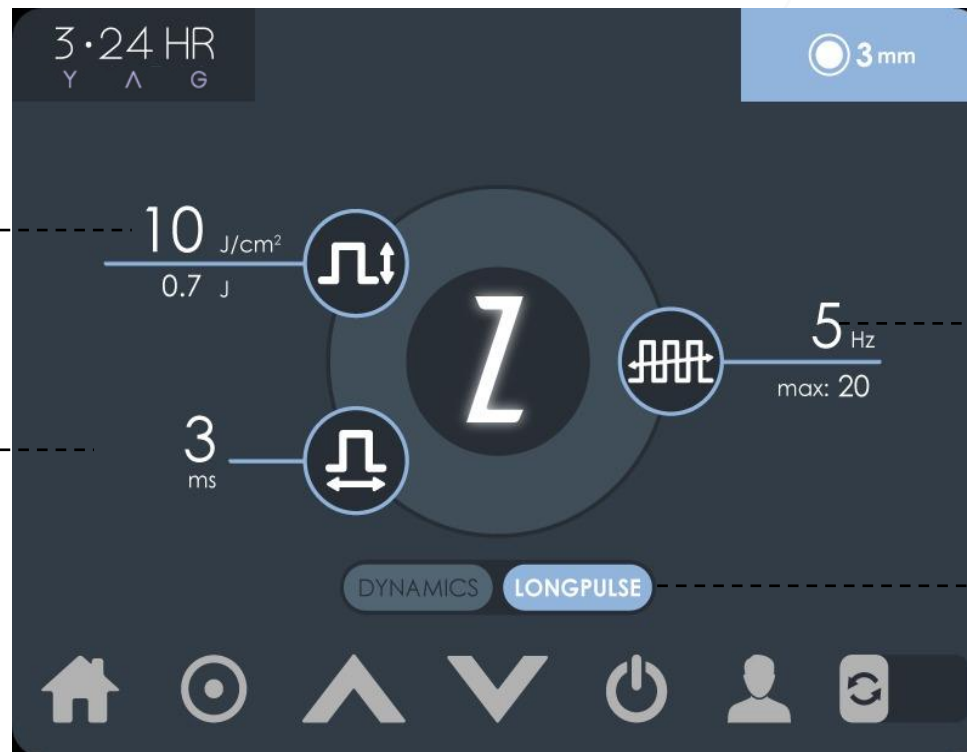
frequency: or repetition rate between shots

selection of **operating mode** - DYNAMICS or LONGPULSE

INTERFACE AND PARAMETERIZATION

Z Y E

DYNAMICS® MODE



fluence: energy delivered by area (J/cm²)

pulse time: time for the fluence to be delivered

automatic recognition of the **handpiece and spot**

frequency: or repetition rate between shots

selection of **operating mode** - DYNAMICS or LONGPULSE

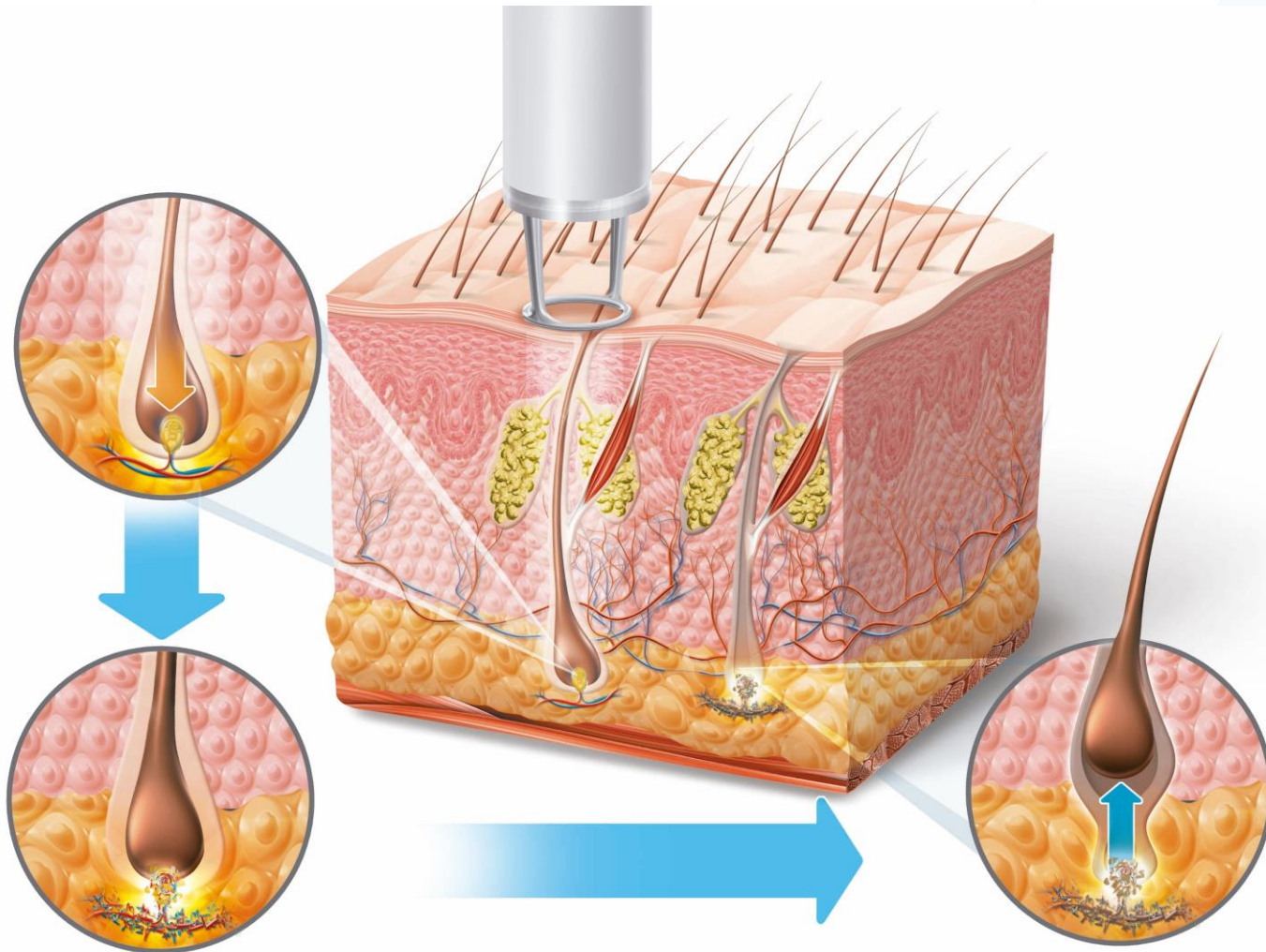
Z Y E

ZYE YAG[®] 3-24/HR:
practice and training
HAIR REMOVAL

PRACTICE AND TRAINING

Z Y E

TISSUE INTERACTION - SELECTIVE PHOTOTHERMOLYSIS



PRACTICE AND TRAINING

Z Y E

APPLICATION TECHNIQUE



- The application must always be **perpendicular (90°)** and in complete contact with the skin surface;
- Does not need gel;
- **Do not do stacking.**

PRACTICE AND TRAINING

Z Y E

CLINICAL GUIDE



PARAMETERS USAGE

Spot:	6 to 24 mm
Operating mode:	LongPulse
Fluence:	2 to 60 J/ cm ²
Pulse time:	20 to 50 ms
Use of Siberian:	Yes
Sessions:	4 to 6
Interval:	4 to 12 weeks

ENDPOINT



Endpoint of the hair:

- Perifollicular erythema or edema in finer hair;
- Carbonization in thicker hair;
- No visible alteration in the adjacent tissues.

GUIDELINES

CONTRAINDICATIONS	PRETREATMENT	POSTTREATMENT
<ul style="list-style-type: none">• Pregnancy• Tanned skin, tattoos in the area of application or pigmentary lesions;• Active herpes;• Be attentive to patients with difficulty healing;• Be careful with active tanning.	<ul style="list-style-type: none">• 6 weeks before the treatment: do not use wax, tweezers or any other hair removal method that pulls hair by the roots;• Use only razors for hair removal before the treatment;• Skin must be clean and completely dry.	<ul style="list-style-type: none">• Use aloe vera gel;• Topical corticoid, if necessary;• SPF 30+ sunscreen.

Z Y E

**ZYE YAG[®] 3-24/HR:
practice and training
OTHER INDICATIONS**

PRACTICE AND TRAINING

Z Y E

VASCULAR LESIONS



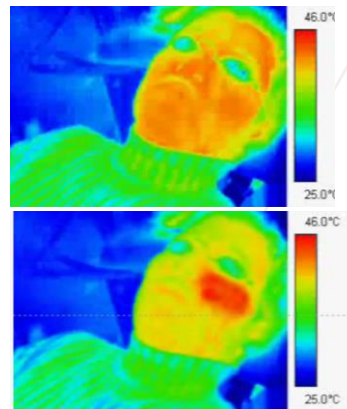
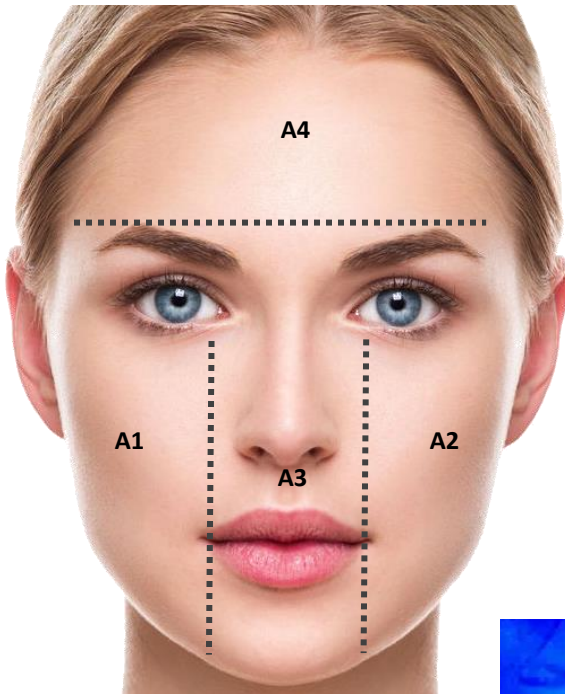
PARAMETERS USAGE

Spot:	3 to 6 mm
Operating mode:	<i>LongPulse</i>
Fluence:	20 to 300 J/ cm ²
Pulse time:	10 to 60 ms
Use of Siberian:	Yes
Interval:	30 days for the same area

PRACTICE AND TRAINING

Z Y E

ROSACEA CONTROL



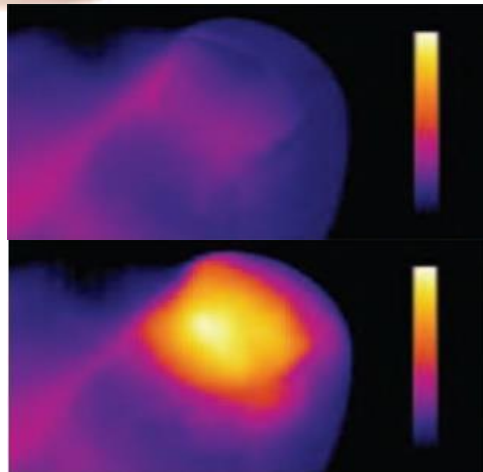
PARAMETERS USAGE

Spot:	3 to 10 mm
Operating mode:	DYNAMICS
Fluence:	8 to 40 J/ cm ²
Pulse time:	200 to 650 μs
Frequency:	3 to 10 Hz
Shots:	500-1.000/ quadrant
Use of Siberian:	No
Sessions:	1 to 8
Interval:	15 to 30 days

PRACTICE AND TRAINING

Z Y E

ONYCHOMYCOSIS



PARAMETERS USAGE

Spot:	3 mm
Operating mode:	DYNAMICS®
Fluence:	10 to 40 J/cm ²
Pulse time:	300 µs
Frequency:	3 to 10 Hz
Shots:	300 to 600 per compromised nails
Use of Siberian:	No
Sessions:	2 to 8
Interval:	15 to 30 days

MY PRACTICE VYDENCE



The MyPractice is a continued medical education program proposed by VYDENCE® to the doctors that use our products and technologies may share their experiences in a practical and quick way.



» My Practice Online

Z Y E

**ZYE YAG[®]:
care and
preventative maintenance**

CARE AND MAINTENANCE

Z Y E

CARE AND PREVENTATIVE MAINTENANCE



ELECTRICAL REQUIREMENTS

30 A circuit breaker

2.5 mm wire (4.0 mm is ideal)

20 A outlet, for 4800 W

2-year platform warranty and pro rata cavity warranty for 1 million shots:

LongPulse Mode: each shot is counted.

DYNAMICS® Mode: each 5 shots is counted as just 1.

CARE AND PREVENTATIVE MAINTENANCE



- **Cleaning and disinfection of the applicator spots:** use isopropyl alcohol (preferentially) with cotton swabs and/or gauze on the lenses and spacers;
- Spacers can be washed with soap and water and/or enzymatic detergent;
- Disinfection of the **Sapphire** with cotton and 70% alcohol;
- **Clean after of each application;**
- **Fiber optics cannot be bent or positioned with a radius of less than 40 cm in diameter.**

CARE AND MAINTENANCE

Z Y E

CARE AND PREVENTATIVE MAINTENANCE



WATCH NOW

Learn more about maintenance procedures on our channel

vydence  LASER ACADEMY 

- Use only deionized water;
- Replace all the water in the reservoir annually;
- Change the deionizing filter annually;
- Annual inspection of the platform and handpieces.

Z Y E

ZYE[®]:
advantages in integration with
ETHEREA-MX[®]

IPL-Sq[®]

EXCLUSIVE ZYE[®] FEATURES

ipl·sq



proprietary and confidential

EXCLUSIVE ZYE® FEATURES



- **DYNAMICS Mode** with a repetition rate of up to 3 Hz;
- **Anti-scattering protection** attached to the Sapphire, increasing comfort and safety during application;
- **Energy calibration system** integrated into the ZYE platform;
- **More cooling: to 2°C.**



- DYNAMICS® mode with a repetition rate of up to 3 Hz for **in-motion treatments** in extensive areas and on different types of lesions;
- Avoids complications and the zebra effect on areas other than the face.



DualMode®

EXCLUSIVE ZYE® FEATURES

DUALMODE



proprietary and confidential

EXCLUSIVE ZYE® FEATURES



12 mm
collimated



TrueLift®

- **New 12 mm collimated spot** with a pulse time of 200 μ s and 10 Hz for minimally ablative treatments;
- **New TrueLift® 8 mm spot** with smooth pulse, for wrinkles in the perioral and periorbital areas, with little or no downtime;
- **New repetition rate of up to 1 Hz** for ATHENA® and InLift®, providing faster treatments.

12mm SPOT: ERBIUM DYNAMICS

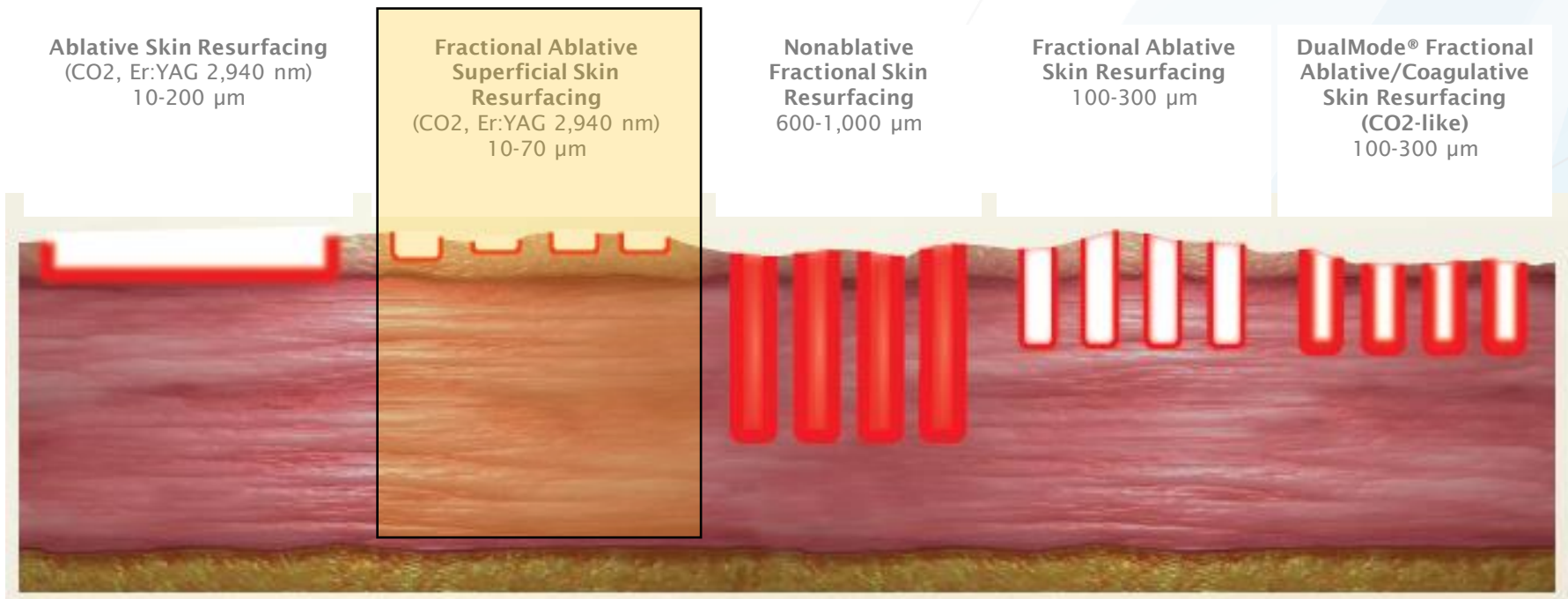


12 mm/ 100 mtz
Frac. and
collimated

- Collimated 12 mm spot with a pulse time of 200 μ s and a repetition rate of up to 10 Hz for **minimally ablative treatments**;
- Controlled beam divergence, short pulse time and high repetition rate: **less ablative effect for a gentle peel.**

12mm SPOT: ERBIUM DYNAMICS

Minimally invasive effect: more superficial and with much less tissue removal.



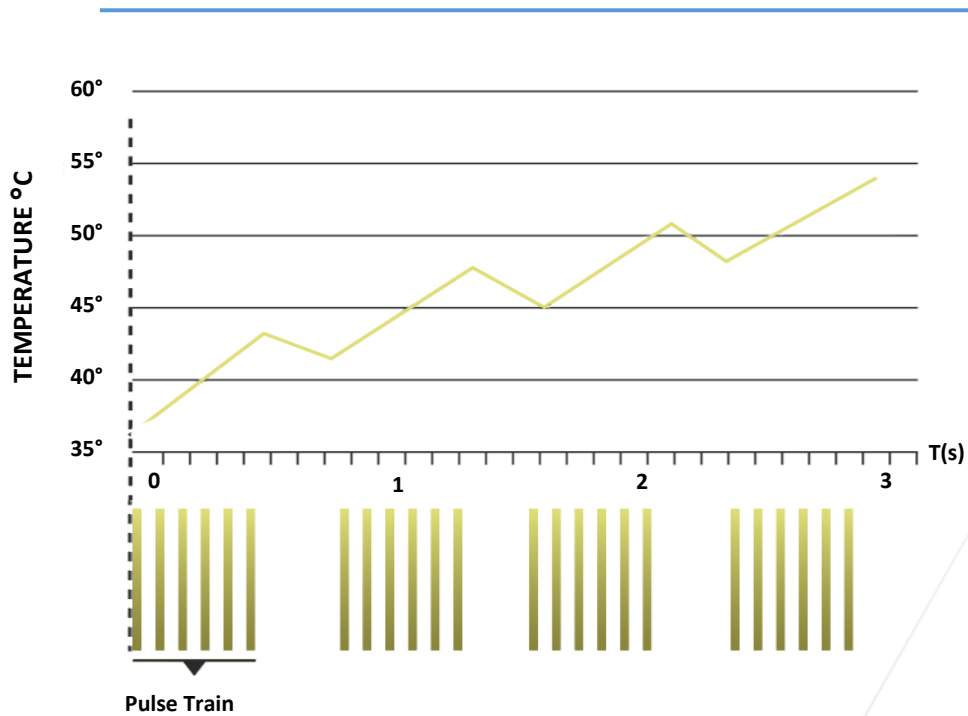


8 mm fractional spot with Smooth Pulse for **fractional resurfacing** of the perioral and periorbital areas, with **little or no downtime**.



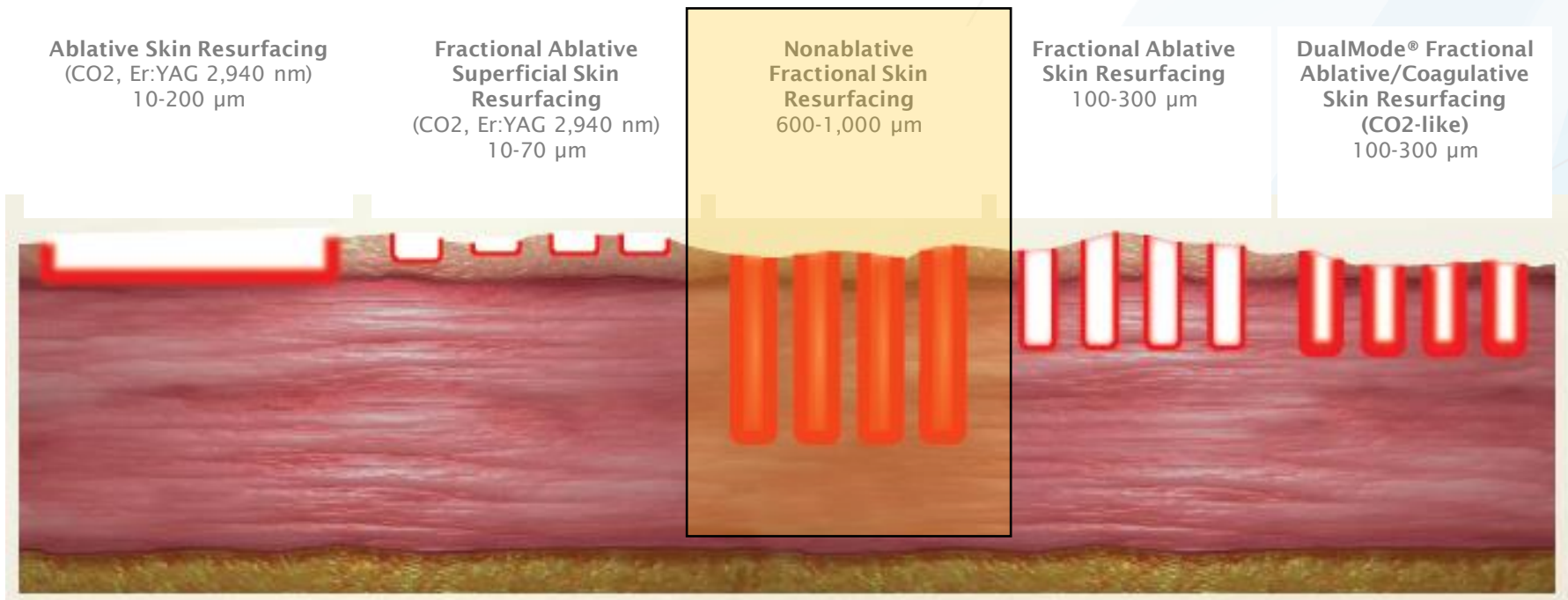
TrueLift®

TrueLift® SPOT



Works with a pulse train as a **smooth pulse**: a sequence of 8 shots (on/off), totaling **400 ms**.

Strengthened coagulative effect, mitigating the effects of ablation.



LongPulse®

EXCLUSIVE ZYE® FEATURES



proprietary and confidential





More fluence in the 3 and 6 mm spots, in the DYNAMICS mode.

Up to 45 J/cm² for more efficacy in thermal peeling, treating even spider veins.

Fewer shots, less session time and more results!

Z Y E

ZYE YAG[®]
clinical library

CLINICAL LIBRARY

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