

DUALMODE



Presentation DualMode®

VYDENCE

CONTINUING MEDICAL EDUCATION Program

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

proprietary and confidential

see more at:

vyndence
LASER ACADEMY tv



ETHEREA-MX[®] PLATFORM



LEADER IN THE WORLD'S SECOND-LARGEST AESTHETICS MARKET



- Maximum versatility;
- LASER and light technologies;
- 70+ treatment indications;
- LASER for all types of skin;
- Always with new technologies;
- Greater profitability and return;
- Compact design that is easy to transport;
- Reliable: second-generation platforms;
- Powerful and with proven results;
- Easily changeable handpieces, plug-and-play;
- Dual voltage, with no need for a voltage stabilizer;
- International standard, FDA approved;
- Sold in nearly 20 countries.

ProDeep®
Nd:YAP 1340 nm
For deep epidermal
nonablative fractional
LASER treatments.



GoSmooth®
Er:GLASS 1540 nm
Gold standard
technology for non-
ablative LASER skin
resurfacing.



LongPulse®
Nd:YAG 1064 nm
Nd:YAG LASER with
variable pulse modes.



ACROMA-QS®
Nd:YAG 1064/532 nm
Dual-wavelength
Fractional Q-switched
LASER with optional
fractional spot.



IPL-Sq®
Intense Pulsed Light
Square-Wave Pulse
Technology and all-in-
one available cut-off
filters.



DualMode®
Er:YAG 2940 nm
Powerful, dual-effect
Er:YAG with improved
coagulation effect.



intenseIR®
Infrared Light
Hi-powered IR light
for skin tightening
of the body and face.



ATHENA®
DualMode® Accessory
intimate LASER
treatment for women's
health and wellness.

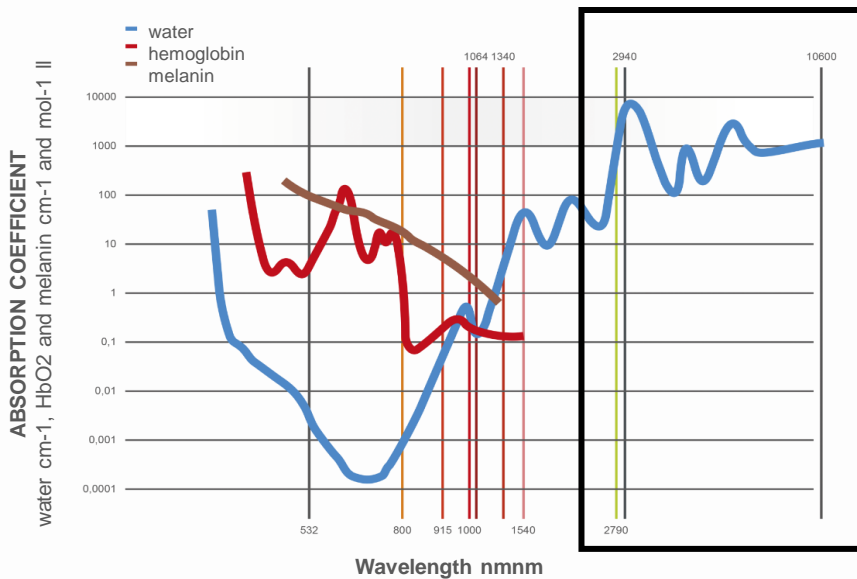


etherea^{MX} | Z Y E

DUALMODE

about LASERs and light: science and technology

TARGET CHROMOPHORE AND ABSORPTION CURVE



- Technology that revolutionized dermatology, introduced in 2004 by Manstein, et al;
- Functions with vaporization (ablation) of tissue
- There are three wavelengths of fractional ablative LASERS:

2790 nm: solid-state LASER, er: YSGG (erbium-doped:yttrium-scandium-gallium-garnet);

2940 nm: solid-state LASER, er:yag (erbium-doped:yttrium-aluminium-garnet);

10.600 nm: gas LASER, CO₂

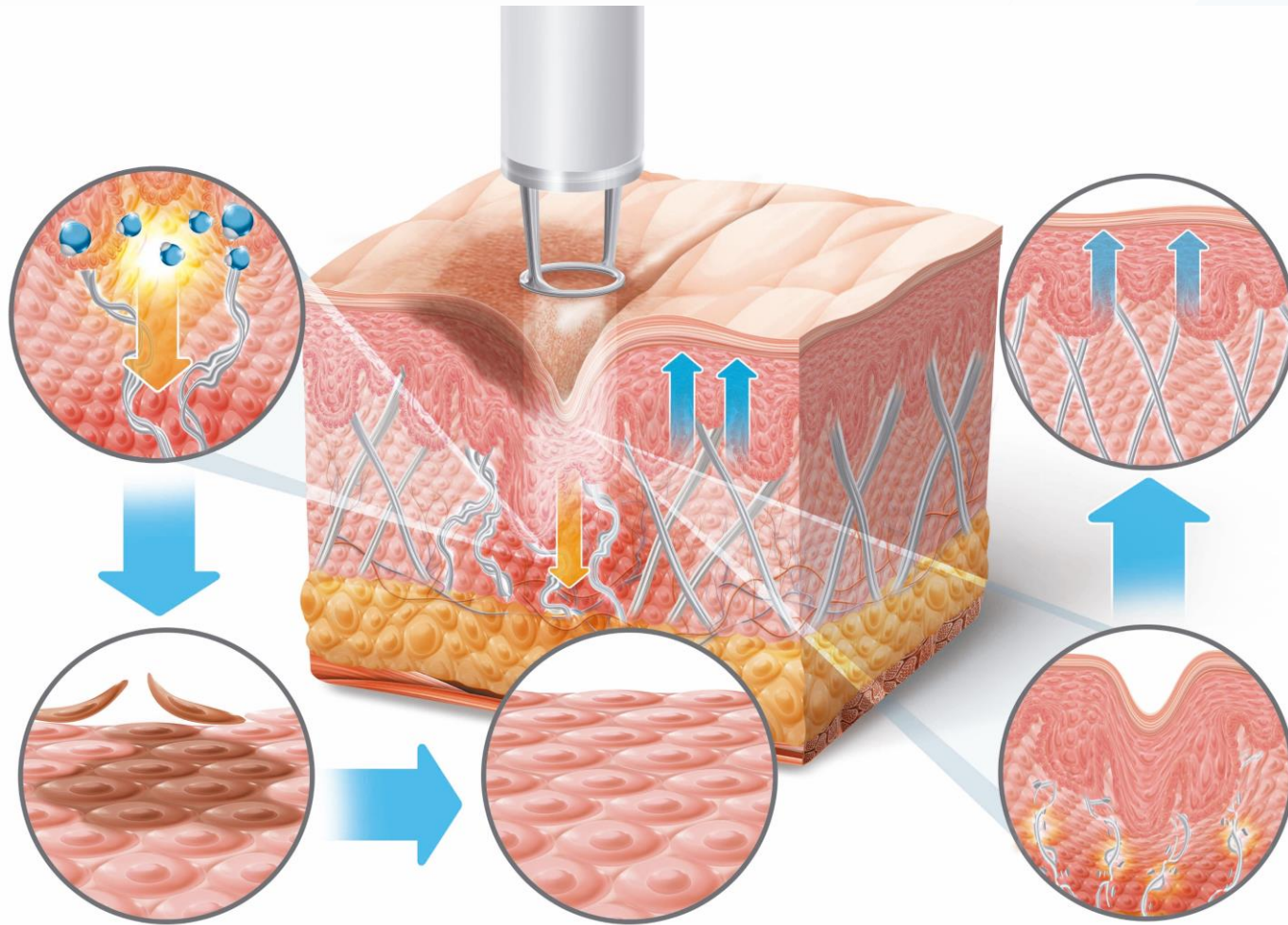
1. Er:YAG has 10 times more absorption by water than a CO₂ laser.

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

SCIENCE AND TECHNOLOGY

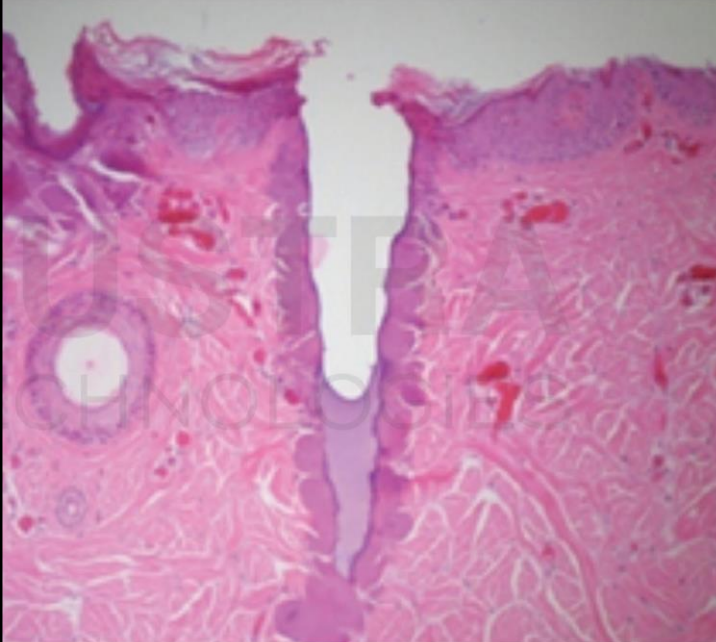
DUALMODE

SELECTIVE PHOTOTHERMOLYSIS EFFECT



ABLATIVE LASER vs. NON-ABLATIVE LASER

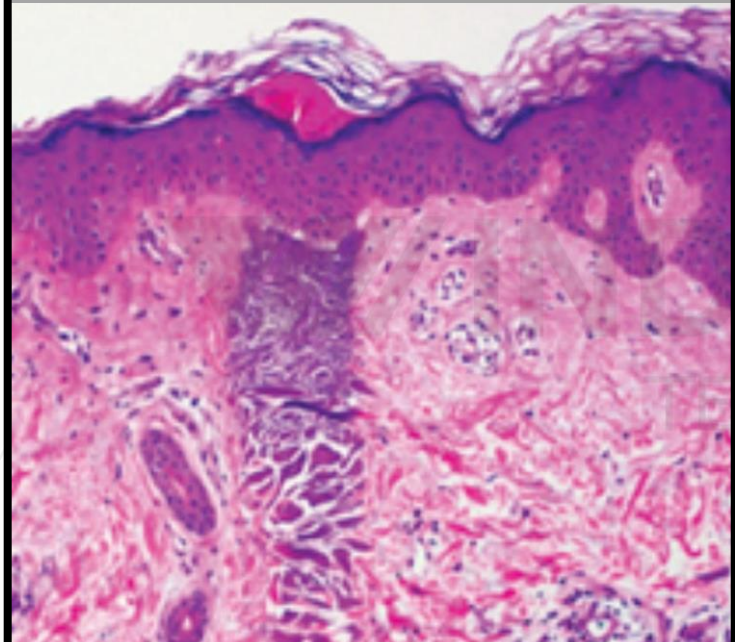
ABLATIVE LASER
Ablation + residual thermal damage and collagen stimulation. Tissue regeneration.



ABLATION

- Complete removal of the epithelial level through a superficial vaporizing effect.

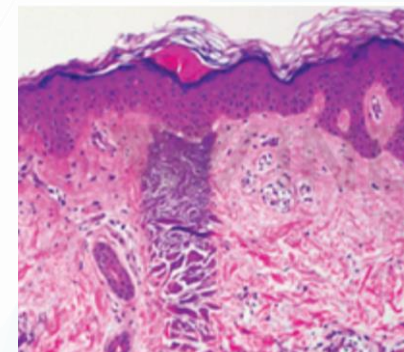
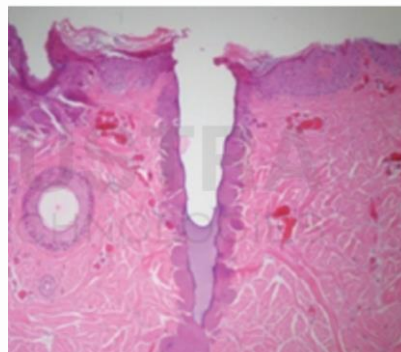
NON-ABLATIVE LASER
Residual thermal damage formation and collagen stimulation.



COAGULATION

- Inflammatory effect in the area, tending to reach deeper layers of the tissue..

ABLATIVE LASER vs. NON-ABLATIVE LASER



Comparison	Ablative	Non-ablative
Target chromophore	H2O	H2O
Chromophore absorption	More	Less
Response time	48-72 hours	24 hours
Advantages	<ul style="list-style-type: none"> • Fewer sessions • Clear improvement after first session • Long-term results • High patient satisfaction 	<ul style="list-style-type: none"> • Safety • Less downtime • Less risk of post-inflammatory hyperpigmentation • Greater versatility • Satisfactory results
Disadvantages	<ul style="list-style-type: none"> • More downtime • More posttreatment care • Risk of post-inflammatory hyperpigmentation 	<ul style="list-style-type: none"> • Higher number of sessions

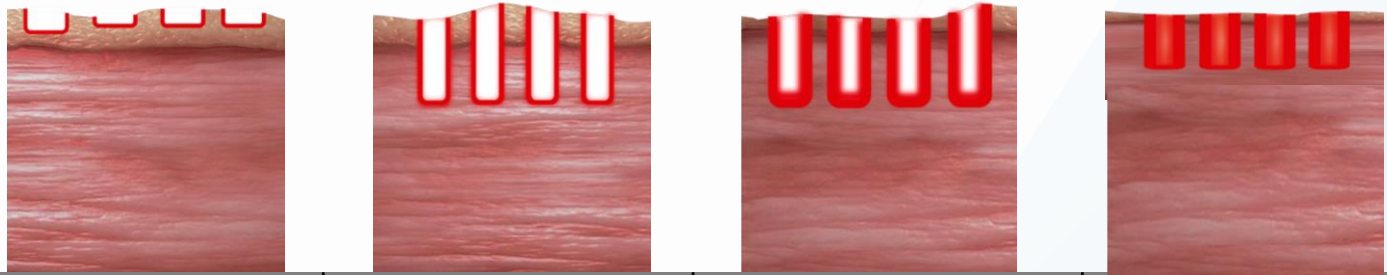
DUALMODE

DualMode[®]: *features & technology*

FEATURES & TECHNOLOGY

DUALMODE

TECHNICAL CHARACTERISTICS

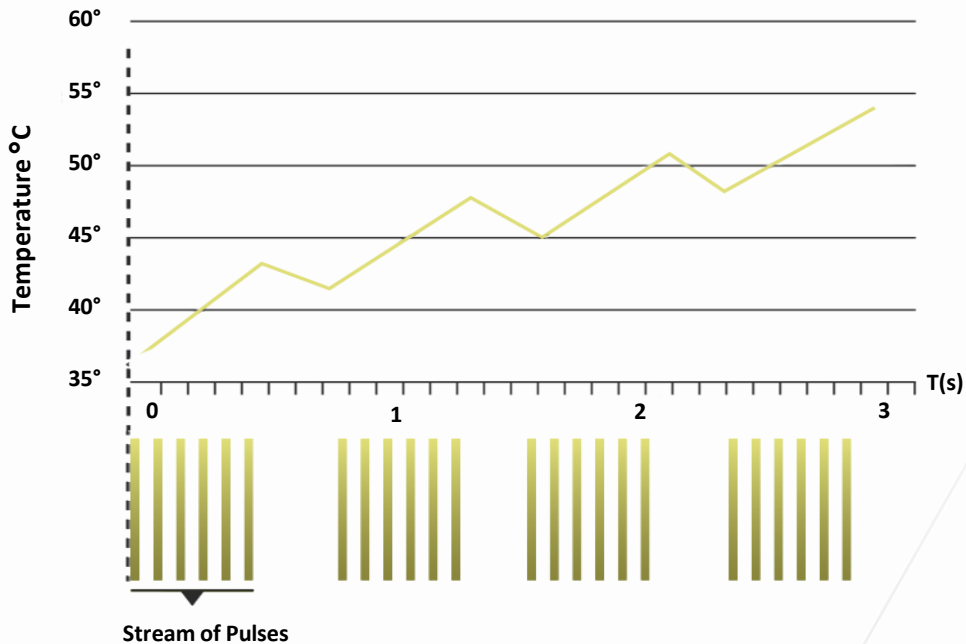


	Microseconds	Milliseconds	Microseconds and milliseconds	Smooth pulse
Pulse time and mode	300 μ s to 1 ms single mode	3 to 5 ms single mode	300 μ s - 1 ms 3 to 5 ms Dual Mode	400 ms
Definition	Short pulses; purely ablative effect	Longer pulse; deeper ablation with residual thermal damage	Double pulses: ablation followed by coagulation	Stream of pulses: coagulative effect, the ablating effects
Spots	Collimated Fractional	Fractional	Fractional	InLift ATHENA
Indication	<ul style="list-style-type: none"> • Drug delivery • LASER peel • Pigmentary lesions 	<ul style="list-style-type: none"> • Fine wrinkles • Light rejuvenation 	<ul style="list-style-type: none"> • Deep wrinkles • Furrows • Scars • Stretch marks 	<ul style="list-style-type: none"> • Intraoral lifting • Lip volume • Intimate feminine treatment • Intimate lightening
Downtime	1-2 days	2-4 days	3-7 days	None

FEATURES & TECHNOLOGY

DUALMODE

TECHNICAL CHARACTERISTICS



- Spots: ATHENA® 90, ATHENA® 360 and InLift®. Work with a stream of pulses in the smooth pulse format: a sequence of 8 shots (on/off), **totaling 400 ms**;
- Painless, less ablative effect and no downtime or need for specific posttreatment care

FEATURES & TECHNOLOGY

DUALMODE

TECHNICAL CHARACTERISTICS

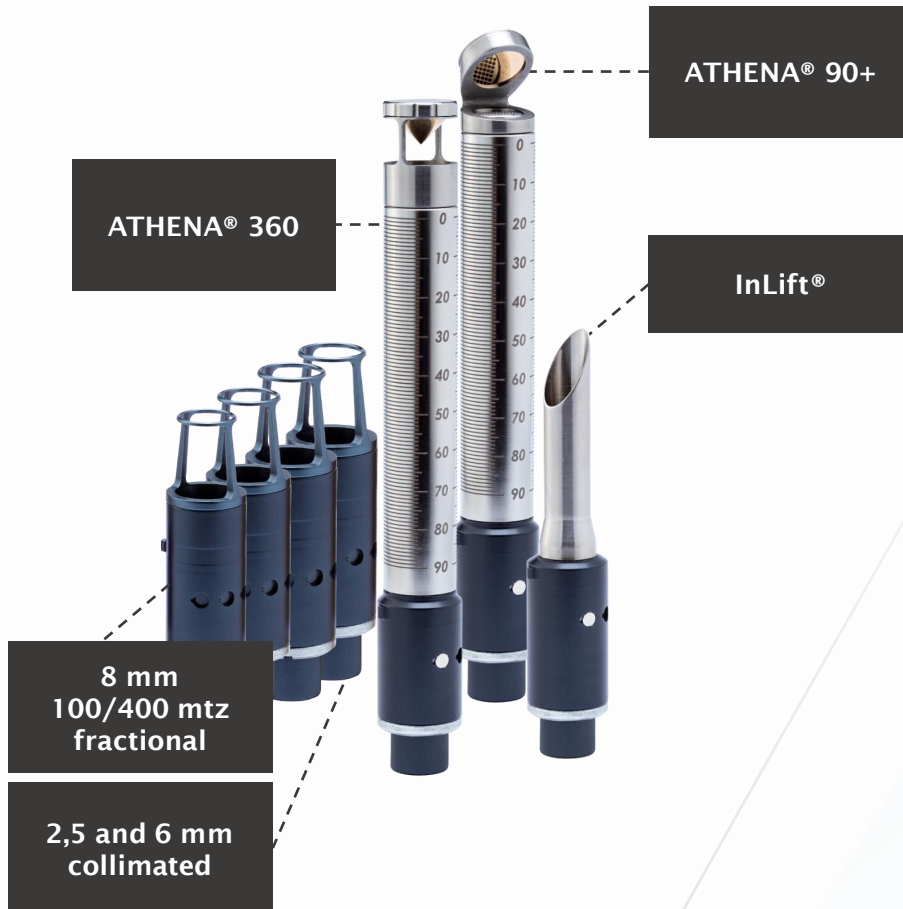


	DUALMODE
Wavelength	2940 nm Er:Yag
Operating mode	Single Mode and Dual Mode
Maximum energy	Up to 60 mj/mtz
Pulse time	300 μ s to 5 ms; 400 ms
Frequency of operation	Up to 5 Hz*
Spots	Fractional 8 mm/100 mtz/cm ² Fractional 8 mm/400 mtz/cm ² Collimated 6 mm InLift® <u>OPTIONAL:</u> Collimated 2.5 mm ATHENA® Kit (90 and 360)
Additional	Integrated cooling or smoke venting adapter

FEATURES & TECHNOLOGY

DUALMODE

TECHNICAL CHARACTERISTICS



- Versatility with 7 spots available;
- Spots with automatic recognition;
- Square applicator, providing more homogeneity.

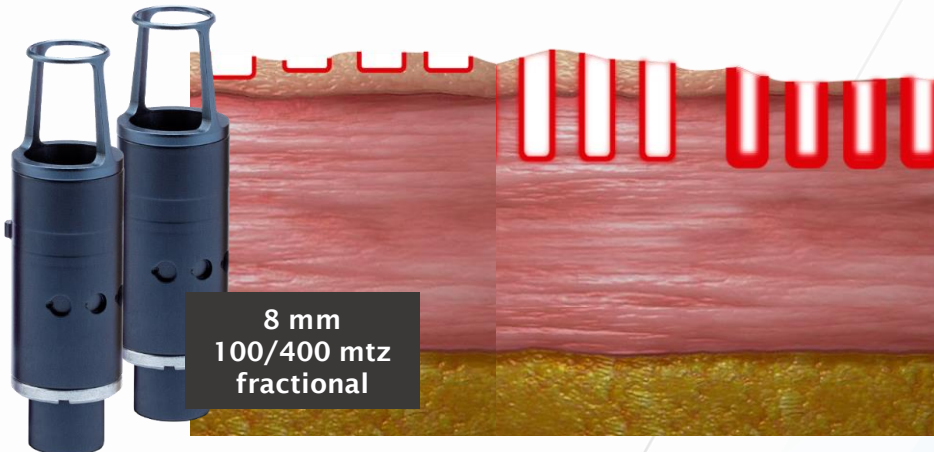
FEATURES & TECHNOLOGY

DUALMODE

SPOTS



- Superficial lesions



- Skin resurfacing
- Light wrinkles
- Deep wrinkles
- Scars

FEATURES & TECHNOLOGY

DUALMODE

SPOTS



ATHENA® 90+
fractional
and collimated

ATHENA® 360
fractional
and collimated

InLift®
fractional
and collimated

- Use in Gynecology

- Intraoral treatment

DUALMODE

DualMode®: interface and parameterization

INTERFACE AND PARAMETERIZATION

DUALMODE

INTERFACE ETHEREA-MX

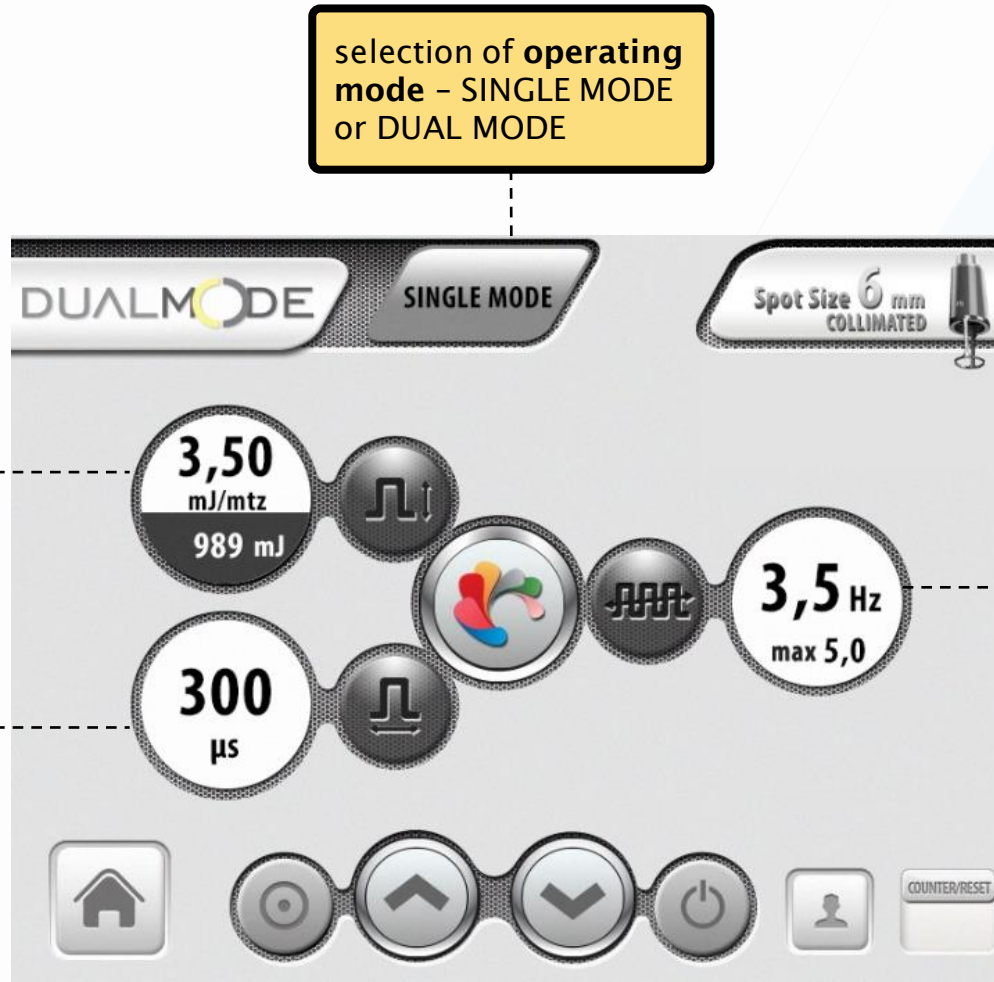
selection of **operating mode** - SINGLE MODE or DUAL MODE

automatic recognition of the **handpiece and spot**

fluence: energy delivered per area (mJ/mtz)

pulse time: time for the fluence to be delivered

frequency or repetition rate between the shots



INTERFACE AND PARAMETERIZATION

DUALMODE

INTERFACE ETHEREA-MX

- DUAL MODE: ablative pulse followed by a coagulative pulse;

ABLATIVE

COAGULATIVE

ABLATIVE

COAGULATIVE

DUALMODE

DUAL MODE

Spot Size 8 mm

400 mtz/cm²

3,5 896
mJ/mtz mJ

7,0 1793

300 µs

3,0 ms

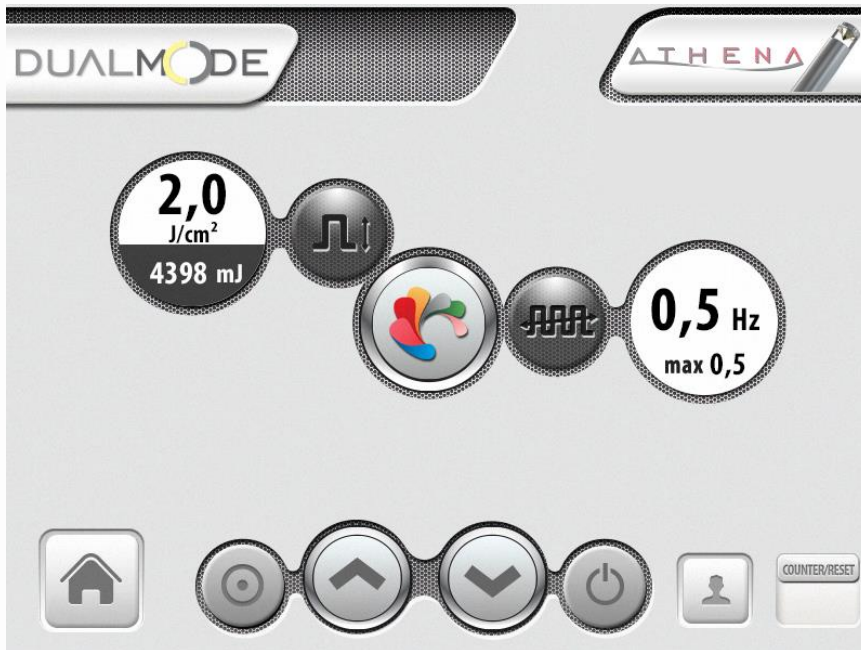
1,5 Hz
max 1,5

COUNTER/RESET

INTERFACE AND PARAMETERIZATION

DUALMODE

INTERFACE ETHEREA-MX



DUALMODE

DualMode®: practice and training

PRACTICE AND TRAINING

DUALMODE

QUICK REFERENCE GUIDE



PRACTICE AND TRAINING

DUALMODE

INDICATION



- Superficial lesions
- Skin resurfacing
- Light wrinkles
- Deep wrinkles
- Scars
- Intraoral treatment
- Feminine intimate treatment

PRACTICE AND TRAINING

DUALMODE

CLINICAL GUIDE – INTRAORAL TREATMENT



courtesy of: Moysés da Costa Lemos, MD, São Carlos, SP, Brazil

USAGE PARAMETERS

Spot:	InLift® fractional
Mode:	Fractional
Fluence:	30 to 40 mj/mtz
Pulse time:	Smooth Pulse
Shots:	Jugal/SNG: 100 to 150/side
Sessions:	4
Interval:	15 days

PRACTICE AND TRAINING

DUALMODE

CLINICAL GUIDE – SUPERFICIAL LESIONS



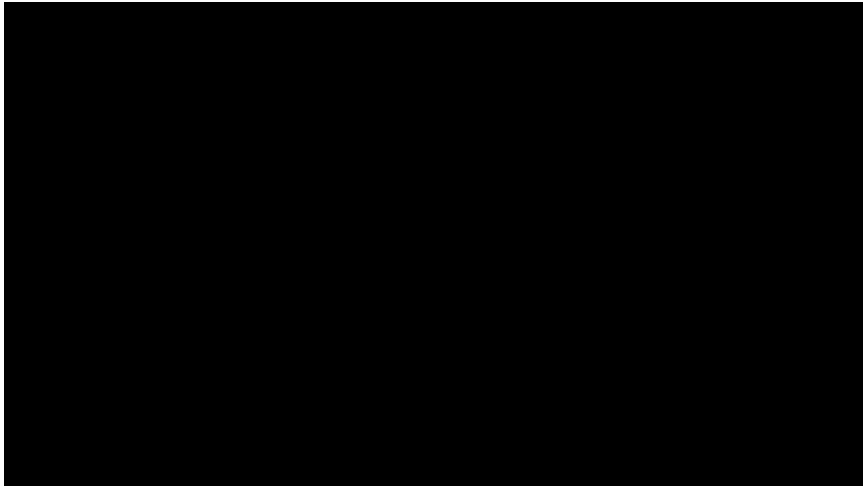
USAGE PARAMETERS

spot:	collimated 2.5 or 6 mm
fluence:	2.5 to 16 J/cm ²
pulse time:	300 μs
passes:	1 to 4
sessions:	2 to 3
interval:	30 to 60 days

PRACTICE AND TRAINING

CLINICAL GUIDE – SKIN RESURFACING

DUALMODE



USAGE PARAMETERS	
spot:	fractional 8/400 mtz/cm ²
fluence:	2.5 to 3.5 mj/mtz
pulse time:	single mode 300 μs
passes:	1 to 3
sessions:	1 to 3
interval:	30 days

Optionally, this can be done with the fractional spot at 100 mtz/cm², with fluence from 10 to 12.5 mj/mtz.

PRACTICE AND TRAINING

DUALMODE

CLINICAL GUIDE – LIGHT WRINKLES



USAGE PARAMETERS	
spot:	fractional 8/100 mtz/cm ²
fluence:	12.5 to 37.5 mJ/mtz
pulse time:	1 to 2 ms
passes:	1 to 4
sessions:	3 to 5
interval:	30 days

Optionally, this can be done with the fractional spot at 400 mtz/cm², with a pulse time of 2 ms and fluence from 2 to 7.5 mJ/mtz.

PRACTICE AND TRAINING

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CLINICAL GUIDE – DEEP WRINKLES AND SCARS



USAGE PARAMETERS

spot:	fractional 8/100 mtz/cm ²
fluence:	12.5 to 15 mJ/mtz and 20 to 52.5 mJ/mtz
pulse time:	DualMode 300 μ s and 3 to 5 ms
passes:	1 to 2
sessions:	3 to 5
interval:	30 to 60 days

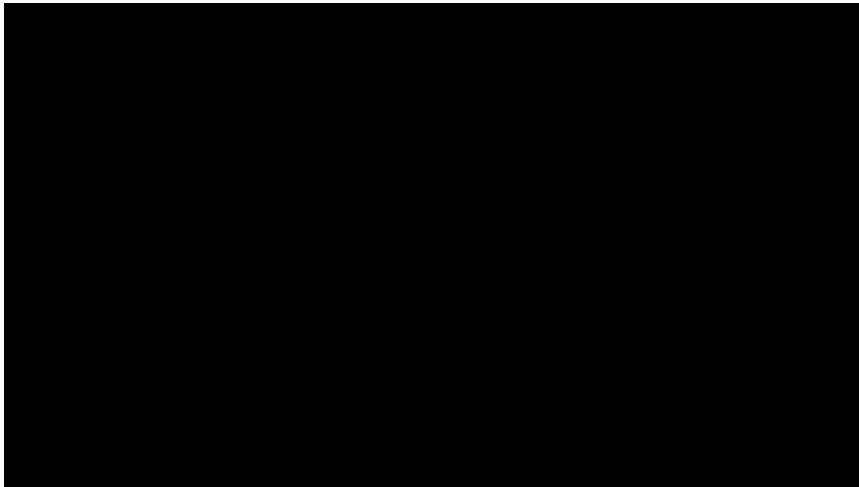
Optionally, this can be done with the fractional spot at 400 mtz/cm², with the pulse time from 300 μ s and 3 ms, fluence from 2 to 3 mJ/mtz and 3 to 9 mJ/mtz.

PRACTICE AND TRAINING



CLINICAL GUIDE – DEEP WRINKLES AND SCARS

CONTRAINDICATIONS	PRETREATMENT	POSTTREATMENT
<ul style="list-style-type: none">▪ Application in locations with nonabsorbable fillers▪ Botulinum toxin only 30 days after the procedure	<ul style="list-style-type: none">▪ Herpes prophylaxis (if necessary)▪ Topical anesthetic (removed completely before the session)	<ul style="list-style-type: none">▪ Drug delivery or LED▪ At home: cold chamomile tea compresses and Cicaplast® Balm▪ Avoid makeup and sunscreen (24 hours, colorless than 48 hours with color)



- ↑ speed of mitosis → ↑ rate of epithelialization of the vulva and the vaginal canal
- ↑ local circulation → angiogenesis:
 - → ↑ glycogen → Maintenance of the vaginal flora and pH
 - → neocollagenosis → ↑ collagen

PRACTICE AND TRAINING

DUALMODE

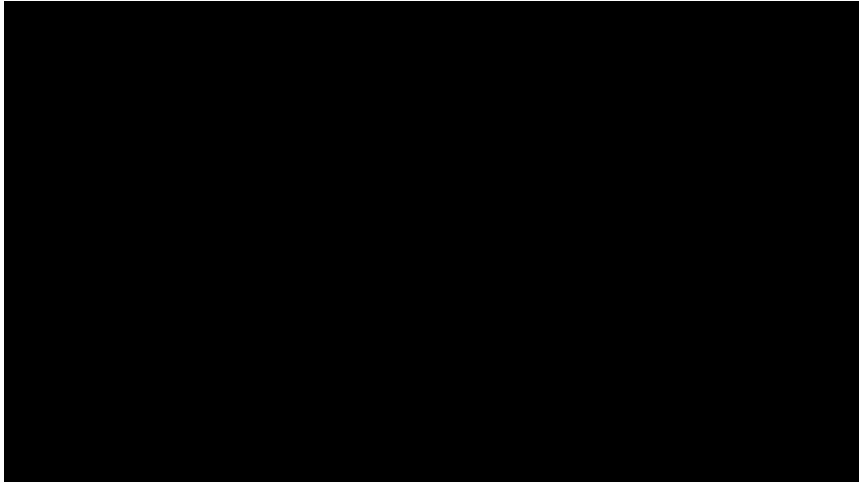
CLINICAL GUIDE – FEMININE INTIMATE TREATMENT



PRACTICE AND TRAINING



CLINICAL GUIDE – FEMININE INTIMATE TREATMENT

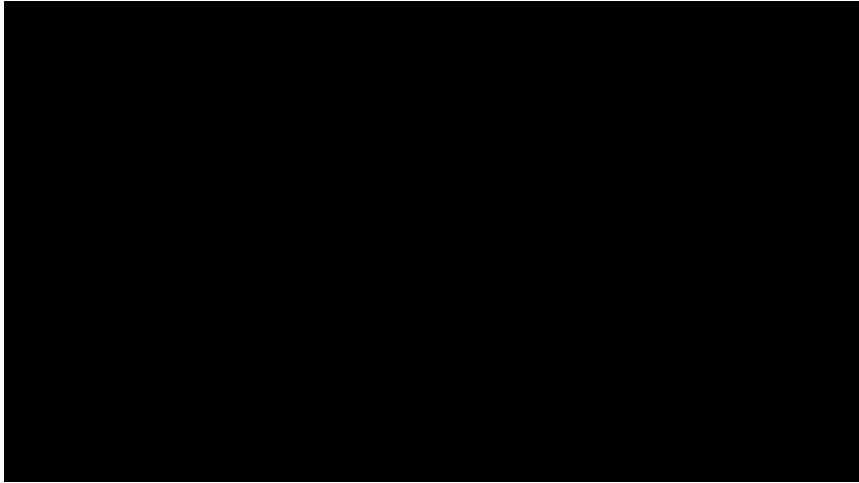


USAGE PARAMETERS	
spot:	ATHENA® 90+
mode:	Fractional
fluence:	30 to 40 mJ/mtz
pulse time:	Smooth Pulse
shots:	4 shots per point of the interior wall (11, 12 and 1 o'clock)
retraction:	8 to 9 mm
passes:	1
sessions:	3 to 5 annual review
interval:	30 to 60 days

PRACTICE AND TRAINING



CLINICAL GUIDE – FEMININE INTIMATE TREATMENT



USAGE PARAMETERS	
spot:	ATHENA® 360 (with or without fractionator)
fluence:	1.5 to 2.5 J/cm ²
pulse time:	Smooth Pulse
shots:	4 / point of retraction
retraction:	4 to 5 mm
passes:	3
sessions:	3 to 5 annual review
interval:	30 to 60 days

PRACTICE AND TRAINING

DUALMODE

CLINICAL GUIDE – FEMININE INTIMATE TREATMENT



PRACTICE AND TRAINING



CLINICAL GUIDE – FEMININE INTIMATE TREATMENT

Contraindications	Pretreatment	Posttreatment
<ul style="list-style-type: none">▪ Menstrual period▪ Untreated STD▪ Altered Pap smear (6 months)	<ul style="list-style-type: none">▪ Herpes prophylaxis (if necessary)▪ Remove hair in the region for treatment of the external area▪ Topical anesthetic in the vulva and in the vaginal introitus (remove completely)▪ Inspection and drying of the vaginal canal (optional)	<ul style="list-style-type: none">▪ Erythema, sensitivity, pruritus, scab formation and hyperpigmentation▪ Not have sexual relations for seven days▪ CICAPLAST® on the external part for 2 or 3 days*▪ HIDRAFEMME® or HYALUFEM® on the internal part for 7 days*▪ Initial results after 21 days

PRACTICE AND TRAINING

MY PRACTICE VYDENCE

DUALMODE



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

DUALMODE

DualMode[®]:
care and
preventative maintenance

CARE AND MAINTENANCE

DUALMODE

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;
- Clean after each application. Careful in assembling the Spot 100 mtz/cm²;
- Pro rata guarantee of the handpiece: 500,000 shots;
- Damage from falls or misuse (usage not in accordance with the recommendations) is not covered;
- Careful during transportation, misalignment can result in ineffective treatment;
- Send the handpiece to technical support after reaching the recommended number of shots.

CARE AND MAINTENANCE

DUALMODE

CARE AND PREVENTATIVE MAINTENANCE



- Wash with water and enzymatic detergent using gauze;
- Sterilize in an autoclave: 121 to 134°C, pressure of 1.2 to 2.2 kgf/cm², for 20 minutes;
- **Never sterilize the optical bases!**
- Never store or sterilize dirty, with any residue or with signs of oxidation;
- InLift® applicator: can be cleaned in an autoclave or washed with soap and water or enzymatic detergent



CARE AND MAINTENANCE

DUALMODE

CARE AND PREVENTATIVE MAINTENANCE



- Visual inspection of the mirrors in the speculum: they must be smooth, polished and not have excessive scratches;
- The gold mirrors must be changed periodically.

CARE AND MAINTENANCE

DUALMODE

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 ionizing filter annually;
- Annual inspection of the platform and handpieces.

DUALMODE

DualMode[®]: cases and results

CASES AND RESULTS

DUALMODE

SKIN RESURFACING

VYDENCE Treatment Center
São Paulo, SP



BEFORE

AFTER 1
SESSION

IPL-Sq: filter 540 nm, 15 ms, 16 J/cm²
+ DualMode: single mode, 400 mtz/cm², 300 µs, 2 mJ/mtz
+ drug delivery of vitamin C
1 treatment session

42

proprietary and confidential

CASES AND RESULTS

DUALMODE

SKIN RESURFACING

VYDENCE Treatment Center
São Paulo, SP



BEFORE

AFTER 1
SESSION

IPL-Sq: filter 540 nm, 15 ms, 15 J/cm²
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+ drug delivery of vitamin C
1 treatment session

43 proprietary and confidential

CASES AND RESULTS

DUALMODE

SKIN RESURFACING

VYDENCE Treatment Center
São Paulo, SP



BEFORE

AFTER 1
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1 treatment session

44 proprietary and confidential

CASES AND RESULTS

DUALMODE

SKIN RESURFACING

VYDENCE Treatment Center
São Paulo, SP



BEFORE

AFTER 1
SESSION

IPL-Sq: filter 540 nm, 15 ms, 15 J/cm²
+ DualMode: single mode, 400 mtz/cm², 300 μs, 2 mJ/mtz
1 treatment session

45 proprietary and confidential

CASES AND RESULTS

DUALMODE

SKIN RESURFACING

VYDENCE Treatment Center
São Paulo, SP



BEFORE

**AFTER 3
SESSIONS**

DualMode: dual mode, 100 mtz/cm², 300 μ s and 5 ms, 15 mJ/mtz and 40 mJ/mtz
3 treatment sessions

CASES AND RESULTS

DUALMODE

SKIN RESURFACING

VYDENCE Treatment Center
São Paulo, SP



BEFORE

AFTER 3
SESSIONS

DualMode: dual mode, 100 mtz/cm², 300 μ s and 5 ms, 15 mj/mtz and 40 mj/mtz
3 treatment sessions

47 proprietary and confidential

CASES AND RESULTS

DUALMODE

SKIN RESURFACING

VYDENCE Treatment Center
São Paulo, SP



BEFORE

AFTER 1
SESSION

DualMode: dual mode, 100 mtz/cm², 300 μ s and 5 ms, 15 mJ/mtz and 40 mJ/mtz
1 treatment session

CASES AND RESULTS

DUALMODE

SKIN RESURFACING

VYDENCE Treatment Center
São Paulo, SP



BEFORE

AFTER 1
SESSION

DualMode: dual mode, 100 mtz/cm², 300 μ s and 5 ms, 15 mj/mtz and 40 mj/mtz
1 treatment session

CASES AND RESULTS

DUALMODE

SKIN RESURFACING

VYDENCE Treatment Center
São Paulo, SP



BEFORE

AFTER 1
SESSION

DualMode: dual mode, 100 mtz/cm², 300 μ s and 5 ms, 15 mj/mtz and 40 mj/mtz
1 treatment session

DUALMODE

clinical library

Arch Dermatol. 1999;135:391-397

STUDY

Comparison of Erbium:YAG and Carbon Dioxide Lasers in Resurfacing of Facial Rhytides

*Khalil A. Khatri, MD; Victor Ross, MD; Joop M. Grevelink, MD, PhD;
Cynthia M. Magro, MD; R. Rox Anderson, MD*



21 patients treated with one session of CO2 Laser (2 to 3 passes) on the right side of the face and Er:Yag (5 to 8 passes) on the left side of the face.

After six months, no significant differences were noted in the results and the recovery of the half of the face treated with Laser Erb:Yag was considerably faster than the side treated with CO2 Laser.

Lasers in Surgery and Medicine 42:160–167 (2010)

Ablative Fractional Lasers (CO₂ and Er:YAG): A Randomized Controlled Double-Blind Split-Face Trial of the Treatment of Peri-Orbital Rhytides

Syrus Karsai, MD,¹ Agnieszka Czarnecka, MD,¹ Michael Jünger, MD, PhD,² and Christian Raulin, MD, PhD^{1,3*}

¹Laserklinik Karlsruhe, Kaiserstr. 104, D-76133 Karlsruhe, Germany

²Department of Dermatology, University of Greifswald, Ferdinand-Sauerbruch-Strasse, D-17475 Greifswald, Germany

³Department of Dermatology, University of Heidelberg, Voßstr. 2, D-69115 Heidelberg, Germany

TABLE 3. Patient Satisfaction

Time	Which of the sides caused more discomfort?			Which of the sides would you undergo again or recommend to others?			
	CO ₂	Er:YAG	Neither	CO ₂	Er:YAG	Both	Neither
1 day after treatment	13 (46.4%)	14 (50.0%)	1 (3.6%)	14 (50.0%)	6 (21.4%)	4 (14.3%)	4 (14.3%)
3 days after treatment	11 (39.3%)	13 (46.4%)	4 (14.3%)	13 (46.4%)	6 (21.4%)	5 (17.9%)	4 (14.3%)
6 days after treatment	15 (53.6%)	11 (39.3%)	2 (7.1%)	10 (35.7%)	10 (35.7%)	6 (21.4%)	2 (7.1%)
3 months after treatment	17 (60.7%)	9 (32.1%)	2 (7.1%)	8 (28.6%)	13 (46.4%)	5 (17.9%)	2 (7.1%)

28 patients treated with CO₂ Laser on the left side of the face and Er:Yag on the right side. After three months: 13 patients would recommend the Er:Yag, 8 would recommend the CO₂ Laser, 5 would recommend both and 2 would not recommend either one.

Lasers in Surgery and Medicine 27:395–403 (2000)

Collagen Tightening Induced by Carbon Dioxide Laser Versus Erbium:YAG Laser

Richard E. Fitzpatrick, MD,^{1,2*} Elizabeth F. Rostan, MD,² and Nancy Marchell, MD³

¹Division of Dermatology, Department of Medicine, University of California at San Diego, San Diego, California

²Dermatology Associates of San Diego County, Inc., San Diego, California

³Laguna Hills Dermatology, Inc., Laguna Hills, California

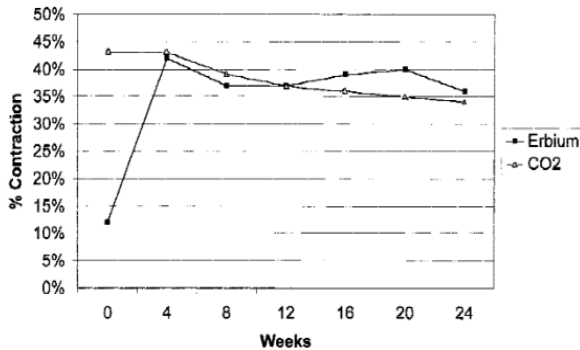


Fig. 4. CO₂ laser collagen tightening versus erbium laser wound contracture in the vertical plane.

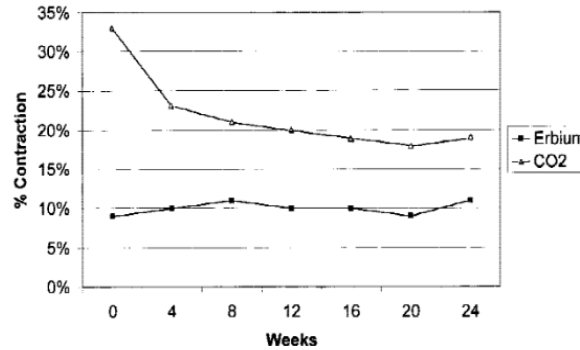


Fig. 5. CO₂ laser collagen tightening versus erbium laser wound contracture in the horizontal plane.

9 patients were tattooed with 4 points on each upper eyelid. After 1 month they were treated with 1 session of CO₂ on one eyelid and 1 session of Er:Yag on the other one. After 6 months, the retraction of both sides was similar.

VERTICAL PLANE:

Average retraction of 34% with CO₂ and 36% with Er:Yag

HORIZONTAL PLANE:

Average retraction of 19% with CO₂ and 11% with Er:Yag

Er:YAG Laser Treatment of Sleep-Disordered Breathing

Katarina Svahnström

General Dentistry Clinic, Uppsala, Sweden



Fig. 3: Patient's mouth before treatment (Class 4).



Fig. 4: Immediately after the first treatment (Class 2).



Fig. 5: After three treatments (Class 1).

75 patients with sleep-disordered breathing were treated with 3 sessions of Er:Yag Laser during a 45-day period. In the photo: before, immediately after the session and after 3 sessions, respectively. From 6 to 12 months after the treatment, the patients' companions were interviewed and 90% said they were satisfied with the treatment in relation to decreased nighttime snoring.

Menopause: The Journal of The North American Menopause Society
 Vol. 26, No. 9, pp. 000-000
 DOI: 10.1097/GME.0000000000001353
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The effect of vaginal erbium laser treatment on sexual function and vaginal health in women with a history of breast cancer and symptoms of the genitourinary syndrome of menopause: a prospective study

Fernanda Arêas, MD, MSc,¹ Ana L. R. Valadares, MD, PhD,¹ Délio Marques Conde, MD, PhD,² and Lúcia Costa-Paiva, MD, PhD¹

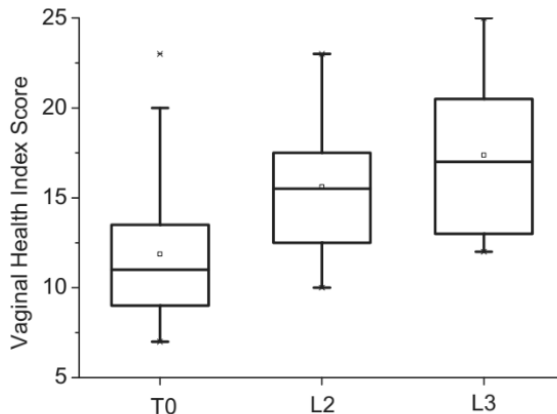


FIG. 1. Vaginal Health Index Score before and after two vaginal erbium laser sessions (n=24). T0, immediately before the first session; L2, immediately before the second session; L3, immediately preceding the third session; VEL: vaginal Erbium laser; VHIS, Vaginal Health Index Score. $P < 0.001$: 1 \neq 2, 1 \neq 3, 2 \neq 3. P value refers to Friedman test for comparison of VHIS between three sessions.

24 postmenopausal women with a history of breast cancer and vaginal dryness and/or dyspareunia were treated with 3 sessions of ATHENA[®], with an interval of 30 days. The illustration shows the increase in the Vaginal Health Index Score, which takes into consideration factors such as: vaginal elasticity, moisture and pH; sexual function and control of dyspareunia.

1. Costa MLM, Azevedo LCM, Stock FS, Grohs LMH, Wanczinski MI, Cunha PR, Campos VB. ESTUDO COMPARATIVO DA EFICÁCIA DO USO DE LASER 2940-NM, 1340-NM E LIP NO REJUVENESCIMENTO GLOBAL DAS MÃOS. Trabalho apresentado no V Simpósio de Cosmiatria e LASER da SBD, São Paulo, SP. 2013
2. Jordão J, Campos V, Santos T, Pinto C, Trevisan F, Pitassi L. FRACTIONAL ABLATIVE LASER VERSUS FRACTIONAL ABLATIVE AND COAGULATIVE LASER FOR THE TREATMENT OF PHOTODAMAGED SKIN IN ARMS AND FOREARMS. Poster originally presented at ASLMS Annual Conference, 2011
3. Morais OO, Costa IMC, Gomes CM, Shinzato DH, Ayres GMC, Cardoso RM. THE USE OF THE ER:YAG 2940 NM LASER ASSOCIATED WITH AMOROLFINE LACQUER IN THE TREATMENT OF ONYCHOMYCOSIS. *An Bras Dermatol.* 2013; 88(5):863-5.
4. Karsai S, Czarnecka A, Jünger M, Raulin C. ABLATIVE FRACTIONAL LASERS (CO₂ AND ER:YAG): A RANDOMIZED CONTROLLED DOUBLE-BLIND SPLIT-FACE TRIAL OF THE TREATMENT OF PERI-ORBITAL RHYTIDES. *LASERs Surg Med.* 2010 Feb;42(2):160-7.
5. Fitzpatrick RE, Rostan EF, Marchell N. COLLAGEN TIGHTENING INDUCED BY CARBON DIOXIDE LASER VERSUS ERBIUM: YAG LASER. *LASERs Surg Med.* 2000;27(5):395-403.
6. Khatri KA, Ross V, Grevelink JM, Magro CM, Anderson RR. COMPARISON OF ERBIUM:YAG AND CARBON DIOXIDE LASERS IN RESURFACING OF FACIAL RHYTIDES. *Arch Dermatol.* 1999 Apr;135(4):391-7.
7. Niwa A, Macéa J, Nascimento D, Torezan L, Osório N. USE OF 2,940 ERBIUM FRACTIONAL LASER IN THE TREATMENT OF FACIAL PHOTODAMAGED SKIN. 15 MONTHS FOLLOW-UP. *Surg & Cosmetic Dermatol.* 2009;2(1)
8. Khatri KA, Mahoney D, Hakam L. HIGH-FLUENCE FRACTIONAL TREATMENT OF PHOTODAMAGED FACIAL SKIN USING A 2940 NM ERBIUM:YTTRIUM-ALUMINIUM-GARNET LASER. *J Cosmet Laser Ther.* 2012 Dec;14(6):260-6.
9. Paasch U, Haedersdal M. LASER SYSTEMS FOR ABLATIVE FRACTIONAL RESURFACING. *Expert Rev Med Devices.* 2011 Jan;8(1):67-83.
10. Dierickx CC, Khatri KA, Tannous ZS, Childs JJ, Cohen RH, Erofeev A, Tabatadze D, Yaroslavsky IV, Altshuler GB. MICRO-FRACTIONAL ABLATIVE SKIN RESURFACING WITH TWO NOVEL ERBIUM LASER SYSTEMS. *LASERs Surg Med.* 2008 Feb;40(2):113-23.
11. El-Domyati M1, El-Ammawi TS, Medhat W, Moawad O, Mahoney MG, Uitto J. MULTIPLE MINIMALLY INVASIVE ERBIUM: YTTRIUM ALUMINIUM GARNET LASER MINI-PEELS FOR SKIN REJUVENATION: AN OBJECTIVE ASSESSMENT. *J Cosmet Dermatol.* 2012 Jun;11(2):122-30.
12. Trelles MA, Mordon S, Velez M, Urdiales F, Levy JL. RESULTS OF FRACTIONAL ABLATIVE FACIAL SKIN RESURFACING WITH THE ERBIUM:YTTRIUM-ALUMINIUM-GARNET LASER 1 WEEK AND 2 MONTHS AFTER ONE SINGLE TREATMENT IN 30 PATIENTS. *LASERs Med Sci.* 2009 Mar;24(2):186-94.
13. Ross EV, McKinlay JR, Sajben FP, Miller CH, Barnette DJ, Meehan KJ, Chhieng NP, Deavers MJ, Zelickson BD. USE OF A NOVEL ERBIUM LASER IN A YUCATAN MINIPIG: A STUDY OF RESIDUAL THERMAL DAMAGE, ABLATION, AND WOUND HEALING AS A FUNCTION OF PULSE DURATIDFFON. *LASERs Surg Med.* 2002;30(2):93-100.
14. Trelles MA, Vélez M, Mordon S. CORRELATION OF HISTOLOGICAL FINDINGS OF SINGLE SESSION ER:YAG SKIN FRACTIONAL RESURFACING WITH VARIOUS PASSES AND ENERGIES AND THE POSSIBLE CLINICAL IMPLICATIONS. *LASERs Surg Med.* 2008 Mar;40(3):171-7.
15. Lee WR, Shen SC, Kuo-Hsien W, Hu CH, Fang JY. LASERS AND MICRODERMABRASION ENHANCE AND CONTROL TOPICAL DELIVERY OF VITAMIN C. *J Invest Dermatol.* 2003 Nov;121(5):1118-25.
16. Gaspar, A., Gasti, G. A., & Medicine, A. (2013). TIGHTENING OF FACIAL SKIN USING INTRAORAL 2940 NM ER:YAG SMOOTH MODE. 2013(2), 17-20.

BIBLIOGRAPHIC REFERENCES

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1. Gaviria JE, Lans L JA. LASER VAGINAL THIGHTENING (LVT) - EVALUATION OF A NOVEL NONINVASIVE LASER TREATMENT FOR VAGINAL RELAXATION SYNDROME. J LASER and health Academy. 2012, 1 59-66.
2. Vizintin Z et al. NOVEL MINIMALLY INVASIVE VSP ER: YAG LASER TREATMENTS IN GYNECOLOGY. J Laser and health Academy. 2012, 1 46-58.
3. Gaspar A, Brandi H; Gomez V, Luque D. EFFICACY OF ERBIUM:YAG LASER TREATMENT COMPARED TO TOPICAL ESTRIOL TREATMENT FOR SYMPTOMS OF GENITOURINARY SYNDROME OF MENOPAUSE. LASERs Surg Med; 2016 Aug 22.
4. Fistonc N et al. MINIMALLY INVASIVE, NON-ABLATIVE ER:YAG LASER TREATMENT OF STRESS URINARY INCONTINENCE IN WOMEN - A PILOT STUDY. LASERs Med Sci; 31(4): 635-43, 2016 May.
5. Escribano T. TRATAMIENTO DEL SÍNDROME GENITOURINARIO DE LA MENOPAUSIA ME-DIANTE LÁSER FRACCIONADO CO2: UNA OP-CIÓN TERAPÉUTICA EMERGENTE. Rev Chil Obstet Ginecol; 81(2): 138-151, abr. 2016.

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