

# FotonaSmooth<sup>®</sup>

REVOLUTIONARY LASER FOR VAGINAL HEALTH



Fotona<sup>®</sup>  
choose perfection

# FotonaSmooth®: In-Office Based Non-Invasive Laser Therapy for Vaginal Health

## Pelvic floor dysfunction

Symptoms of age- and childbirth-related pelvic floor dysfunction, such as urinary incontinence and pelvic floor prolapse, affect hundreds of millions of women worldwide.

- 60-80% of women over 50 will experience atrophy in their lifetime
- 40% of women suffer from some form of urinary incontinence
- Almost 50% of parous women suffer from some degree of pelvic organ prolapse

Conservative treatments such as pelvic floor muscle therapy (Kegel exercises) often fail because of patients' lack of compliance. Surgical options, although effective, suffer from a high rate of adverse effects and are typically a patient's last resort.

## Revolutionary non-surgical laser treatment

Connective tissue in the vaginal walls is an important factor in pelvic organ support. Symptoms of pelvic floor dysfunction mainly arise from laxity in the vagina or its supporting ligaments, due to increasing age and vaginal childbirth.

Fotona's SMOOTH™ is a non-invasive non-ablative laser procedure for functional strengthening of connective tissue inside the vaginal wall, improving the pelvic floor support and diminishing symptoms of pelvic floor dysfunction.

## What is SMOOTH™ mode?

SMOOTH™ gynecological procedures are based on the discovery that the delivery of an optimal sequence of heat pulses to the vaginal mucosa results in strengthening and rejuvenation of the vaginal wall. FotonaSmooth® is a gynecological laser system developed specifically for performing SMOOTH™ treatments.

### FOTONA'S SMOOTH™ TREATMENTS INCLUDE:

**IncontiLase®** – Stress Urinary Incontinence

**IntimaLase®** – Vaginal Relaxation Syndrome

**RenovaLase®** – Vaginal Atrophy / Genitourinary Syndrome of Menopause

**ProlapLase®** – Pelvic Organ Prolapse

### SIMPLE AND QUICK

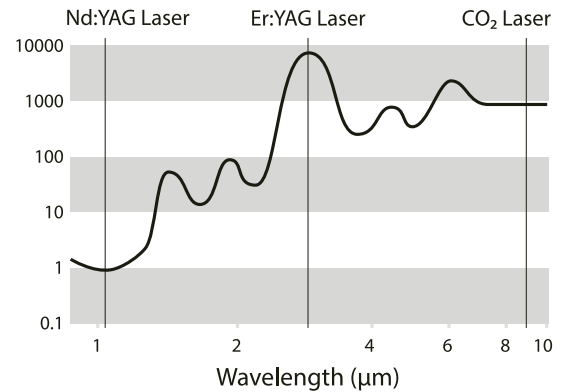
- Ambulatory procedures
- 20-30 minutes/treatment

### PATIENT FRIENDLY

- No anesthesia
- No downtime
- High patient satisfaction

# Optimal Er:YAG laser wavelength

FotonaSmooth® operates at the optimal infrared Er:YAG laser wavelength (2.94  $\mu\text{m}$ ) that coincides with the maximal absorption peak of the mucosal tissue. This ensures that the laser light is delivered to the tissue in a controlled superficial manner without the risk of affecting deeper-lying structures.

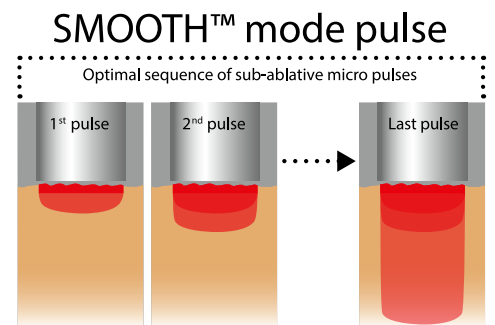


The Er:YAG wavelength sits at the highest peak of the absorption spectrum of water and is therefore completely absorbed within a few microns of mucosal tissue.

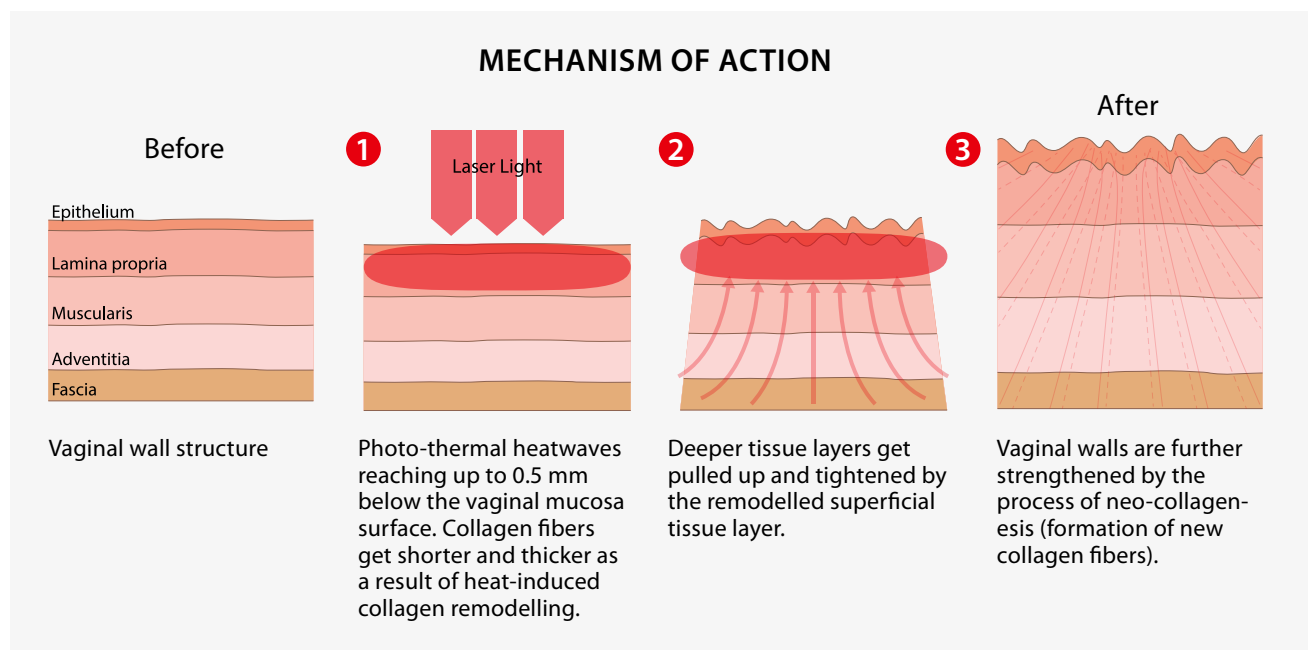
## Unique SMOOTH™ mode

FotonaSmooth® delivers patented sequential Er:YAG SMOOTH™ mode laser pulses to the vaginal wall mucosa, generating controlled and optimal distribution of heat within the tissue, enabling collagen remodelling and neo-collagenesis.

The 2.94  $\mu\text{m}$  wavelength, in conjunction with its patented SMOOTH™ mode delivery, allows for a highly controlled, safe procedure with no impact to any critical structures, including any penetration or disruption of the mucosal lining.



Unique sequential SMOOTH™ mode Er:YAG laser pulses generate an optimal structure of heat waves.



# FotonaSmooth® – Non-surgical Er:YAG Laser for Vaginal and Pelvic Floor Health

## Patient and physician-friendly

- Simple, fast in-office procedure
- Outstanding results, peer-reviewed
- No anesthesia required, non-ablative
- Minimal discomfort or downtime
- Excellent return on investment
- Multiple additional applications



Er:YAG treatments



Nd:YAG treatments

## Easy to use

- Large touchscreen with intuitive graphical user interface
- Easily accessible presets for all applications
- Lightweight, ergonomic articulated-arm delivery system



# Tools for gynecological treatments

## G-SET™ – INTRAVAGINAL ACCESSORY SET



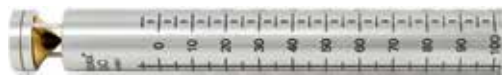
R11 full-beam titanium handpiece



PS03 patterned titanium handpiece



**IncontiLase® and ProlapLase® treatment:**  
90° angular golden mirror titanium adapter



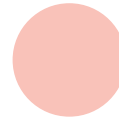
**IntimaLase®, RenovaLase® and ProlapLase® treatment:** 360° circular golden mirror titanium adapter



SClear speculum



Wired laser speculum



### FULL-BEAM AND PATTERNED HANDPIECES



- Zoom optics with spot sizes from 2-7 mm offers a wide range of treatments
- Collimated beam enables precise delivery of laser energy
- Titanium technology ensures robustness and durability
- Additional handpiece options for cervical treatments and soft tissue cutting



## G-RUNNER – FOR AUTOMATED OPERATION



- Automatic delivery of laser energy to the vaginal canal
- Improvement in accuracy and precision of laser delivery – more homogenous coverage of vaginal mucosa - better results!
- Optimized treatment time
- Increased comfort and convenience for the operator

G-Runner™ - Fotona's proprietary scanning technology

# Wide Range of Treatments

FotonaSmooth® is more than a SMOOTH laser

## Additional non-surgical Er:YAG gynecological procedures

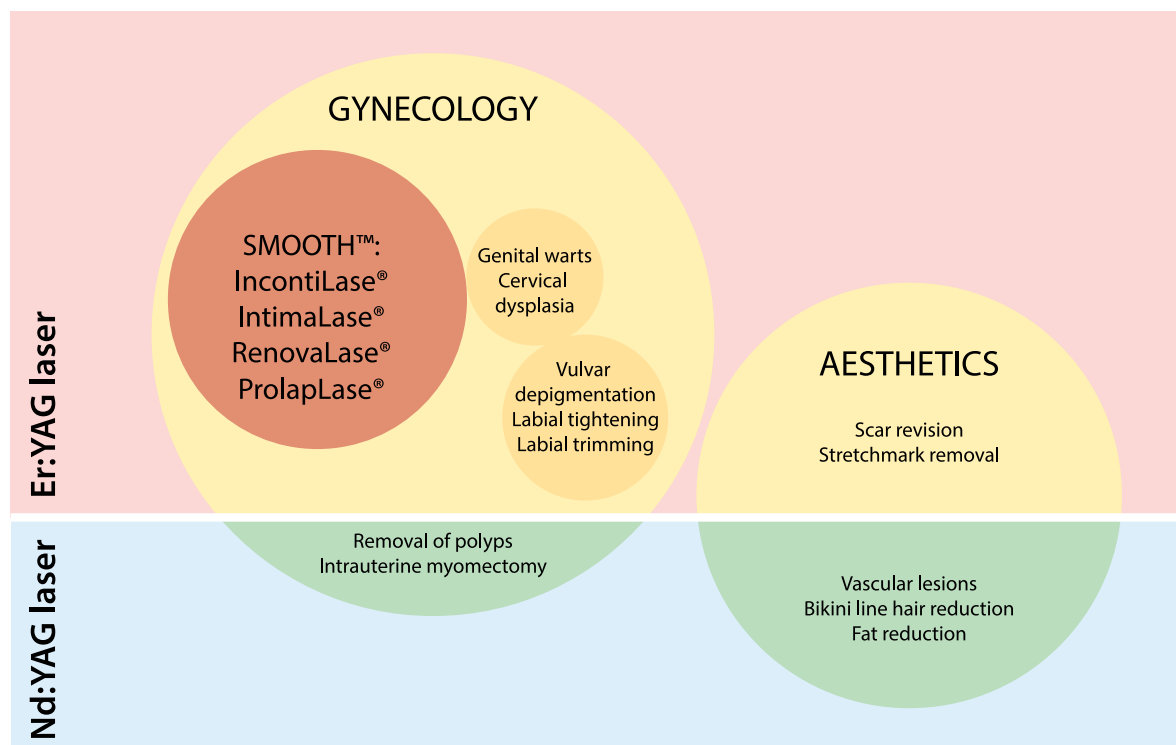
The Er:YAG laser incorporated in FotonaSmooth® allows the user to perform other non-surgical treatments, such as:

- Vulvar depigmentation
- Labial and vulvar tightening

## Surgical Er:YAG gynecological procedures

In addition, FotonaSmooth® can also be used for various surgical gynecological procedures, such as:

- Genital warts removal
- Cervical dysplasia vaporisation
- Labial trimming





# Expand your practice

## Additional Nd:YAG wavelength

FotonaSmooth® capabilities can be expanded with an additional Nd:YAG laser source. The Nd:YAG laser wavelength of 1064 µm exhibits the most homogeneous absorption in human tissue and thus represents a complementary wavelength to the Er:YAG wavelength with the shortest penetration depth in human tissue. Together, these golden-standard wavelengths are well suited for handling an exceptionally wide range of aesthetic and clinical procedures.

## Key aesthetic treatments

### Er:YAG

Skin resurfacing, stretchmarks  
Scar revisions  
Lesions removal  
Acne scar treatments

### Nd:YAG

Vascular lesion removal  
Removal of unwanted hair  
Wrinkle reduction  
Active acne treatments

## Fotona Er:YAG and Nd:YAG laser system models

		Er:YAG GYNECOLOGY	Nd:YAG GYNECOLOGY	Er:YAG AESTHETICS	Nd:YAG AESTHETICS
<b>GYNECOLOGY MODELS</b>					
FotonaSmooth® XS	20 W Er:YAG	YES	NO	Optional	NO
FotonaSmooth® SP	20 W Er:YAG 30 W Nd:YAG	YES	YES	Optional	Optional
FotonaSmooth® SP+	20 W Er:YAG 80 W Nd:YAG	YES	YES	Optional	Optional
<b>GENERAL USE MODELS</b>					
XS Dynamis®	20 W Er:YAG	Optional	NO	YES	NO
SP Spectro®	20 W Er:YAG 30 W Nd:YAG	Optional	Optional	YES	YES
SP Dynamis®	20 W Er:YAG 80 W Nd:YAG	Optional	Optional	YES	YES

# FotonaSmooth® treatments

1

## IncontiLase®

A minimally invasive solution for stress urinary incontinence

### How does IncontiLase® work?

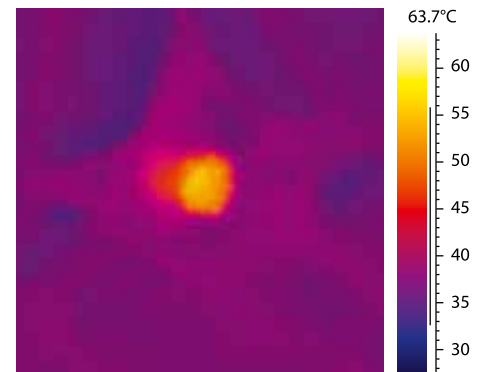
- Fotona's 2.94 µm Er:YAG non-ablative laser with proprietary SMOOTH™ mode technology
- Improves urethral support by photothermal strengthening of the vaginal wall
- Works on connective tissue in the vaginal mucosa with emphasis on the anterior vaginal wall



Fotona SMOOTH™ mode treatment of the anterior vaginal wall

### WHO IS ELIGIBLE FOR INCONTILASE®?

- The treatment works best in mild and moderate stress urinary incontinence patients, with very good results in severe stress urinary incontinence as well
- Mixed incontinence patients get relief in stress symptoms

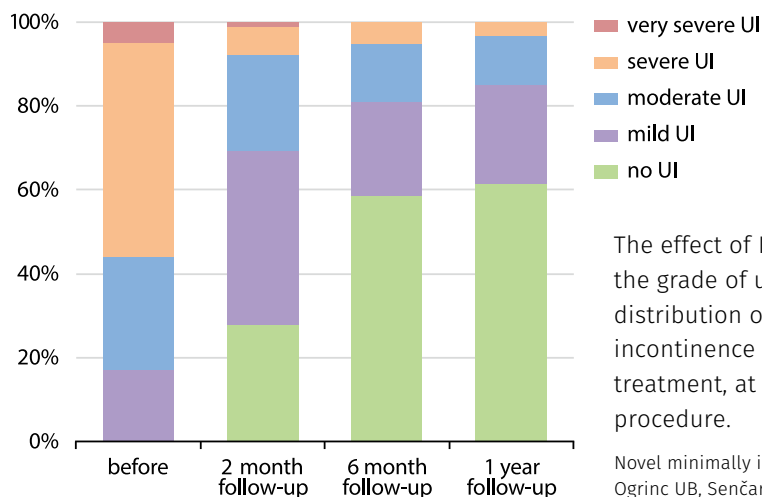


Thermal camera images of the introitus show that SMOOTH™ pulses achieve the optimal peak temperature range (60-65°C) for collagen remodelling and initiation of neo-collagenesis.

Tissue \ Invasiveness	Non invasive methods	Invasive methods
Pelvic floor muscles	Kegel exercises Vaginal cones Electrostimulation	Surgical repair
Connective tissues	<b>IncontiLase®</b>	Anterior repair Sling procedures (TVT, TOT)



# IncontiLase® treatment

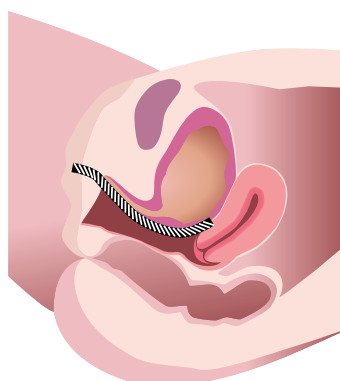


One year after the treatment, significantly improved continence was reported in 77% of SUI patients.

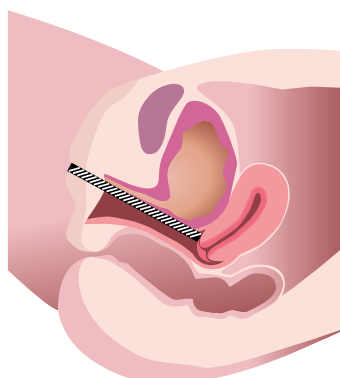
Data presented in Lasers Surg Med. 47(9):689-97.

The effect of IncontiLase® therapy on the improvement of the grade of urinary incontinence (UI). Figure shows the distribution of patients (in %) with regard to the grade of incontinence (mild, moderate, severe, very severe) before treatment, at 2 months, 6 months and 1 year after the procedure.

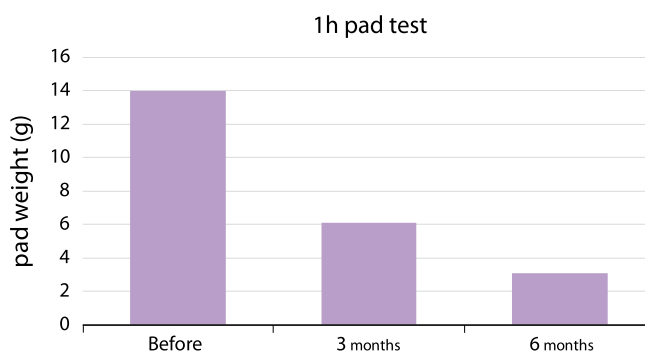
Novel minimally invasive laser treatment of urinary incontinence in women. Ogrinc UB, Senčar S, Lenasi H. Lasers Surg Med., 2015: 47(9): 689-97.



Mild and moderate stress and mixed urinary incontinence



After IncontiLase® treatment



IncontiLase® treatment significantly reduced leakage quantity measured by 1h pad test.

Tien, Yi-Wen, et al. "Effects of laser procedure for female urodynamic stress incontinence on pad weight, urodynamics, and sexual function." International urogynecology journal 28.3 (2017): 469-476.



One year following the IncontiLase® treatment, we found significant improvement in 77% of patients diagnosed with SUI.

Dr Sabina Senčar



Apart from non-invasiveness, the main advantage of IncontiLase® over surgery is that it can be applied as an ambulatory procedure, which means a lower economic burden.

Dr Urska Bizjak Ogrinc

Ogrinc UB, Senčar S, Lenasi H. Novel minimally invasive laser treatment of urinary incontinence in women. Lasers Surg Med. 47(9): 689-97.

# FotonaSmooth® treatments

## 2

## IntimaLase®

### A true incisionless laser treatment for vaginal relaxation syndrome

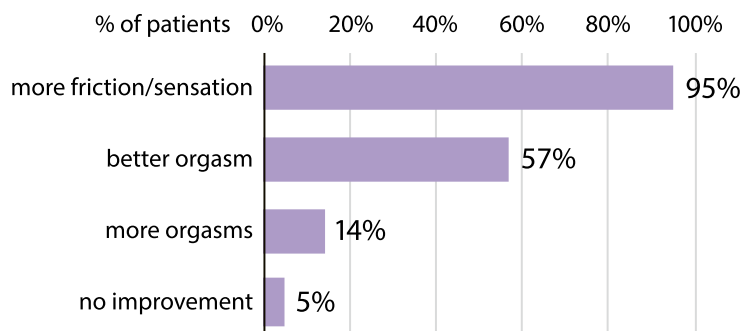
#### How does IntimaLase® work?

- Photothermally tightens the vaginal canal
- Mechanism of action is based on shrinking and thickening of the connective tissue in the vaginal wall

#### WHO IS ELIGIBLE FOR INTIMALASE®?

- Women with increased vaginal laxity due to childbirth and/or ageing

#### IntimaLase® treatment



95% of patients reported an improvement of sexual gratification.

Patients' assessment of sexual gratification improvement after IntimaLase® treatment. Data presented in J. LA&HA, 2012(1); 46-58.

Patients' assessment of sexual gratification improvement after IntimaLase® treatment.

Gaviria J, Lanz J. Laser Vaginal Tightening (LVT) – evaluation of a novel noninvasive laser treatment for vaginal relaxation syndrome. LAHA Journal of Laser and Health Academy, 2012(1); 46-58.



IntimaLase® treatment



95% of my patients assess vaginal tightness and sexual gratification as strongly or moderately improved after IntimaLase® treatment.

Dr Jorge Gaviria

Gaviria J, Lanz J. Laser Vaginal Tightening (LVT) – evaluation of a novel noninvasive laser treatment for vaginal relaxation syndrome. LAHA Journal of Laser and Health Academy, 2012(1); 46-58.

# 3

## ProlapLase® Er:YAG SMOOTH™ mode laser treatment for pelvic organ prolapse

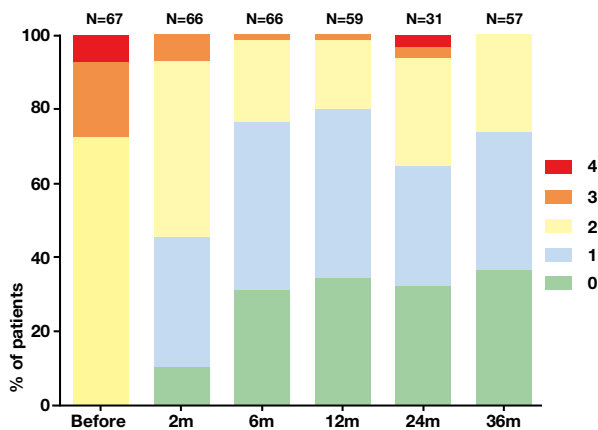
### How does ProlapLase® work?

- Photothermal tightening of the tissue and contraction of the vaginal canal stimulating collagen remodeling and the synthesis of new collagen fibers
- A safe and non-invasive alternative to traditional methods
- Incisionless and virtually painless, with no cutting, bleeding or sutures
- Suitable also for higher grade prolapse

### WHO IS ELIGIBLE FOR PROLAPLASE®?

- Women suffering from pelvic organ prolapse

### ProlapLase® treatment



Pelvic organ prolapse



After ProlapLase® treatment

The effect of ProlapLase® on cystocele grade distribution at baseline and follow-ups. The figure shows the effects of 2-7 laser treatments on 67 patients over a period of 3 years.

Erbium:YAG laser treatment of pelvic organ prolapses: 3 years follow-up. Sencar S., Bizjak-Ogrinc U., Vizintin

Significant reduction of average pelvic organ prolapse (POP) grade was already observed after the first treatment session. POP grade reduction continued to improve with additional treatments.

Data presented at IMS: 15<sup>th</sup> World Congress on Menopause.



Dr Urska Bizjak Ogrinc



Dr Sabina Sencar

*"In most of the patients the improvement occurred after the first treatment, with patients reporting better prolapse containment inside of the vaginal canal and less frequent occurrence of the prolapse falling out of vaginal canal."*

Bizjak Obrinc U, Sencar S; Non-ablative laser treatment of cystocele. It. J. Gynaecol. Obstet. 2017, 29: N. 120

# 4

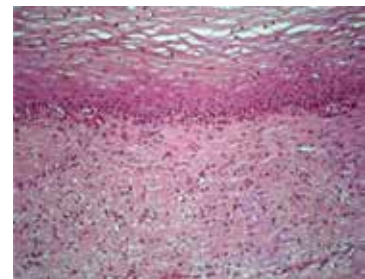
## RenovaLase® Gentle laser treatment of vaginal atrophy / genitourinary syndrome of menopause - GSM

### How does RenovaLase® work?

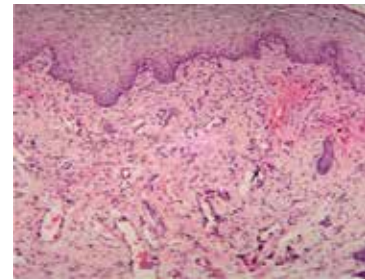
- Non-ablative gentle photothermal treatment of the vaginal canal using very low energies that cause mild hyperthermia and induce microvascularisation and tissue regeneration without shrinking the collagen
- Restores normal vaginal mucosa structure and function
- Eliminates the need for long-term estrogen treatment

### WHO IS ELIGIBLE FOR RENOVALASE®?

- Women suffering from vaginal atrophy symptoms such as vaginal dryness, irritation and dyspareunia



Atrophied vaginal mucosa



Vaginal mucosa after RenovaLase® treatment

Courtesy of Dr. Gaspar



*RenovaLase® treatment induces a significant improvement of genitourinary syndrome of menopause, including vaginal dryness and dyspareunia. Additionally, this treatment can be proposed in postmenopausal women who cannot be treated with hormones.*

Dr Marco Gambacciani

Gambacciani M, Levancini M, Cervigni M. Vaginal erbium laser: the second-generation thermotherapy for the genitourinary syndrome of menopause. Climacteric. 2015, 18(5):757-763.

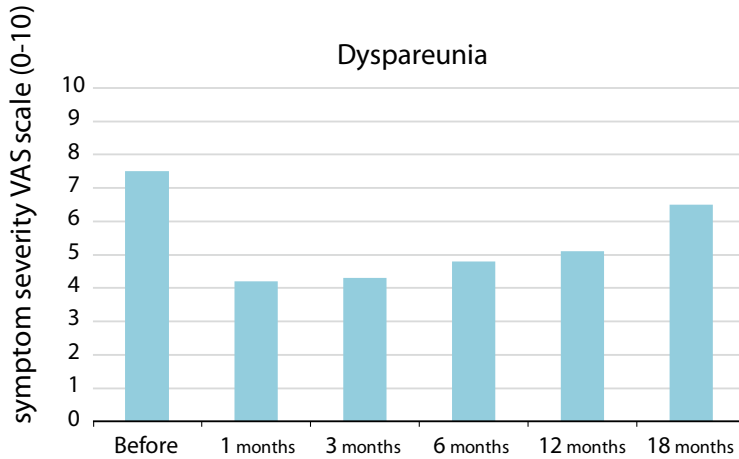


*We observed significant improvement of symptoms and also regeneration of normal mucosal structure. Better and more lasting results compared to local estriol therapy.*

Dr Adrian Gaspar

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. 2017, 49(2):160-168.

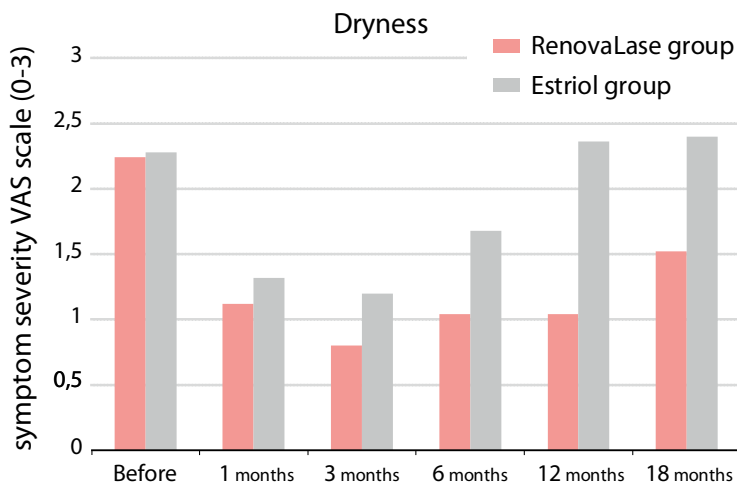
# RenovaLase® treatment



RenovaLase® significantly decreased the severity of dyspareunia in breast cancer survivors suffering from GSM, the effect lasting more than 12 months after treatment.

RenovaLase® significantly improves GSM symptoms, including vaginal dryness and dyspareunia, in breast cancer survivors.

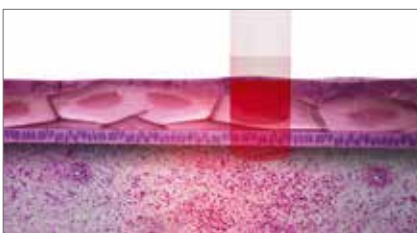
Gambacciani, Marco, and Marco Levancini. "Vaginal erbium laser as second-generation thermotherapy for the genitourinary syndrome of menopause: a pilot study in breast cancer survivors." *Menopause* 24.3 (2017): 316-319.



RenovaLase® had a significantly better effectiveness in relieving GSM symptoms.

Comparison between RenovaLase® treatment and local estriol on severity of vaginal dryness up to 18 months after treatments.

Gaspar, Adrian, et al. "Efficacy of Erbium: YAG laser treatment compared to topical estriol treatment for symptoms of genitourinary syndrome of menopause." *Lasers in surgery and medicine* 49.2 (2017): 160-168.



Non-ablative gentle photothermal treatment of the vaginal canal using mild hyperthermia via SMOOTH™ mode.



Enhanced synthesis of new proteoglycan and hyaluronic acid molecules, which improves tissue water content and collagen structure.



The result is improved vascularisation and trophism of the vaginal wall and restored normal structure and function of the vaginal mucosa.



# Scientifically proven results

## Scientific research using FotonaSmooth®

### STRESS URINARY INCONTINENCE

*Effects of laser procedure for female urodynamic stress incontinence on pad weight, urodynamics, and sexual function. Tien YW, Hsiao SM, Lee CN, Lin HH. International Urogynecology Journal, 2017, 28(3):469-76.*

*Treatment of female stress urinary incontinence with Erbium-YAG laser in non-ablative mode. Pardo JJ, Solà VR, Morales AA. Eur J Obstet Gynecol Reprod Biol. 2016 Sep;204:1-4.*

*Patient Satisfaction with Vaginal Erbium Laser Treatment of Stress Urinary Incontinence, Vaginal Relaxation Syndrome and Genitourinary Syndrome of Menopause. Barber MA, Eguiluz I. LAHA Journal of the Laser Health Academy, 2016(1):18-23.*

*Minimally invasive, non-ablative Er:YAG laser treatment of stress urinary incontinence in women – a pilot study. Fistonc N, Fistonc I, Findri Gustek S, Sorta Bilajac Turina I, Franic D, Vizintin Z, Kazic M, Hreljac I, Perhavec T, Lukac M. Lasers in Medical Science, 2016: vol. 31 (4) pp 635-43.*

*Novel minimally invasive laser treatment of urinary incontinence in women. Ogrinc UB, Senčar S, Lenasi H. Lasers Surg Med., 2015: 47(9): 689-97.*

*Vaginal erbium laser: the second-generation thermotherapy for the genitourinary syndrome of menopause. Gambacciani M, Levancini M, Cervigni M. Climacteric. 2015, 18(5):757-763.*

*Minimal Invasive Laser Treatment for Female Stress Urinary Incontinence. Khalafalla MM, Elbiaa AM, Abdelazim IA, Hussain M (2015). Obst&Gyn Int. Journal, 2015, 2(2) 00035.*

*First assessment of short-term efficacy of Er:YAG laser treatment on stress urinary incontinence in women: prospective cohort study. Fistonc N, Fistonc I, Lukanovic A, Guštek ŠF, Turina IS, Franić D. Climacteric. 2015 Oct;18 Suppl 1:37-42.*

*Minimally invasive laser procedure for early stages of stress urinary incontinence (SUI). Fistonc I, Findri-Gušteš Š, Fistonc N. LAHA Journal of Laser and Health Academy, 2012(1): 67-74.*

*Novel Minimally Invasive VSP Er:YAG Laser Treatments in Gynecology. Vizintin Z, Rivera M, Fistonc I, Saracoğlu F, Guimares P, Gaviria J, Garcia V, Lukac M, Perhavec T, Marini L, LAHA Journal of Laser and Health Academy, 2012(1): 46-58.*

### VULVOVAGINAL ATROPHY / GENITOURINARY SYNDROME OF MENOPAUSE

*Vaginal erbium laser as second-generation thermotherapy for the genitourinary syndrome of menopause: a pilot study in breast cancer survivors. Gambacciani M, Levancini M. Menopause, 2017, 24(3):316-319.*

*Efficacy of Erbium:YAG laser treatment compared to topical estriol treatment for symptoms of genitourinary syndrome of menopause. Gaspar A, Brandi H, Gomez V, Luque D. Lasers Surg Med. 2017, 49(2):160-168.*

*Treatment of Genitourinary Syndrome of Menopause with Erbium:YAG Laser: A Prospective Study of Efficacy and Safety of the Treatment for Women after Menopause of Natural Origin and Therapy-Induced Menopause in Breast Cancer Survivors. Bojanini JF. LAHA Journal of the Laser Health Academy, 2016(1):35-40.*

*Vaginal erbium laser: the second-generation thermotherapy for the genitourinary syndrome of menopause. Gambacciani M, Levancini M, Cervigni M. Climacteric. 2015, 18(5):757-763.*

*Vaginal Erbium Laser: the Second Generation Thermotherapy for the Genitourinary Syndrome of Menopause (GSM) in Breast Cancer Survivors. A preliminary report of a pilot study. Gambacciani M, Levancini M. It. J. Gynaecol. Obstet. 2015, 27: 9-11.*

*Short-term effect of vaginal erbium laser on the genitourinary syndrome of menopause. Gambacciani M, Levancini M. Minerva Ginecol. 2015 Apr;67(2):97-102.*

*Laser Treatment of Vaginal Atrophy in Post-menopause and Post-gynecological Cancer Patients. Bojanini JF, Mejia AM. J. LA&HA, Vol. 2014, No.1; pp.65-71.*

### VAGINAL RELAXATION SYNDROME

*Laser Vaginal Tightening with Non-ablative Er:YAG for Vaginal Relaxation Syndrome. Evaluation of Patient Satisfaction. Pardo JJ, Solà Dalenz V. LAHA Journal of the Laser Health Academy, 2016(1):12-17.*

*Up to 3-Year Follow-up of Patients with Vaginal Relaxation Syndrome Participating in Laser Vaginal Tightening. Gaviria J, Korosec B, Fernandez J, Montero G. LAHA Journal of the Laser Health Academy, 2016(1):6-11.*

*Laser Vaginal Tightening (LVT) – evaluation of a novel noninvasive laser treatment for vaginal relaxation syndrome. Gaviria J, Lanz J. LAHA Journal of Laser and Health Academy, 2012(1): 46-58.*

*Novel Minimally Invasive VSP Er:YAG Laser Treatments in Gynecology. Vizintin Z, Rivera M, Fistonc I, Saracoğlu F, Guimares P, Gaviria J, Garcia V, Lukac M, Perhavec T, Marini L, LAHA Journal of Laser and Health Academy, 2012(1): 46-58.*

### PELVIC ORGAN PROLAPSE

*Non-ablative vaginal erbium YAG laser for the treatment of cystocele. Bizjak Ogrinc U, Sencar S. It. J. Gynaecol. Obstet. 2017, 29:19-25.*

*Laser Treatment of Higher Grade Cystocele. Bizjak Ogrinc U, Sencar S. LAHA Journal of the Laser and Health Academy, 2013 (1): S22.*

*Erbium Laser in Gynecology. Vizintin Z, Lukac M, Kazic M, Tettamanti M. Climacteric. 2015, 18(1):4-8.*



# Training & Education

## Regular clinical workshops – make a SMOOTH start!

### Comprehensive workshops

Training is provided in cooperation with the Laser and Health Academy under the guidance of experts in medical laser technology.

The extensive workshops, where participants engage in live demonstrations and gain in-depth understanding of laser physics and laser tissue interaction, provide the needed insight into the fundamentals of non-invasive gynecological treatments and other procedures that can be performed with the FotonaSmooth® system.



### Fotona and the Laser & Health Academy

Fotona has partnered with the Laser & Health Academy (LA&HA) to help support the professional growth of medical practitioners. To get the most out of your Fotona laser system, our practitioner workshops, co-organized with LA&HA ([www.laserandhealth.com](http://www.laserandhealth.com)), provide hands-on demonstrations of our lasers by international clinical experts.



#### ANNUAL INTERNATIONAL LASER & HEALTH ACADEMY SYMPOSIUM

- Attended by several hundred physicians every year
- Newest research and treatments in different fields of laser medicine, including gynecology
- For more information, contact [info@laserandhealth.com](mailto:info@laserandhealth.com)

#### THE WORKSHOPS COVER:

- Laser safety and physics
- Laser-tissue interaction
- Extensive theoretical and hands-on application training
- A visit to a clinic for live patient demonstrations



since 1964

A world map with a light gray background. Red dots are scattered across the map, representing data points. There are several large, thin red circles overlaid on the map, centered in North America, Europe, and Asia, suggesting a global network or coverage area. The dots are more densely clustered in North America, Europe, and Asia, with fewer dots in South America, Africa, and Australia.

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Changshu City, Jiangsu Province  
CHINA. 215515

	<b>VISIBLE AND INVISIBLE LASER RADIATION</b>			
	<b>AVOID EYE OR SKIN EXPOSURE</b>			
	<b>TO DIRECT OR SCATTERED RADIATION</b>			
	<b>CLASS II LASER PRODUCT</b>			
MAXIMUM RMS OUTPUT	5 mW	500	1000	1000
PULSE DURATION	0.1-100	0.1-100	0.1-100	0.1-100