

Trattamento laser dell'atrofia genitale

Dott. Maurizio Filippini

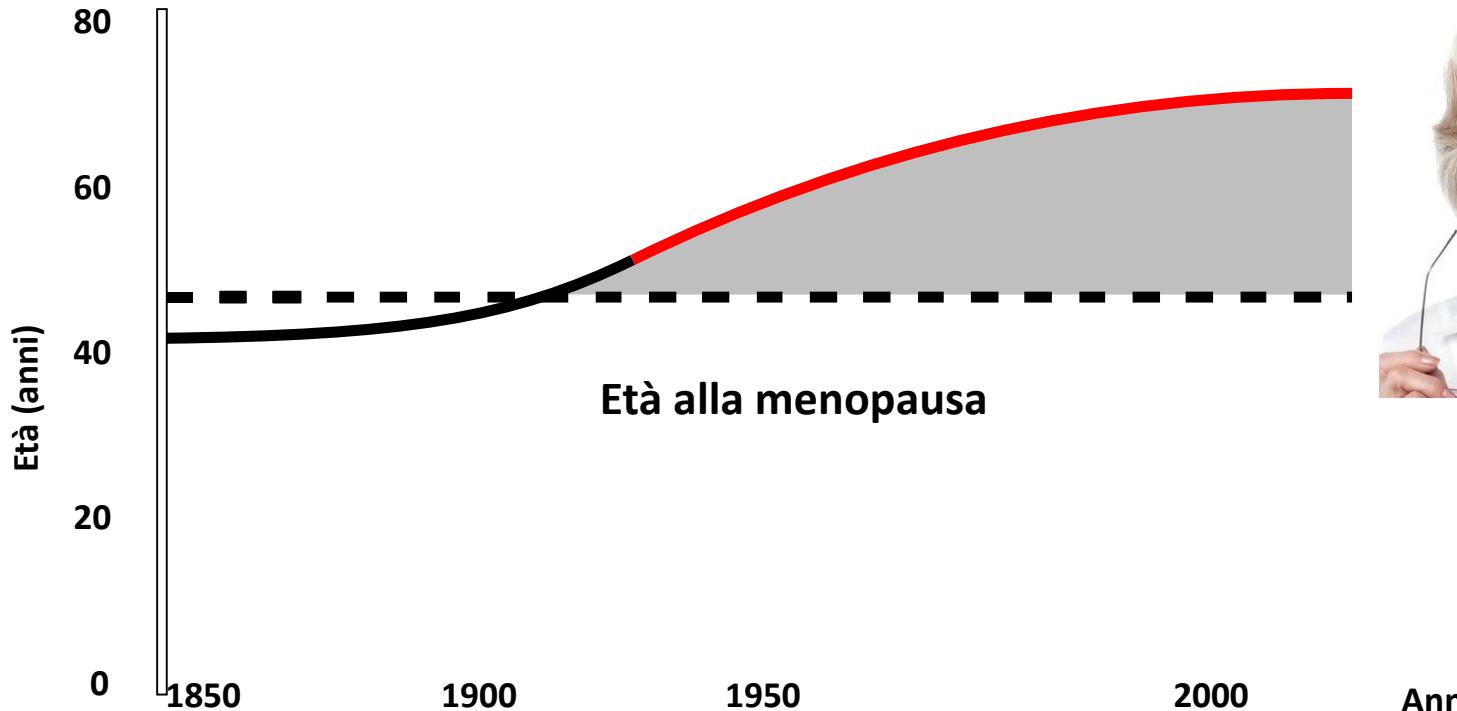
Responsabile del Modulo Funzionale di Endoscopia Ginecologica
Ospedale di Stato
della Repubblica di San Marino





ATROFIA VAGINALE UN PROBLEMA MONDIALE

Soules et al. *J Am Geriatr Soc.* 30:548,1982.



> 65 years
1999: 37 mln
2030: 70 mln

> 80 years
1999: 9.3 mln
2030: 25 mln

U.S. Census Bureau,
Census of Population and Housing 2010,
Yancik R.
Cancer 2010

ATTUALMENTE LE DONNE VIVONO UN TERZO DELLA LORO VITA IN POST-MENOPAUSA

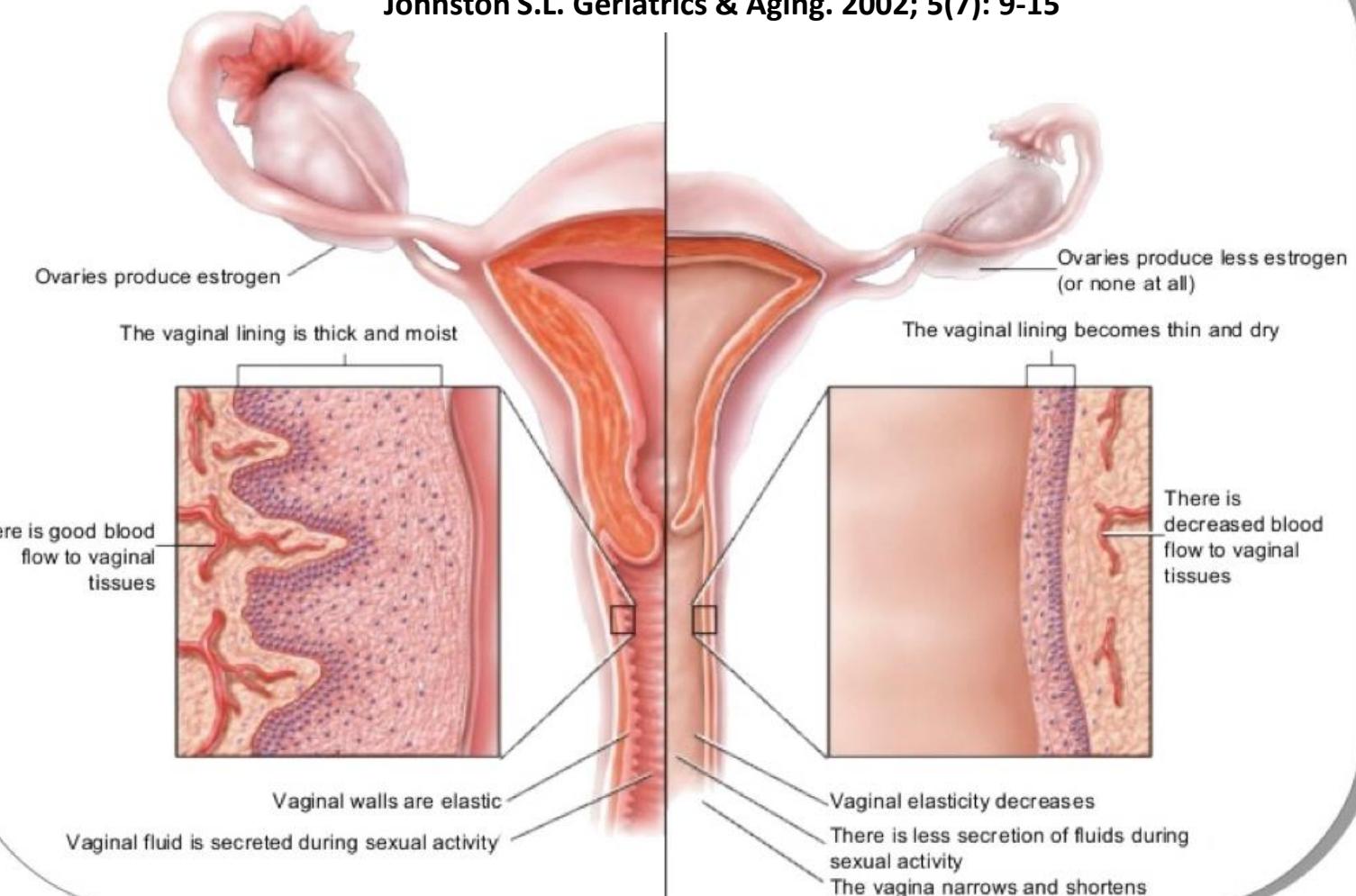




Vaginal environment before menopause

Vaginal environment after estrogen loss

Johnston S.L. Geriatrics & Aging. 2002; 5(7): 9-15





SPERIMENTAZIONE NEL 2010 - PRIMI STUDI NEL 2011

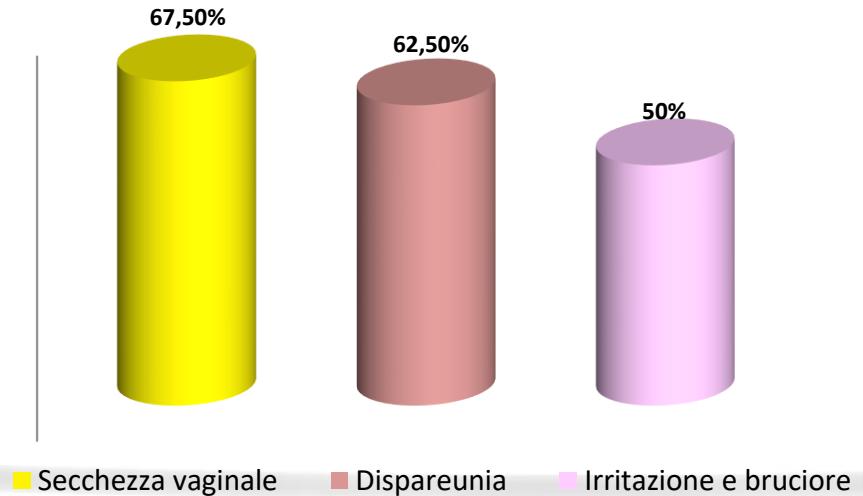


Adrian Gaspar , MD; Gabriel Addamo , MD; Hugo Brandi , PhD
Vaginal Fractional CO₂ Laser: A Minimally Invasive Option for Vaginal Rejuvenation
Am Journal Cosmetic Surgery:
September 2011, Vol. 28, No. 3, pp. 156-162.

Nel 2011 un gruppo di ginecologi dell'Università di Mendoza in Argentina pubblica un articolo su "The American Journal of Cosmetic Surgery" relativo all'esperienza, un protocollo preliminare (92 donne in menopausa dal dicembre 2009 al dicembre 2010)

Dai questionari di valutazione dello studio emersero importanti miglioramenti

- Secchezza vaginale (nel 67,5%)
- Dispareunia (nel 62,5%)
- Irritazione o bruciore (nel 50%)





CONFERMA ISTOLOGICA



Prof. Stefano Salvatore



Prof. Alberto Calligaro



La collaborazione con l'Ospedale IRCCS San Raffaele di Milano e l'Università di Pavia, conduce allo sviluppo di un apposito studio per valutare l'effetto del laser a CO₂ sulla mucosa vaginale

- **POTENZA DI USCITA (watt)**
- **TEMPO DI ESPOSIZIONE (msec)**
- **DISTANZA DEI SINGOLI PUNTI (Dot in mcm)**
- **LIVELLO DI PENETRAZIONE NEL TESSUTO (Stack)**
- **FLUENZA ENERGETICA COMPLESSIVA**

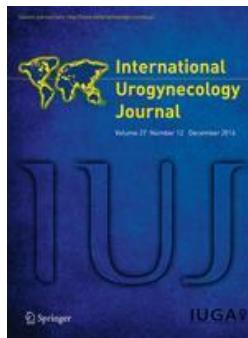




ASSIOMA FONDAMENTALE

*La terapia con laser
del basso tratto genitale femminile
non è un trattamento estetico...
ma funzionale*





[International Urogynecology Journal](#)

February 2015, Volume 26, [Issue 2](#), pp 163–164

Laser vaginal rejuvenation: not ready for prime time

Authors

Authors and affiliations

Anand Singh, Steven Swift, Vik Khullar, G. Alessandro Digesu



Int Urogynecol J (2015) 26:785

DOI 10.1007/s00192-015-2647-3

LETTER TO THE EDITOR

Laser vaginal rejuvenation: not ready for prime time—response to comments by Maggiore et al.

Alex Digesu



Maurizio Filippini - Ospedale di Stato della Repubblica di San Marino



NEL 2015 APPROVAZIONE E COLLABORAZIONE AOGOI

MonnaLisa Touch™

www.monnalisatouch.it - www.dekalaser.com - Maggio 2015 - N° 2

La procedura **MONNALISA TOUCH™** è approvata dall'associazione AOGOI.

IL PROFESSOR CHIANTERA
spiega la nascita di questa COLLABORAZIONE

MONNALISA TOUCH™ DIVENTA UNA OPZIONE TERAPEUTICA CONSIGLIATA DA AOGOI.

QUALI PECULIARITÀ AVETE RICONOSCIUTO DETERMINANTI PER AVVIARE QUESTA COLLABORAZIONE?

Durante la menopausa, con il cessare dell'attività ovarica, la donna deve affrontare un deficit di nutrimento da parte degli ormoni e le conseguenti problematiche.

La tecnica laser **MonnaLisa Touch™** ha senza alcun dubbio un validissimo effetto terapeutico, perché stimola la produzione di collagene, rimpicciolisce le pareti della vagina ed esercita un'azione di sostentamento del pavimento pelvico. Inoltre, questo innovativo laser ha un effetto esclusivamente locale stimolante e non presenta effetti collaterali, a differenza della tradizionale terapia a base di estrogeni.

Il trattamento è indicato anche per le donne giovani che, sottoposte a radio o chemioterapia dopo cure oncologiche, si trovano in una condizione di menopausa indotta.

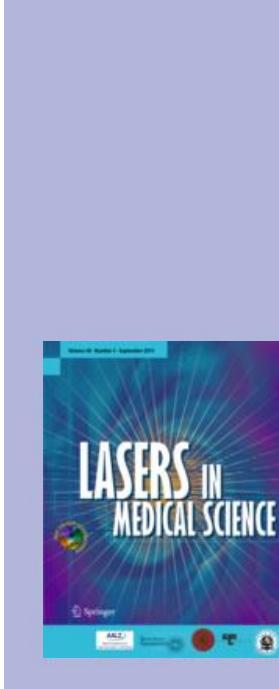
Procedura **MonnaLisa Touch™**
approvata dai Ginecologi Italiani

AOGOI
ASSOCIAZIONE
OSTETRICI GINECOLOGI
OSPEDALIERI ITALIANI





VALIDAZIONE ISTOLOGICA



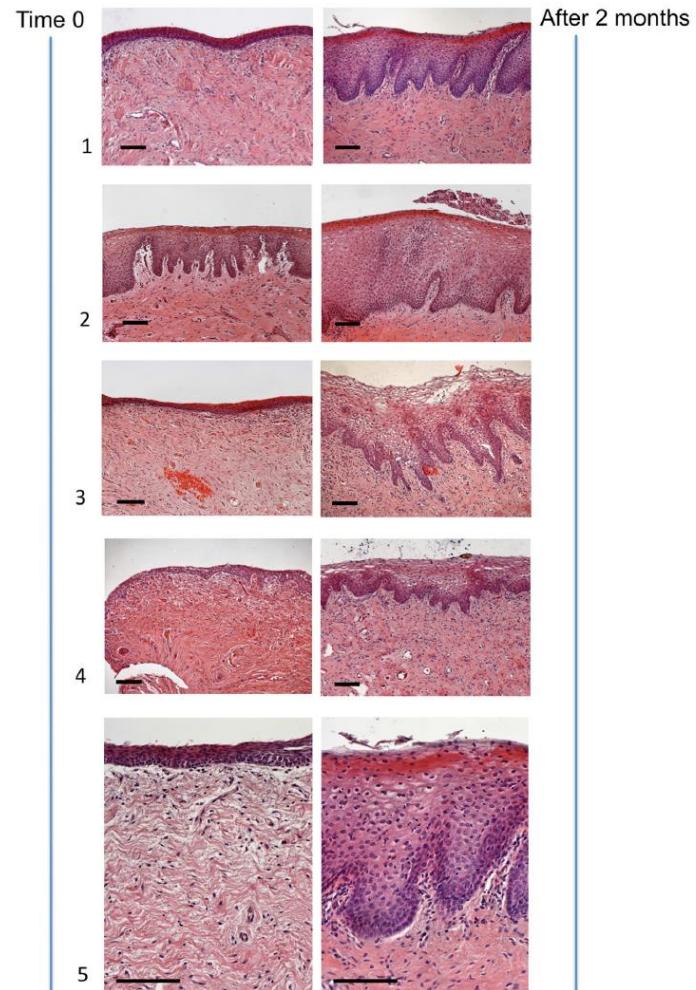
Lasers in Medical Science - Vol. 30, No. 1, 2015. Epub 2014 Nov 20

Microscopic and ultrastructural modifications of postmenopausal atrophic vaginal mucosa after fractional carbon dioxide laser treatment

Zerbinati N¹, Serati M¹, Origoni M², Candiani M², Iannitti T³,
Salvatore S², Marotta F⁴, Calligaro A⁵

1: University of Insubria, Varese – Italy. 2: San Raffaele Hospital, Milan – Italy. 3: University of Leeds, Leeds – United Kingdom.

4: ReGenera Research Group for Aging Intervention, Milan – Italy. 5: University of Pavia, Pavia – Italy.



Scale bars: 100 µm

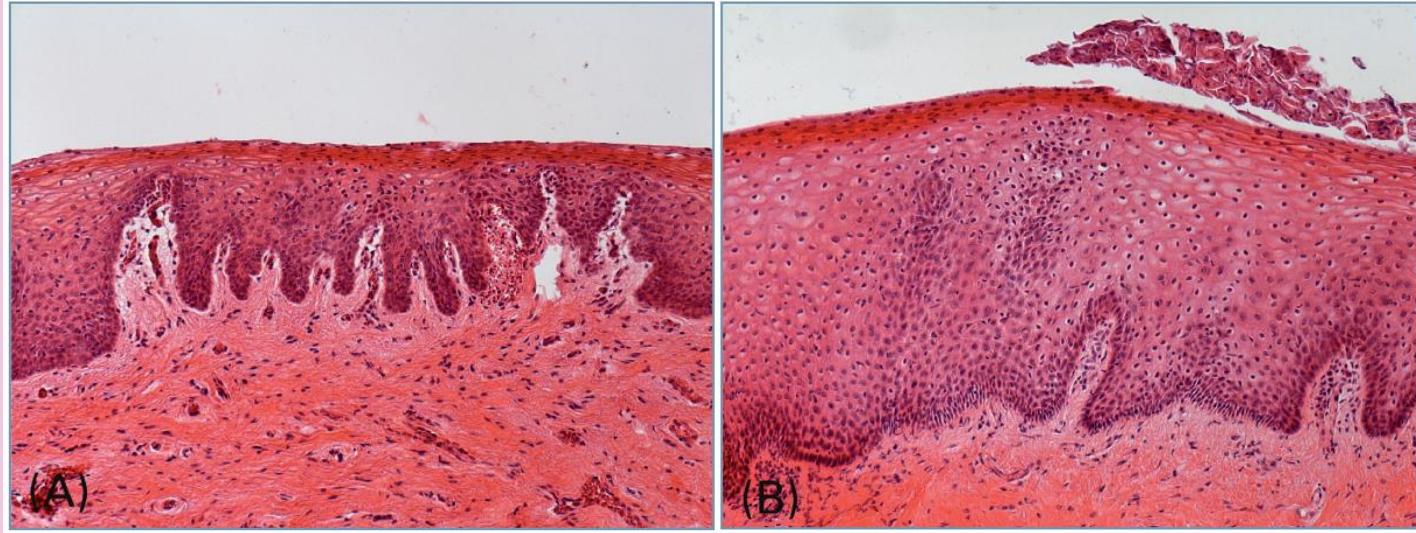




Menopause - Vol. 22, No.8, 2015
Histological study on the effects of microablative fractional CO₂ laser on atrophic vaginal tissue: an ex vivo study

Salvatore S¹, Leone Roberti Maggiore U¹, Athanasiou S², Origoni M¹, Candiani M¹, Calligaro A³, Zerbiniati N⁴

1: San Raffaele Hospital, Milan – Italy. 2: National and Kapodistrian University of Athens, Athens – Greece.
3: University of Pavia, Pavia – Italy. 4: University of Insubria, Varese – Italy.



Mucosa vaginale in condizione basale.

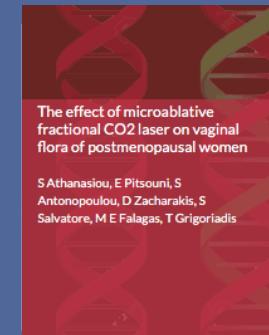
Mucosa vaginale a un mese da una seduta di trattamento laser

- 1. Epitelio vaginale aumentato di spessore, trofico ricco di vasi**
- 2. Matrice connettivale (fibre collagene e sostanza amorfa) aumentata con numerosi fibroblasti**
- 3. Distacco superficiale di cellule di grosse dimensioni, globose e ricche di glicogeno**
- 4. Glicogeno ben evidente nelle cellule epiteliali e in quantità maggiore rispetto alla condizione basale**
- 5. Le papille ben indentate con l'epitelio ed estese**
- 6. Non essendo mai gli epitelii vascolarizzati, assume un ruolo molto importante la matrice extraconnettivale**





MODIFICHE SUL PH VAGINALE

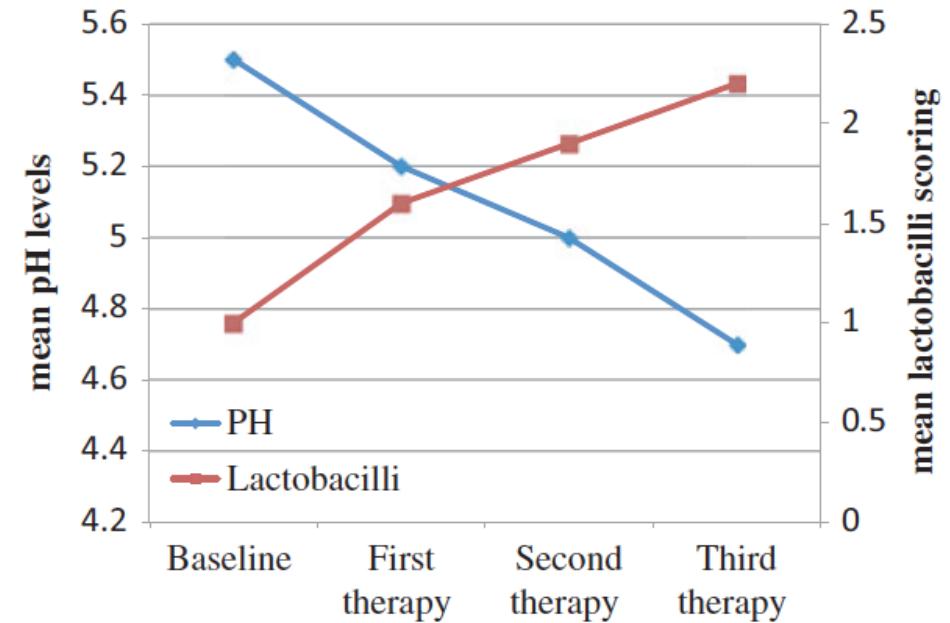


Climacteric – Vol. 19, No. 5, 2016. Epub 2016 Aug 2

The effect of microablative fractional CO₂ laser on vaginal flora of postmenopausal women

Athanasiou S¹, Pitsouni E^{1,2}, Antonopoulou S³, Zacharakis D¹,
Salvatore S⁴, Falagas ME^{2,5,6}, Grigoriadis T⁷

1: National and Kapodistrian University of Athens, Athens – Greece. 2: AIBS, Athens – Greece.
3: "G. Gennimatas" General Hospital, Athens – Greece. 4: San Raffaele Hospital, Milan – Italy. 5: IASO General Hospital, Athens – Greece.
6: Tufts University School of Medicine, Boston, MA – USA. 7: Alexandra Hospital', Athens - Greece.



53 donne con GSM

aumento Lactobacillus (p <0,001)
aumento flora normale (p <0,001)

Percentuale di Lactobacillus è cambiata
dal 30% iniziale al 79%





Maturitas - Vol. 94, 2016. Epub 2016 Sep 16

Microablative fractional CO₂-laser therapy and the genitourinary syndrome of menopause: An observational study

Pitsouni E¹, Grigoriadis T¹, Tsiveleka A², Zacharakis D¹, Salvatore S³, Athanasiou S¹

1: National and Kapodistrian University of Athens, Athens - Greece.

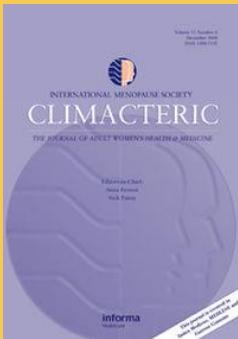
2: "Alexandra Hospital", Athens - Greece. 3: San Raffaele Hospital, Milan - Italy.

53 donne con GSM
Età media 57,2
Anni dalla menopausa 8,9

	Baseline (n=53) ^b	12 weeks follow-up (n=53) ^b	Mean of difference ± SD of difference (n=53) ^b
VMV ^a	11.7 ± 15.6	44.2 ± 13.7	32.4 ± 15.2
Parabasal epithelial cells ^a	74.6 ± 31.6	16.2 ± 23.9	-57.6 ± 29.9
Intermediate epithelial cells ^a	24.6 ± 31.7	80.0 ± 23.4	55.6 ± 30.6
Superficial epithelial cells ^a	0 ± 0	3.3 ± 4.9	3.3 ± 4.9
VHIS ^a	8.4 ± 2.5	20.1 ± 3.0	11.6 ± 2.9
Elasticity	1.6 ± 0.8	4.2 ± 0.9	2.6 ± 0.9
Fluid Volume	1.0 ± 0	3.1 ± 0.9	2.1 ± 0.9
pH	2.7 ± 1.1	4.2 ± 1.7	1.5 ± 1.0
Epithelial Integrity	1.3 ± 0.9	4.1 ± 1.7	2.8 ± 1.8
Moisture	1.8 ± 1.2	3.1 ± 0.9	2.7 ± 1.2

	Baseline ^a	12 weeks follow-up ^a	Mean of difference ± SD of difference
Dyspareunia	7.7 ± 2.5 (98)	2.3 ± 2.2 (71)	5.4 ± 2.6
Genital dryness	6.1 ± 3.1 (87)	1.7 ± 1.9 (53)	4.3 ± 2.9
Burning	1.3 ± 2.9 (22)	0.3 ± 0.9 (12)	1.1 ± 2.4
Itching	1.7 ± 3.2 (22)	0.3 ± 1.2 (8)	1.6 ± 3.1
Dysuria	0.9 ± 1.7 (34)	0.3 ± 0.7 (13)	0.7 ± 1.1
Total	7.4 ± 2.1	1.8 ± 1.8	5.6 ± 1.9
Pain during the insertion of the speculum	4.9 ± 2.6	1.5 ± 1.9	3.4 ± 2.7
FSFI			
Desire	2.4 ± 0.9	3.8 ± 1.0	1.5 ± 1.0
Arousal	2.1 ± 1.5	3.9 ± 0.9	1.7 ± 1.4
Lubrication	2.5 ± 1.9	4.5 ± 0.9	2.0 ± 1.6
Orgasm	2.2 ± 1.8	4.4 ± 1.0	2.2 ± 1.7
Satisfaction	2.6 ± 1.3	4.6 ± 0.9	1.9 ± 1.4
Pain	1.9 ± 1.6	4.7 ± 1.0	2.8 ± 1.8
Total	13.7 ± 8.1	25.9 ± 4.6	12.1 ± 8.1
Overall satisfaction with sexual life	2.3 ± 2.8	6.5 ± 2.3	3.5 ± 3.6





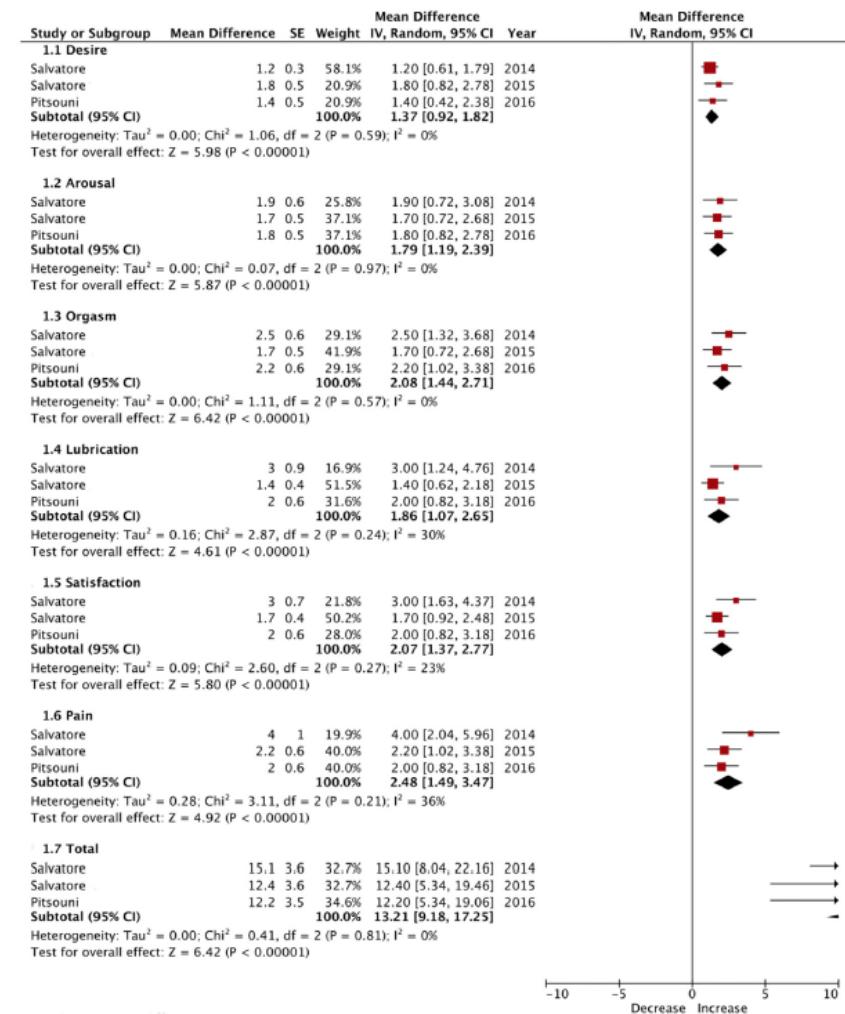
Climacteric - Vol.18, No. 2, 2015. Epub 2014 Dec 16

Sexual function after fractional microablative CO₂ laser in women with vulvovaginal atrophy

Salvatore S¹, Nappi RE², Parma M¹, Chionna R¹, Lagona F¹, Zerbinati N³, Ferrero S⁴, Origoni M¹, Candiani M¹, Leone Roberti Maggiore U¹

1: San Raffaele Hospital, Milan – Italy. 2: Policlinico S. Matteo, University of Pavia, Pavia – Italy.
3: University of Insubria, Varese – Italy. 4: San Martino Hospital, University of Genoa, Genoa, Italy.

273 donne
Età media 57.8 anni
Review di 6 articoli
FSFI (Female Sexual Function Index)



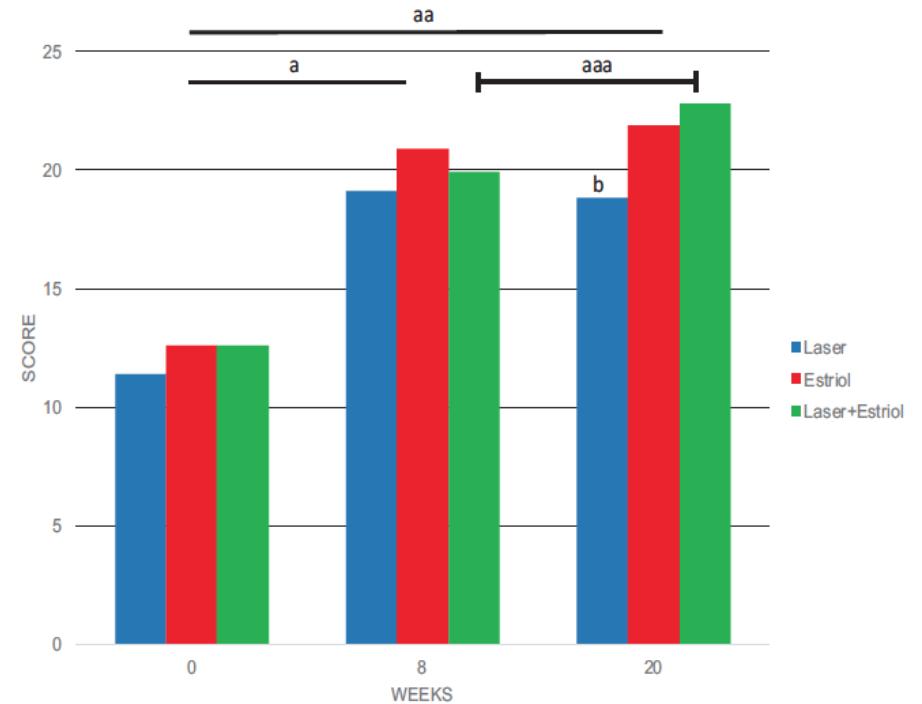


Menopause
The Journal of The North American Menopause Society
Volume 17 Number 4 November/December 2010 www.menopause.com www.nams.org OVID

Menopause – Epub 2017 Jul 31

Randomized, double-blind, placebo-controlled clinical trial for evaluating the efficacy of fractional CO₂ laser compared with topical estriol in the treatment of vaginal atrophy in postmenopausal women

Cruz VL, Steiner ML, Pompei LM, Strufaldi R, Fonseca FLA, Santiago LHS, Wajsfeld T, Fernandes CE
ABC School of Medicine, São Bernardo do Campo, São Paulo – Brazil.



45 donne

Età media 45-70 anni

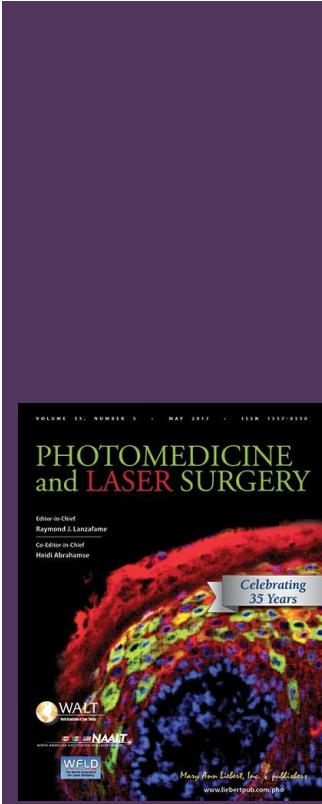
Studio che ha avuto lo scopo di valutare l'efficacia del laser frazionato Co2 (L) comparato con terapia locale all'Estriolo (E) (1 mg) e la combinazione di entrambi i trattamenti (L+E)

La conclusione è che il laser Co2 da solo o in combinazione con Estriolo è un buon trattamento per i sintomi VVA.





NOSTRI RISULTATI



Photomedicine and Laser Surgery. Epub 2016 Dec 30
Fractional CO₂ laser: from skin rejuvenation to vulvo-vaginal reshaping

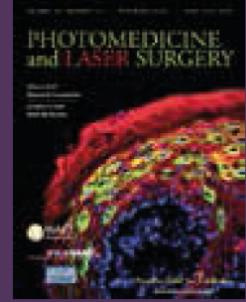
Filippini M¹, Del Duca E², Negosanti F^{2,3}, Bonciani D⁴, Negosanti L⁵, Sannino M², Cannarozzo G², Nisticò SP^{2,6}

1: Hospital State of Republic of San Marino - Republic of San Marino. 2: University of Rome Tor Vergata, Rome - Italy.

3: Dermatology Center, Bologna - Italy . 4: Piero Palagi University Hospital, Florence - Italy.

5: S.Orsola-Malpighi University Hospital, Bologna - Italy. 6: Magna Grecia University of Catanzaro - Italy .





**386 donne
Range età 48-56 anni**

Photomedicine and Laser Surgery. Epub 2016 Dec 30
Fractional CO₂ laser: from skin rejuvenation to vulvo-vaginal reshaping

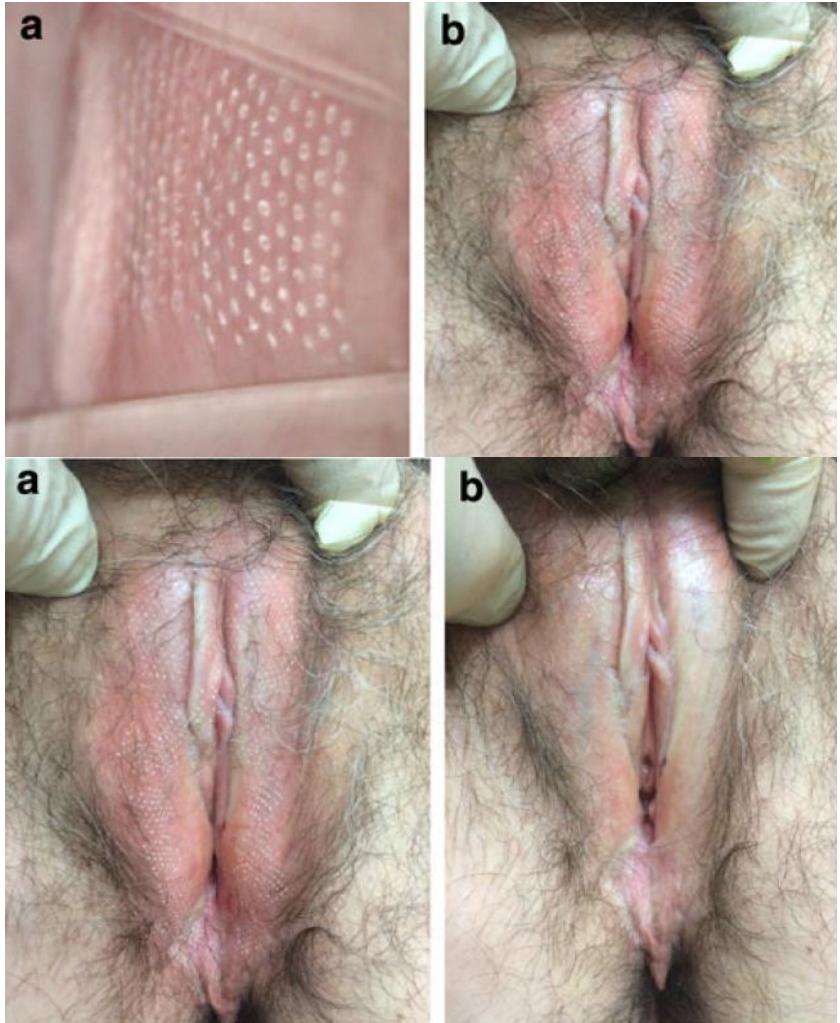
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5: S.Orsola-Malpighi University Hospital, Bologna - Italy. 6: Magna Grecia University of Catanzaro - Italy .

<i>Symptom</i>	n (%)
Vaginal dryness	231 (59.94)
Vaginal burning sensation	216 (56.26)
Dyspareunia	190 (48.75)
Itching	220 (56.37)
Soreness	281 (73.15)
Vaginal introitus pain	185 (48.79)



NUMERO TRATTAMENTI ESEGUITI DAL 23.01.2013 AL 25.10.2017

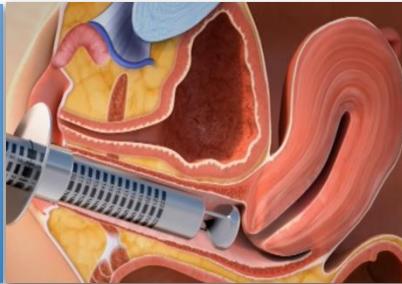


Ospedale di Stato della
Repubblica di San Marino

652



1447



1085



Dal 26.06.2013
anche INTROITO

1194

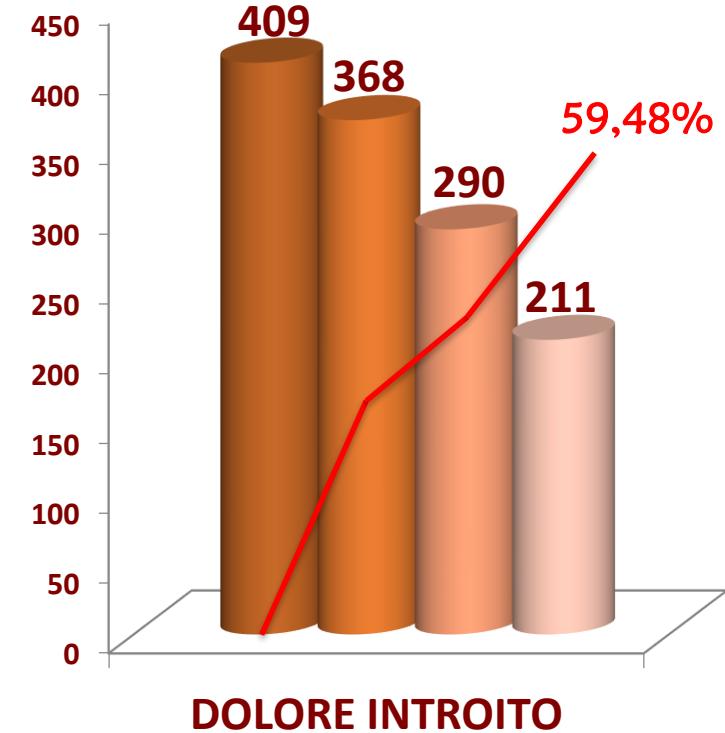
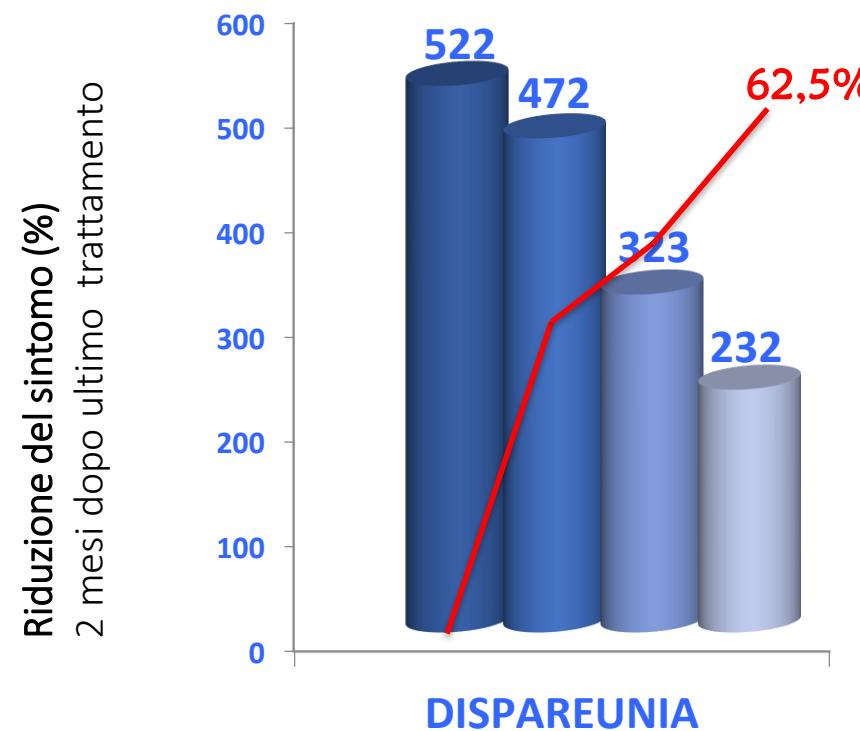




RIDUZIONE IN PERCENTUALE DI TUTTI I SINTOMI DOPO 3 TRATTAMENTI



Ospedale di Stato della Repubblica di San Marino

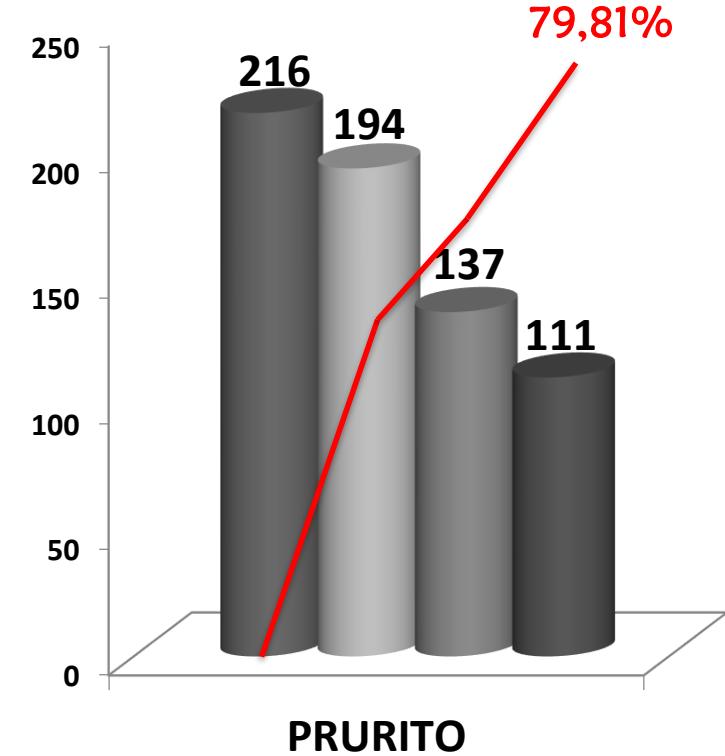
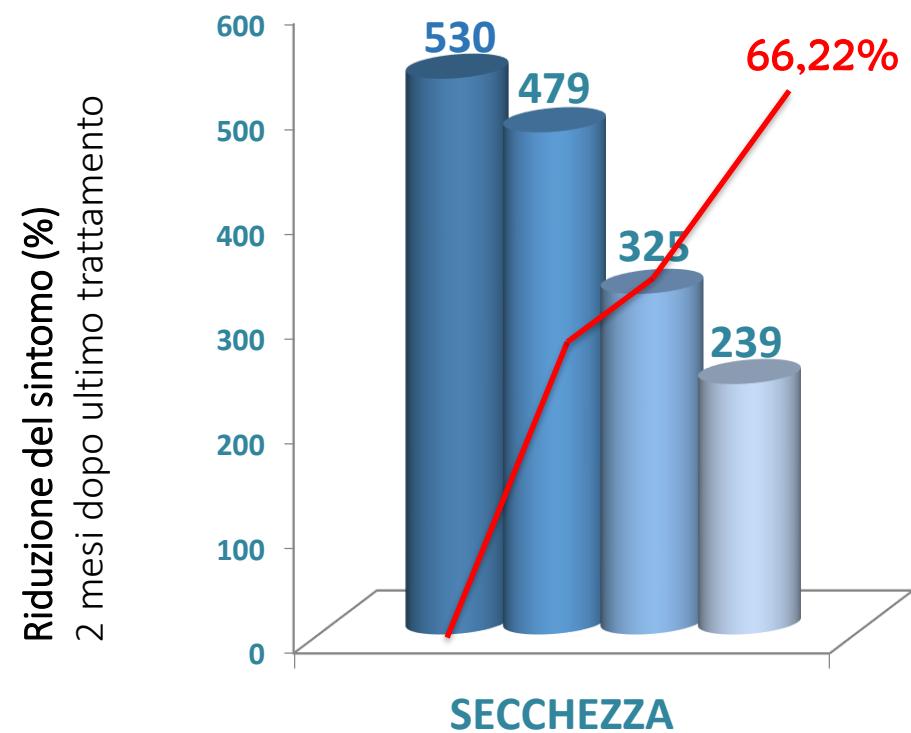




RIDUZIONE IN PERCENTUALE DI TUTTI I SINTOMI DOPO 3 TRATTAMENTI



Ospedale di Stato della Repubblica di San Marino

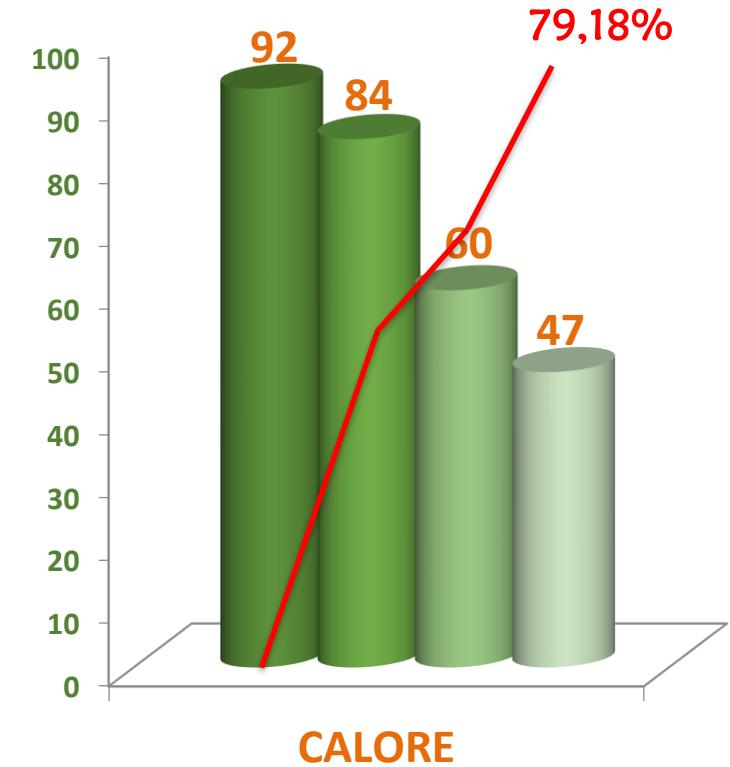
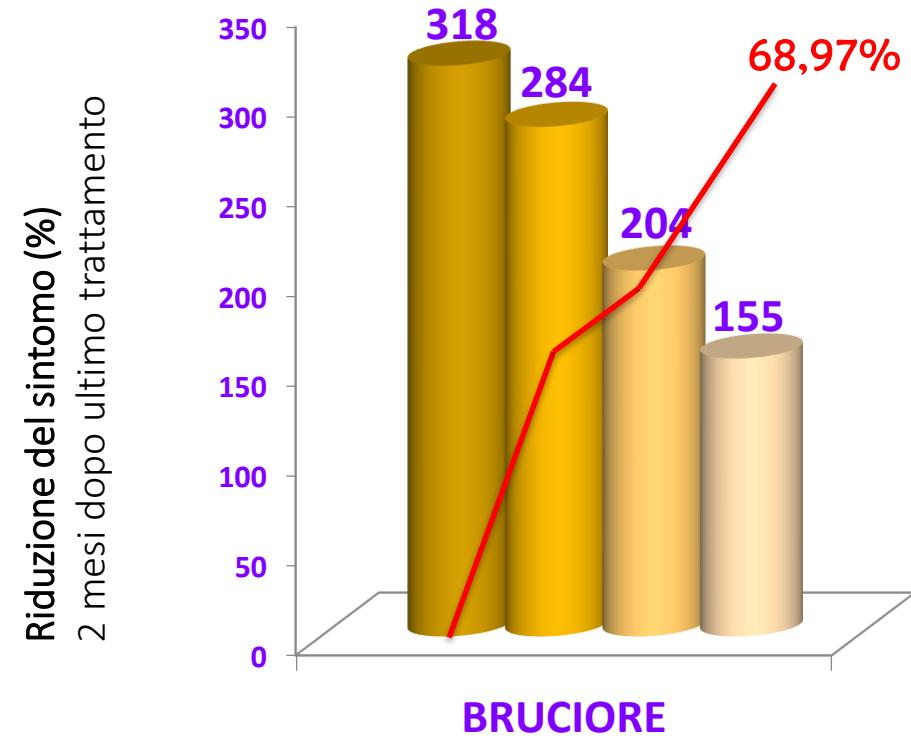




RIDUZIONE IN PERCENTUALE DI TUTTI I SINTOMI DOPO 3 TRATTAMENTI



Ospedale di Stato della Repubblica di San Marino

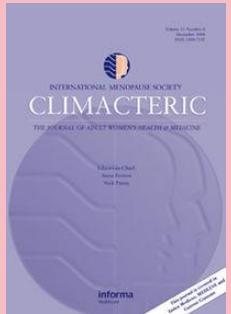




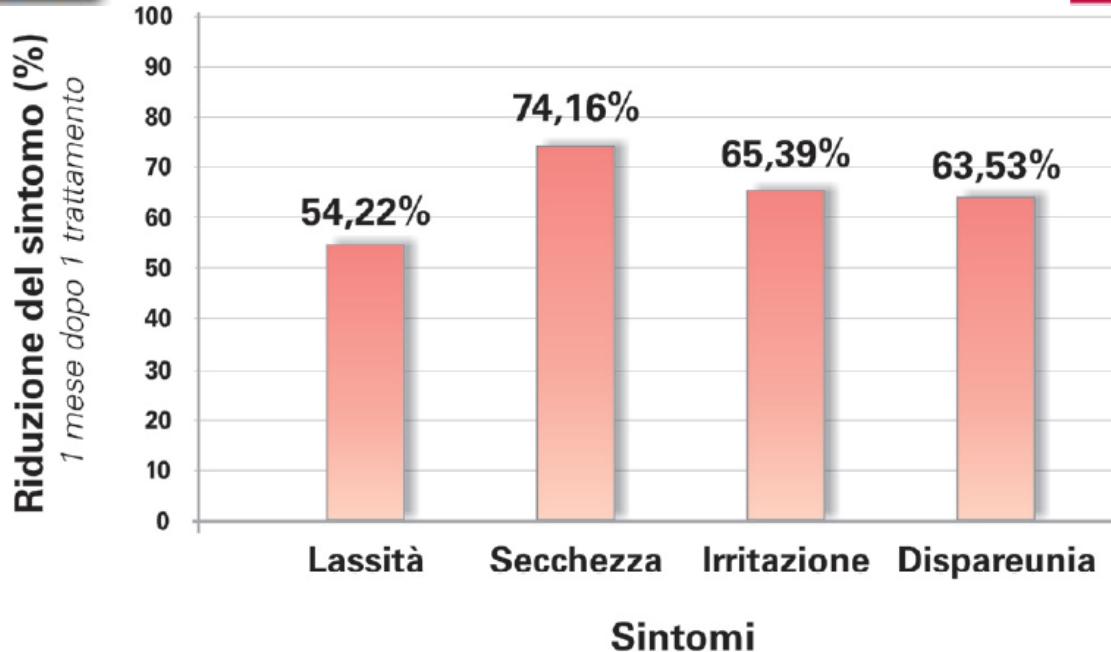
Climacteric - Vol. 17, No. 4, 2014. Epub 2014 Jun 5
A 12-week treatment with fractional CO₂ laser for vulvovaginal atrophy: a pilot study

Salvatore S¹, Nappi RE², Zerbinati N³, Calligaro A⁴, Ferrero S⁵,
Origoni M¹, Candiani M¹, Leone Roberti Maggiore U¹

1: San Raffaele Hospital, Milan - Italy. 2: Policlinico S. Matteo, University of Pavia, Pavia - Italy.
3: University of Insubria, Varese - Italy. 4: University of Pavia, Pavia - Italy.
5: San Martino Hospital, University of Genoa, Genoa - Italy.

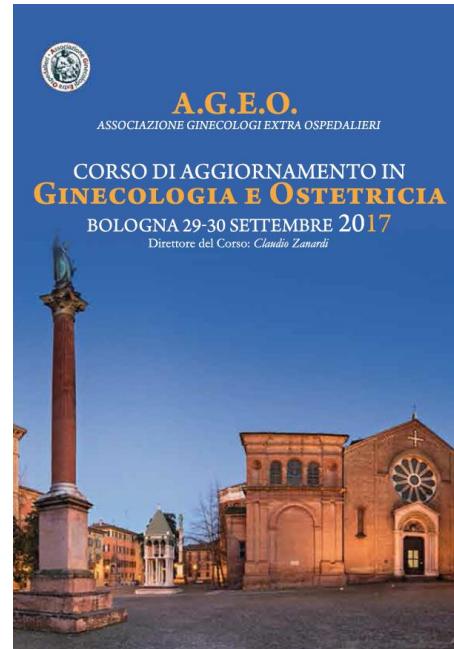


San Raffaele Scientific Institute
Vita-Salute San Raffaele University
Milan, Italy



Courtesy by Stefano Salvatore





Patologia neoplastica





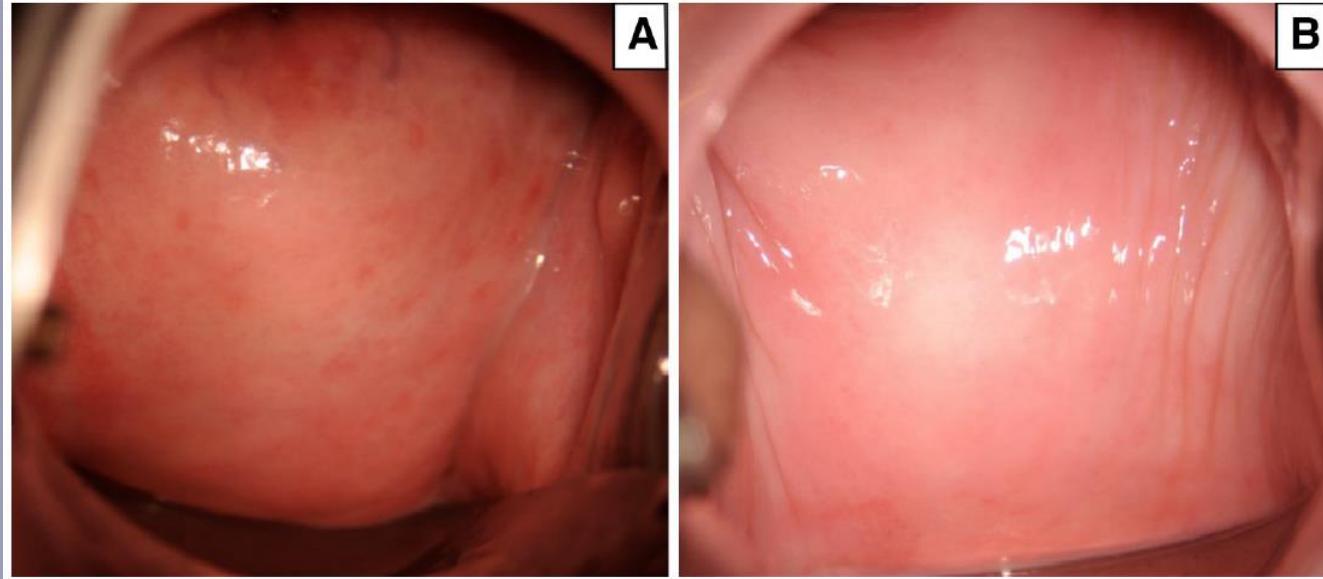
TRATTAMENTO EFFICACE ANCHE SU ONCOLOGICHE

Archives of Obstetrics and Gynecology - Vol. 249, No. 4, 2016. Epub 2016 May 12

Fractional CO₂ laser for vulvovaginal atrophy (VVA) dyspareunia relief in breast cancer survivors

Pieralli A¹, Fallani MG¹, Becorpi A¹, Bianchi C¹, Corioni S¹, Longinotti M¹, Tredici Z¹, Guaschino S¹

¹: Careggi University Hospital, Florence - Italy.



50 patients (mean age 53.3 years)

Data indicated a significant improvement in VVA dyspareunia ($p < 1.86e-22$) in breast cancer survivors

76 % of patients were satisfied or very satisfied with the treatment results ($p < 0.0001$).

The majority (52 %) of patients were satisfied after a long-term follow-up (mean time 11 months).





TRATTAMENTO EFFICACE ANCHE SU ONCOLOGICHE

Menopause – Vol. 23, No. 10, 2016

Fractional microablative CO₂ laser for vulvovaginal atrophy in women treated with chemotherapy and/or hormonal therapy for breast cancer: a retrospective study

Pagano T¹, De Rosa P¹, Vallone R¹, Schettini F¹, Arpino G¹,
De Placido S¹, Nazzaro G¹, Locci M¹, De Placido G¹

1: University of Naples "Federico II", Naples - Italy.

**Retrospective study included 26 women affected by hormone-receptor positive breast tumors
Fractional microablative CO₂ laser treatment is associated with a significant improvement of VVA symptoms
in women affected by hormone-driven breast cancer.**





NUMERO TRATTAMENTI ESEGUITI DAL 06.03.2013 AL 25.10.2017



Ospedale di Stato della
Repubblica di San Marino

80



239



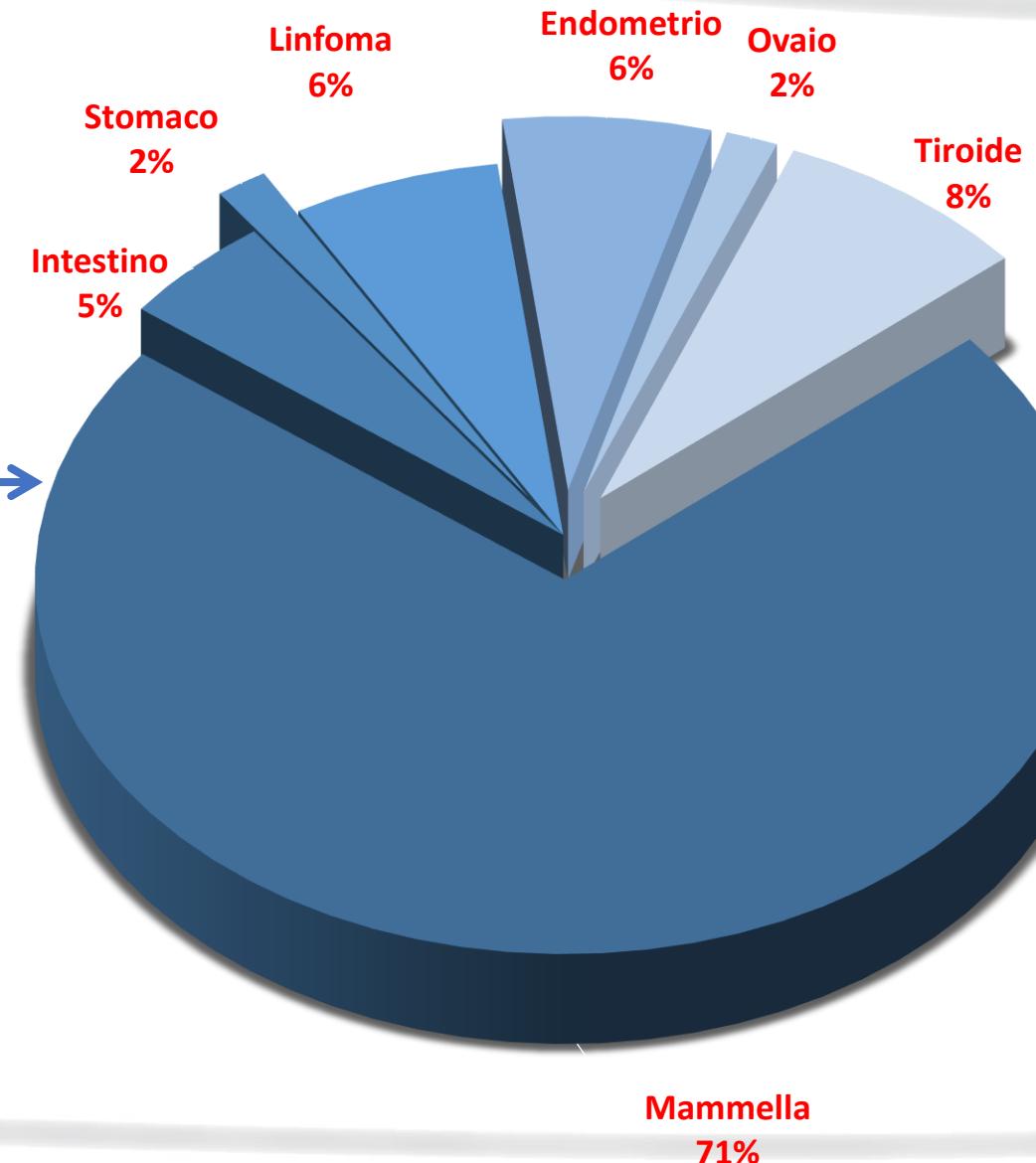
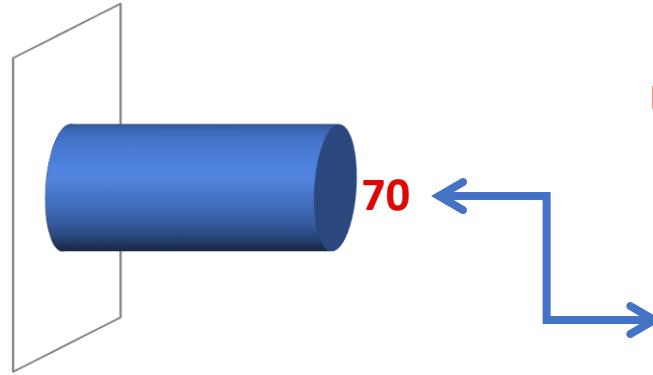
184



PATOLOGIE NEOPLASTICHE ASSOCIATE



Ospedale di Stato della Repubblica di San Marino



Maurizio Filippini - Ospedale di Stato della Repubblica di San Marino

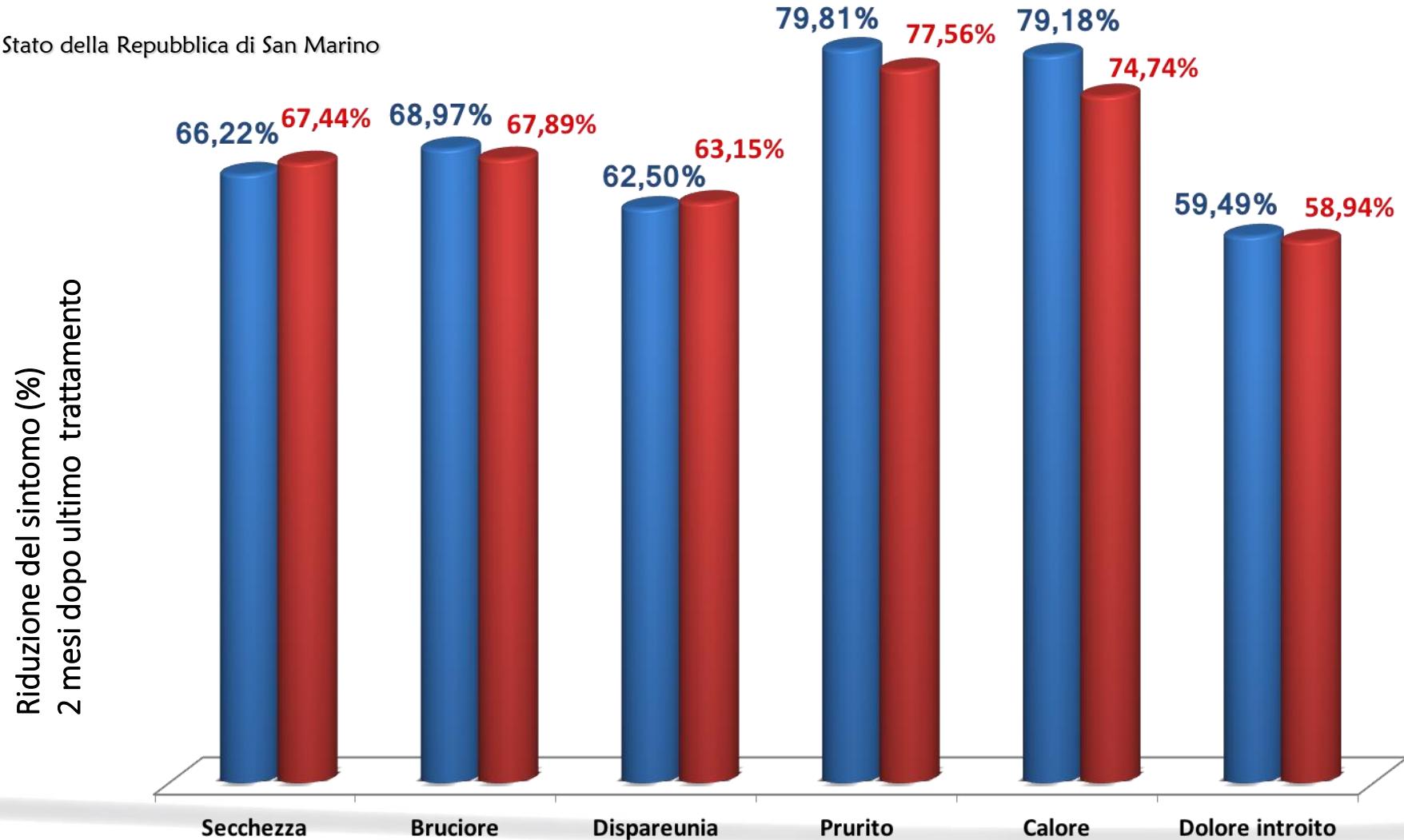


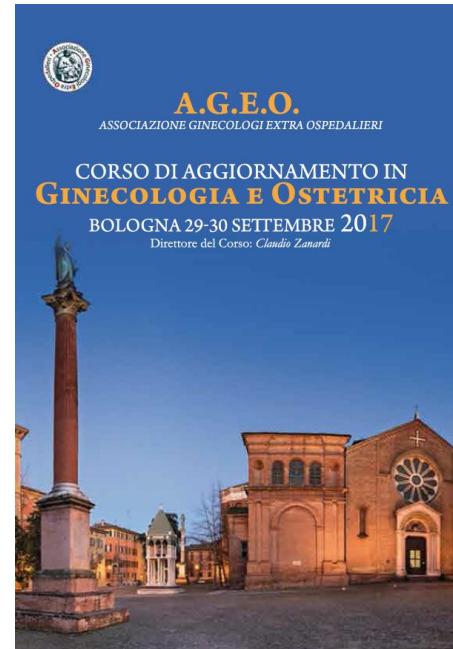


RIDUZIONE IN PERCENTUALE DI TUTTI I SINTOMI DOPO 3 TRATTAMENTI



Ospedale di Stato della Repubblica di San Marino





Vestibulo-vulvodynia





The Journal of Sexual Medicine – Vol.13, No.12, 2016. Epub 2016 Nov 15
**Fractional CO₂ laser treatment
of the vestibule for patients with
vestibulodynia and genitourinary
syndrome of menopause: a pilot study**

Murina F¹, Karram M², Salvatore S³, Felice R¹

1: V. Buzzi Hospital, Milan - Italy. 2: The Christ Hospital, Cincinnati, OH – USA.

3: San Raffaele Hospital, Milan – Italy.



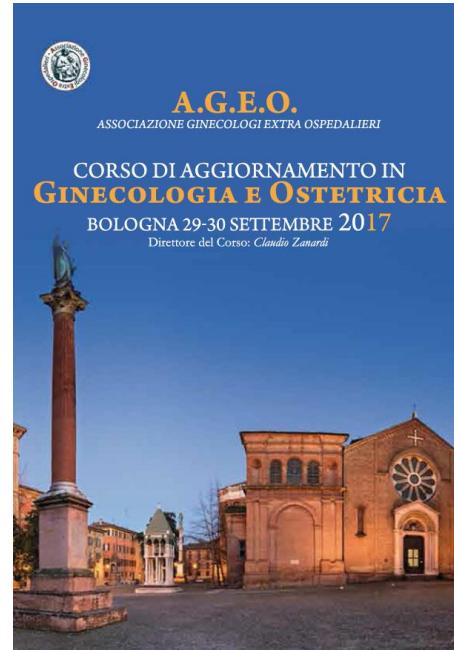
70 Patients

37 vestibular pain plus vestibulodynia

33 genitourinary syndrome of menopause

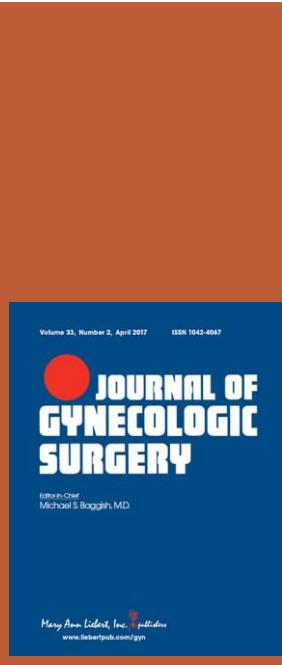
67.6% of patients stated significant improvement from the laser procedure.





Lichen sclero-atrofico





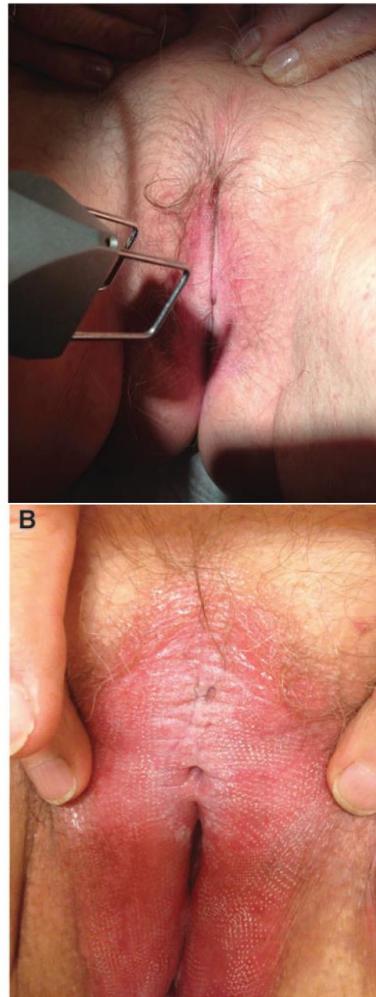
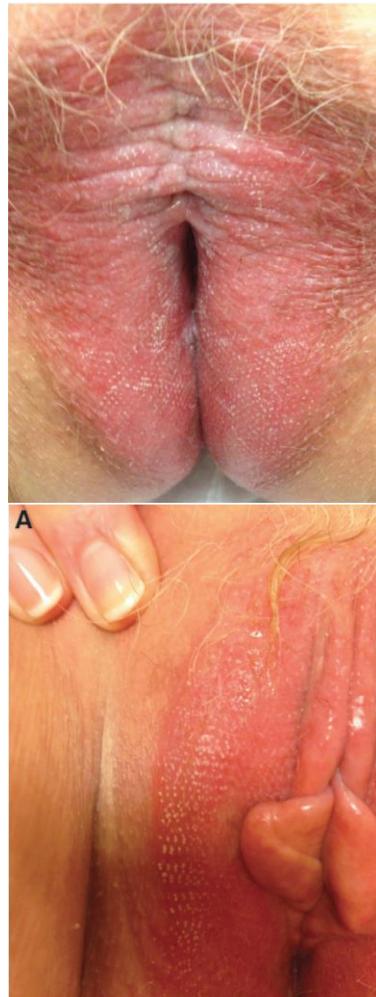
Journal of Gynecologic Surgery – Vol. 32, No. 6, 2016. Epub 2016 Nov 21
Fractional CO₂ laser treatment for vaginal atrophy and vulvar lichen sclerosus

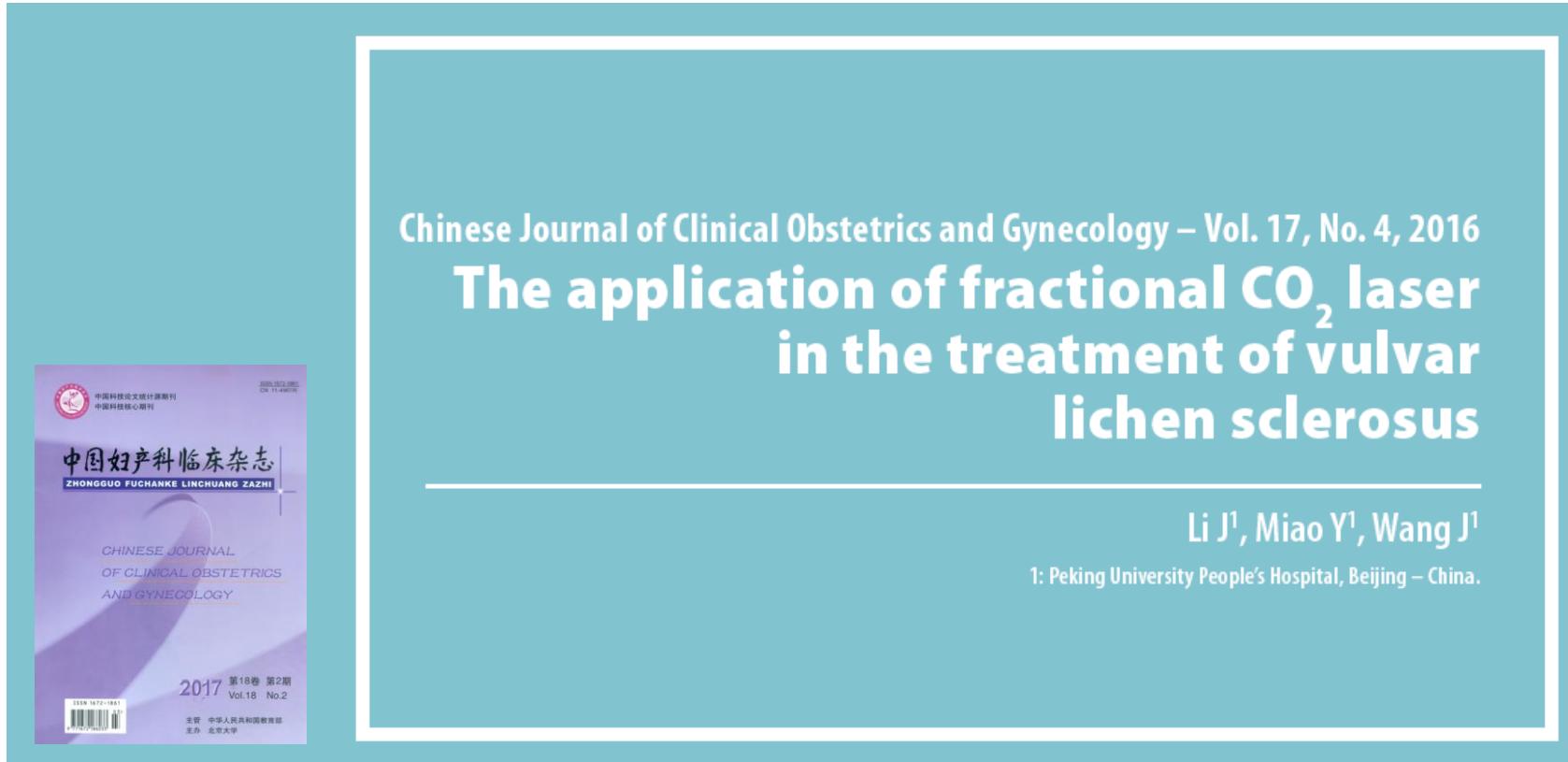
Baggish M S¹

1: University of California, San Francisco, CA – USA.

23 postmenopausal women with vaginal atrophy (30, 1000, 1000)
27 postmenopausal women with lichen sclerosus (20, 1000, 1000)

Parameter	# of patients
No progression	27/27
No itching/vulvitis	24/27
Visually noted improvement	26/27
Continued pruritus/vulvitis	3/27





Chinese Journal of Clinical Obstetrics and Gynecology – Vol. 17, No. 4, 2016

**The application of fractional CO₂ laser
in the treatment of vulvar
lichen sclerosus**

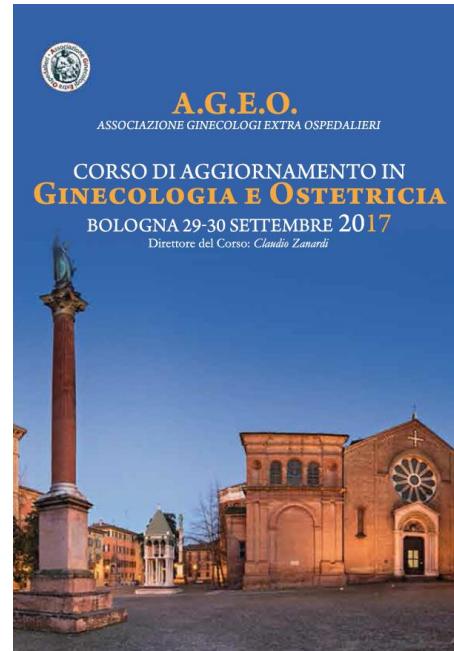
Li J¹, Miao Y¹, Wang J¹

1: Peking University People's Hospital, Beijing – China.

31 patients with vulvar lichen sclerosus (VLS)

There were significant difference in pruritus score at the first and the third after treatment one month





Dolore e bruciore vulvo-perineale





NUMERO TRATTAMENTI ESEGUITI DAL 06.03.2013 AL 25.10.2017



Ospedale di Stato della
Repubblica di San Marino

289



481



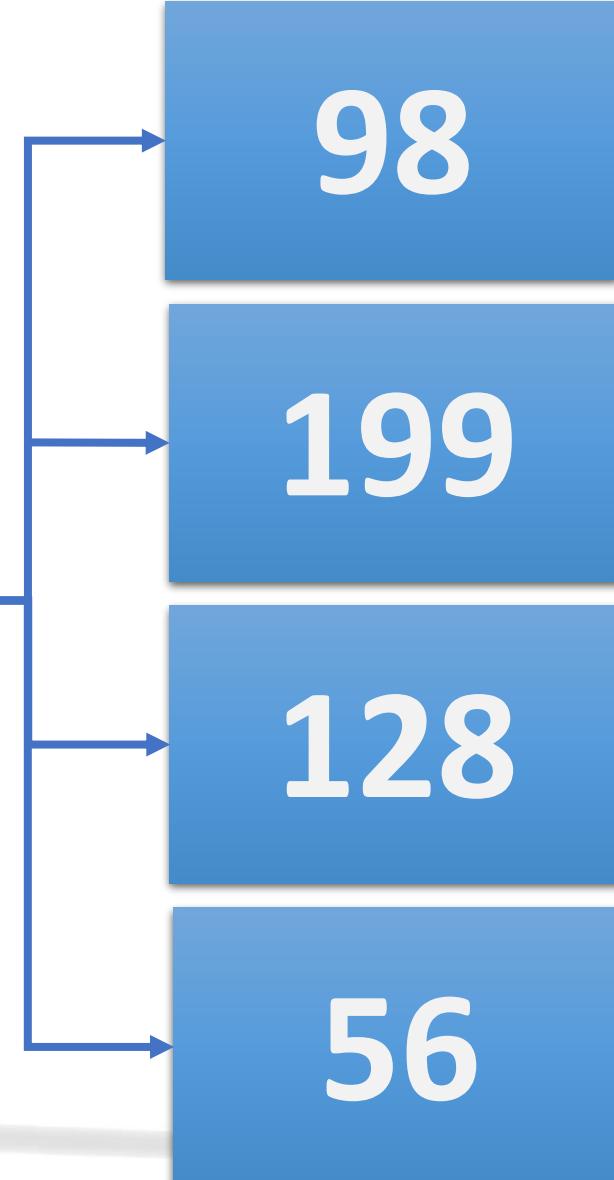
342





Ospedale di Stato della
Repubblica di San Marino

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TRATTAMENTO
ANALE



TRATTAMENTO
VULVARE



TRATTAMENTO
CLITORIDEO



TRATTAMENTO
PERINEALE



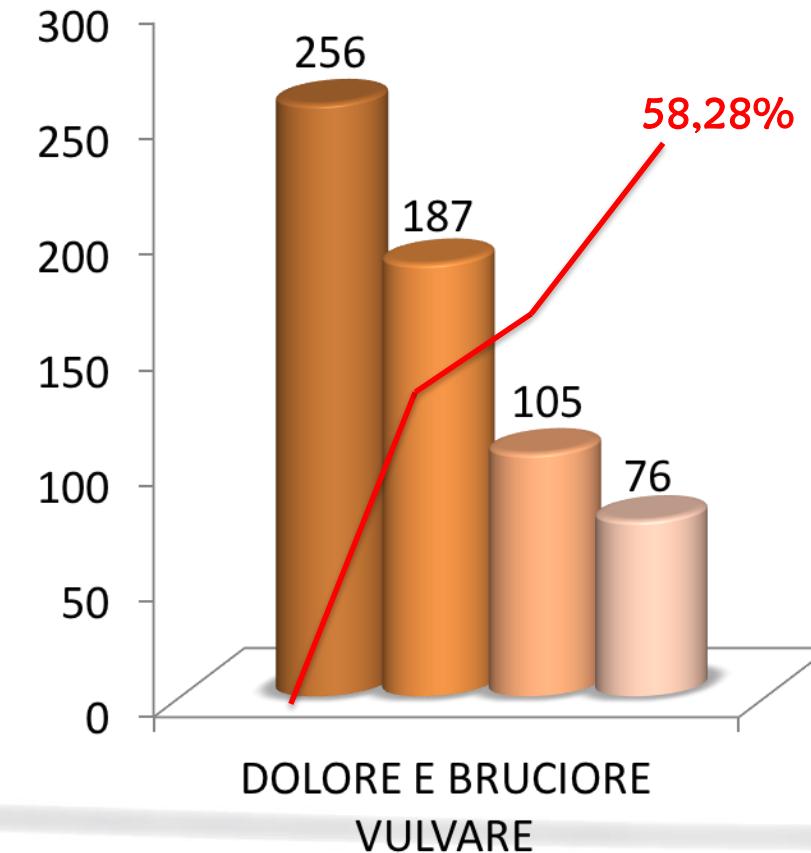


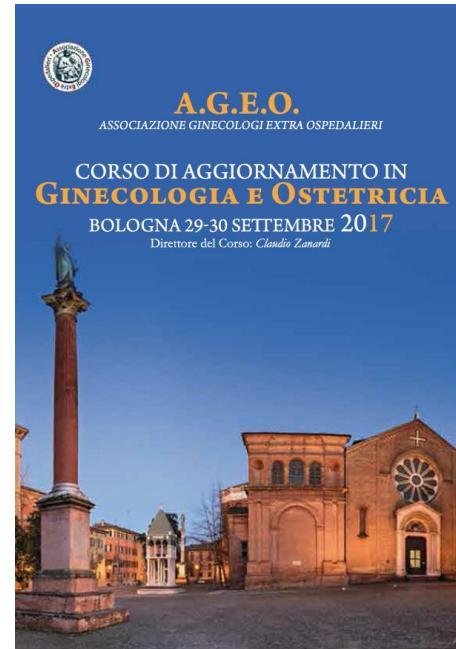
RIDUZIONE IN PERCENTUALE DEI SINTOMI DOPO 3 TRATTAMENTI



Ospedale di Stato della Repubblica di San Marino

Riduzione del sintomo (%)
2 mesi dopo ultimo trattamento





Apparato urinario



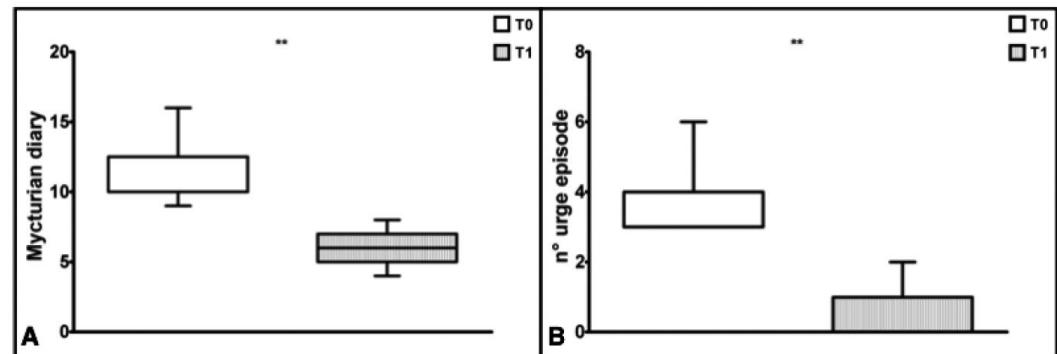
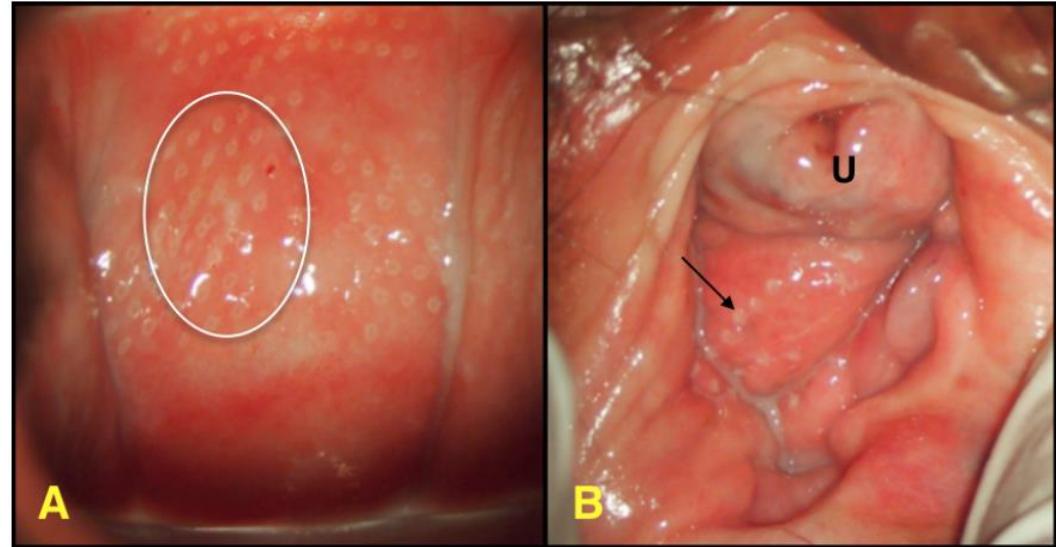


European Review for Medical and Pharmacological Sciences – Vol. 20, No. 12, 2016
Is vaginal fractional CO₂ laser treatment effective in improving overactive bladder symptoms in post-menopausal patients? Preliminary results

Perino A¹, Cucinella G², Gugliotta G³, Saitta S⁴, Polito S⁵,
Adile B², Marci R⁵, Calagna G¹

1: University Hospital, Palermo – Italy. 2: Villa Sofia-Cervello' Hospital, Palermo – Italy. 3: University of Messina, Messina – Italy.
4: "Barone I. Romeo" Hospital, Patti (ME) – Italy. 5: University of Ferrara, Ferrara - Italy.

30 donne con GSM e OAB
Età media 56/8.5
23,3% urge incontinence
20% pregressa HRT
36,7 pregressa terapia con estriolo





Urología Colombiana – Vol. 26, No. 1, 2017. Epub 2016 Oct 09

Fractional CO₂ laser treatment: a novel approach for stress urinary incontinence management in post-menopausal women

González Isaza P¹, Ruiz Rosas A I², Vélez Rizo D L³

1: Universidad Militar de Colombia, Bogotá – Colombia. 2: Universidad Nacional de Colombia, Bogotá – Colombia.

3: Universidad de la Sabana, Bogotá – Colombia.

**161 postmenopausal patients (age 53.38 ± 5.1 years, range 45-65 years) with a clinical diagnosis of mild SUI
The results were confirmed by significant histological changes related to trophic restoration of the vagina,
responsible for extrinsic and intrinsic mechanisms involved in urinary continence.**





NUMERO TRATTAMENTI ESEGUITI DAL 06.03.2013 AL 25.10.2017

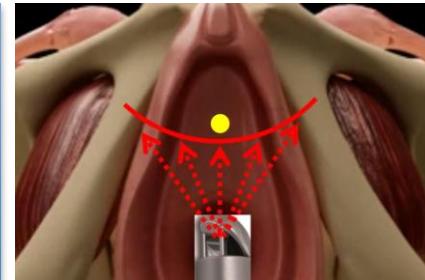


Ospedale di Stato della
Repubblica di San Marino

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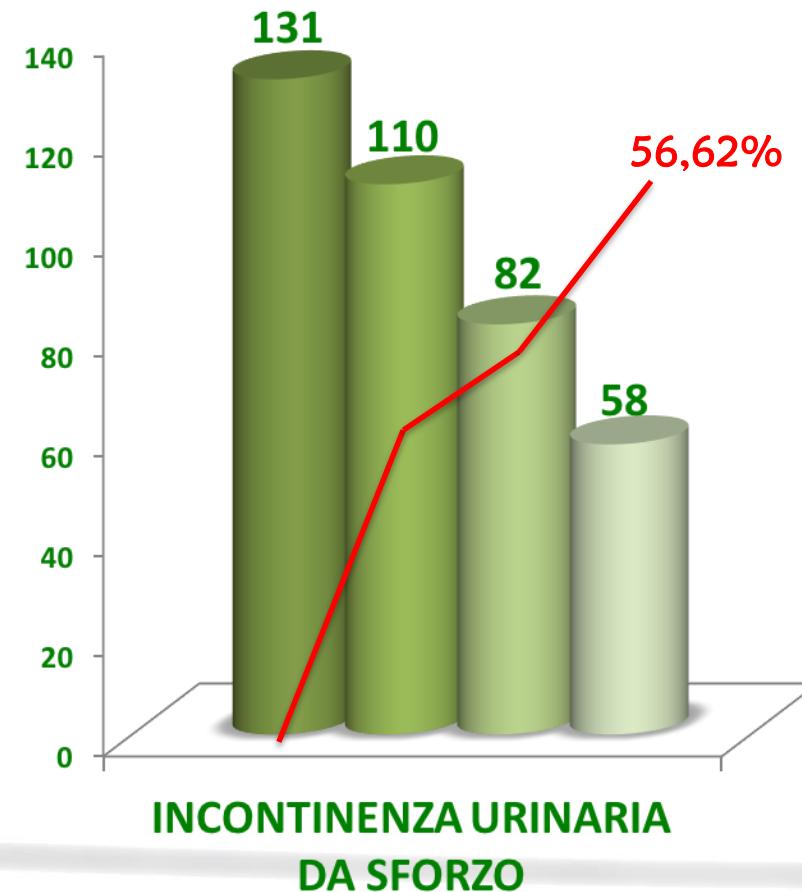


RIDUZIONE IN PERCENTUALE DELLA IUS DOPO 3 TRATTAMENTI



Ospedale di Stato della Repubblica di San Marino

Riduzione del sintomo (%)
2 mesi dopo trattamento



Maurizio Filippini - Ospedale di Stato della Repubblica di San Marino



RIDUZIONE IN PERCENTUALE DELLA IUS DOPO 3 TRATTAMENTI



Ospedale di Stato della Repubblica di San Marino

Riduzione del sintomo (%)
2 mesi dopo i trattamenti

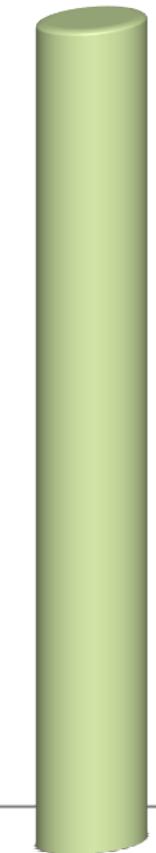
IUS totale; 56,62%

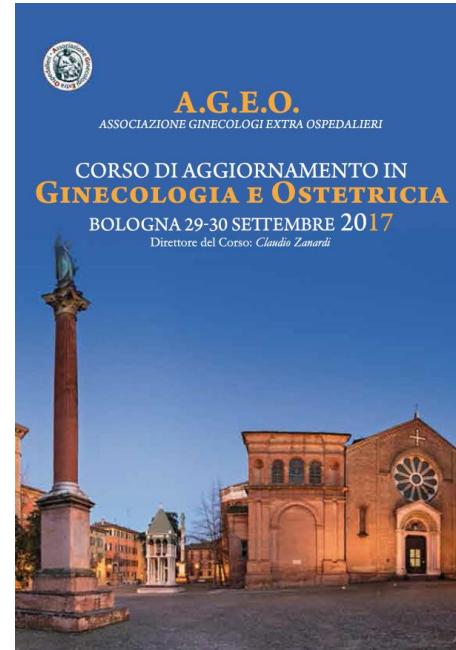


No atrofia;
35,78%



Si atrofia; 65,29%





Un trattamento sicuro...





Menopause – Vol. 23, No. 10, 2016

An assessment of the safety and efficacy of a fractional CO₂ laser system for the treatment of vulvovaginal atrophy

Sokol ER¹, Karram MM²

1: Stanford University, Stanford, CA - USA. 2: The Christ Hospital, Cincinnati, OH - USA.

**The data suggest that the fractional CO₂ laser is effective and safe for treatment of the symptoms associated with GSM.
Studio combinato Stanford e Cincinnati**





European Journal of Obstetrics Gynecology and Reproductive Biology
Vol. 213, 2017. Epub 2017 Apr 2

Safety and long-term efficacy of fractional CO₂ laser treatment in women suffering from genitourinary syndrome of menopause

Behnia-Willison F^{1,2}, Sarraf S³, Miller J⁴, Mohamadi B¹, Care A S^{4,5},
Lam A⁶, Willison N², Behnia L⁷, Salvatore S⁸

1: FBW Gynaecology Plus – Australia. 2: Flinders University – Australia. 3: Virginia Women's Center – USA.

4: The University of Adelaide – Australia. 5: Robinson Research Institute – Australia.

6: Centre for Advanced Reproductive Endosurgery – Australia. 7: University of Tehran – Iran. 8: San Raffaele Hospital – Italy.

102 women (8 center)

The Australian Pelvic Floor Questionnaire was used to gather data on sexual function

Wilcoxon signed-rank tests were used to detect statistically and clinically significant changes in sexual function and side-effects

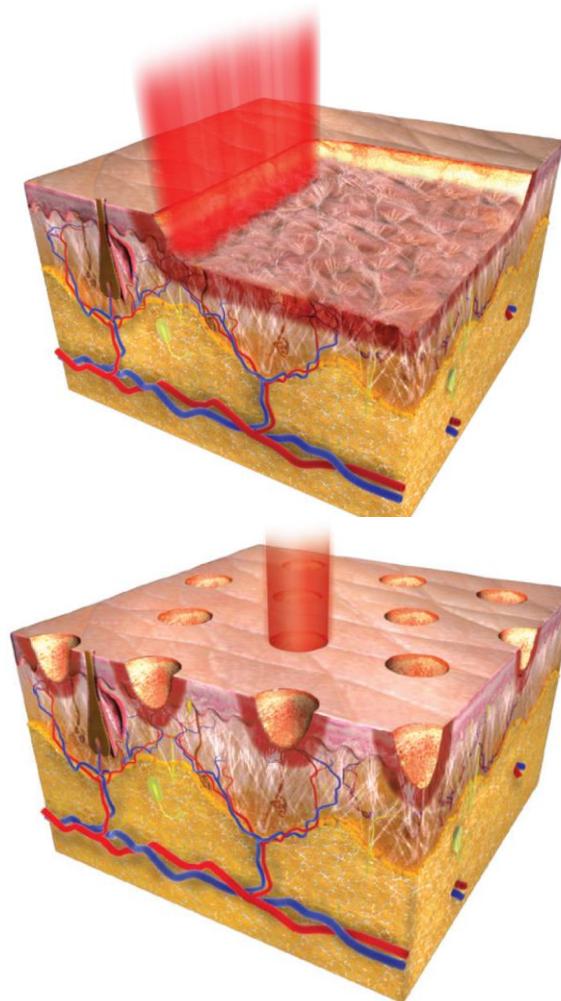




LASER OPERATIVO



LASER RIGENERATIVO



ABLAZIONE



BIOSTIMOLAZIONE



