



**NUOVA TECNOLOGIA
LASER PER IL
GINECOLOGO**

**Sconfiggere l'atrofia vaginale
in maniera naturale**

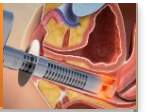
MonnaLisa Touch™



MONNALISA TOUCH

Vulvo-Vaginal Laser Reshaping (V2LR)

**QUATTRI ANNI DI ESPERIENZA DELLO
OSPEDALE DELLA REPUBBLICA DI SAN MARINO**



TRATTAMENTO CON LETTERATURA SCIENTIFICA VALIDATA ISTOLOGICAMENTE

ORIGINAL ARTICLE

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

Nicola Zerbinati · Maurizio Serati · Massimo Origoni · Massimo Candiani · Tommaso Iannitti · Stefano Salvatore · Francesco Marotta · Alberto Calligaro

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Abstract Vaginal atrophy occurring during menopause is closely related to the dramatic decrease in ovarian estrogens due to the loss of follicular activity. Particularly, significant changes occur in the structure of the vaginal tissue, with consequent impairment of many physiological functions. This study, carried out on biopsies of the vaginal mucosa of postmenopausal, nonestrogen-treated women, aimed at describing the microscopic and ultrastructural modifications of the vaginal mucosa following fractional carbon dioxide laser treatment. We observed the restoration of the stratified epithelium, the presence of keratinizing cells at the epithelial surface, and the reorganization of the connective tissue constituents. These findings suggest that the laser treatment is a new

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Thermo-ablative fractional CO₂ laser for the treatment of vulvo-vaginal atrophy: A new treatment modality using thermally-ablative fractional CO₂ laser

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ABSTRACT

Objective: To evaluate the efficacy and feasibility of thermo-ablative fractional CO₂ laser for the treatment of symptoms related to vulvo-vaginal atrophy (VVA) in post-menopausal women.
Methods: From April 2013 to December 2013, post-menopausal patients who complained of one or more VVA-related symptoms and who underwent vaginal treatment with fractional CO₂ laser were enrolled in a study. At baseline (T0) and 30 days post-treatment (T1), vaginal status of the women was evaluated using a 5-point Likert scale. At baseline (T0) and 30 days post-treatment (T1), vaginal status of the women was evaluated using a 5-point Likert scale. At baseline (T0) and 30 days post-treatment (T1), vaginal status of the women was evaluated using a 5-point Likert scale. At baseline (T0) and 30 days post-treatment (T1), vaginal status of the women was evaluated using a 5-point Likert scale.

Fig. 1 Hematoxylin and eosin staining of a patient's vaginal mucosa before treatment (a, c) and 2 months after treatment (b, e).

17 ARTICOLI

Microablative fractional CO₂ laser improves dyspareunia related to vulvovaginal atrophy: a pilot study

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Objective: This pilot study aimed to assess the efficacy in treating sexually active women who had dyspareunia related to vulvovaginal atrophy (VVA).
Materials and methods: The intensity of VVA symptoms was recorded for each patient before and after treatment. All patients were administered the Gloria Bachman Vaginal Health Index (VHI).
Results: At 12-week follow-up, the laser treatment was efficacious in improving the quality of life and sexual function, respectively. An objective evaluation of female quality of life and sexual function was performed using the Gloria Bachman Vaginal Health Index (VHI).
Conclusions: This pilot study demonstrated that treatment with the microablative fractional CO₂ laser was efficacious in improving the quality of life (QoL) and sexual function were shown. Furthermore, after 12-week follow-up, the intensity of dyspareunia significantly ameliorated at the same follow-up. Moreover, after 12-week follow-up, the intensity of dyspareunia significantly ameliorated at the same follow-up. Moreover, after 12-week follow-up, the intensity of dyspareunia significantly ameliorated at the same follow-up.

Keywords: Dyspareunia, Fractional CO₂ laser, Menopause, Vaginal atrophy

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INTRODUCTION

Vulvovaginal atrophy (VVA) is a physiological process occurring in women after the drop of estrogen that occurs in menopause (1). The vagina becomes narrower and less elastic, and the introitus can constrict. VVA is associated with a decrease in the thickness of the vaginal epithelium and of rugal folds, and may also be associated with a decrease in the thickness of the vaginal epithelium and of rugal folds.

Histological study on the laser on atrophic vaginal mucosa

Stefano Salvatore MD¹, Umberto Leone Roberti Maggiore MD¹

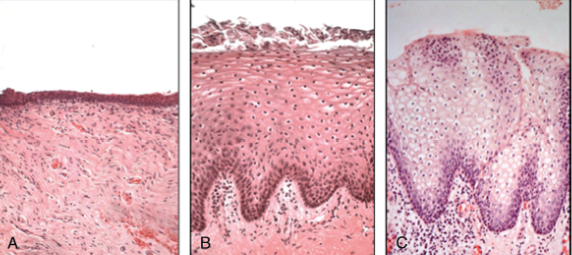


FIG. 3. Morphological findings from clinical practice. (A) Atrophic vaginal mucosa before fractional CO₂ laser treatment. (B) Vaginal mucosa of the same person 2 months after treatment. Note the lamina propria newly formed connective tissue with vessel-rich papillae, the thick stratified epithelium, and normally shedding superficial cells. (C) Normal vaginal mucosa of a fertile-age woman (reported for comparison).

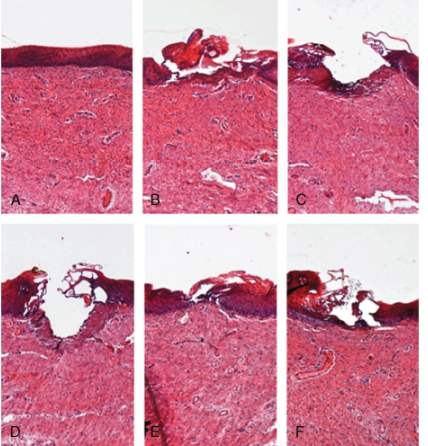
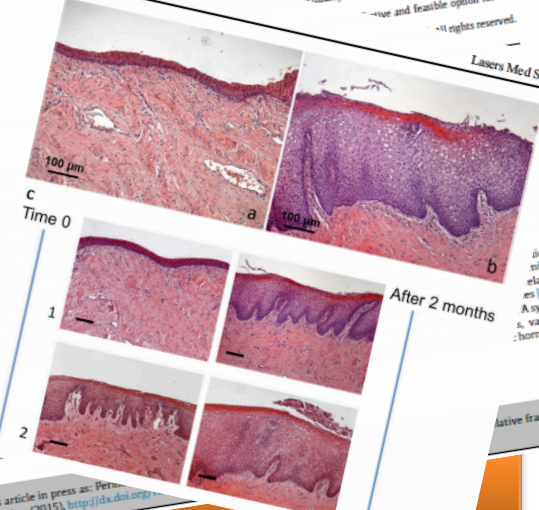


FIG. 1. Vaginal mucosa under a light microscope. (A) Atrophic control. (B-F) Treatment protocols 1, 2, 3, 4, and 5.





MONNALISA TOUCH

« NON E'
UN TRATTAMENTO ESTETICO
MA FUNZIONALE »



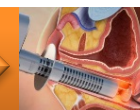
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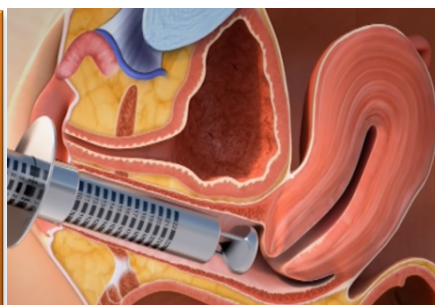
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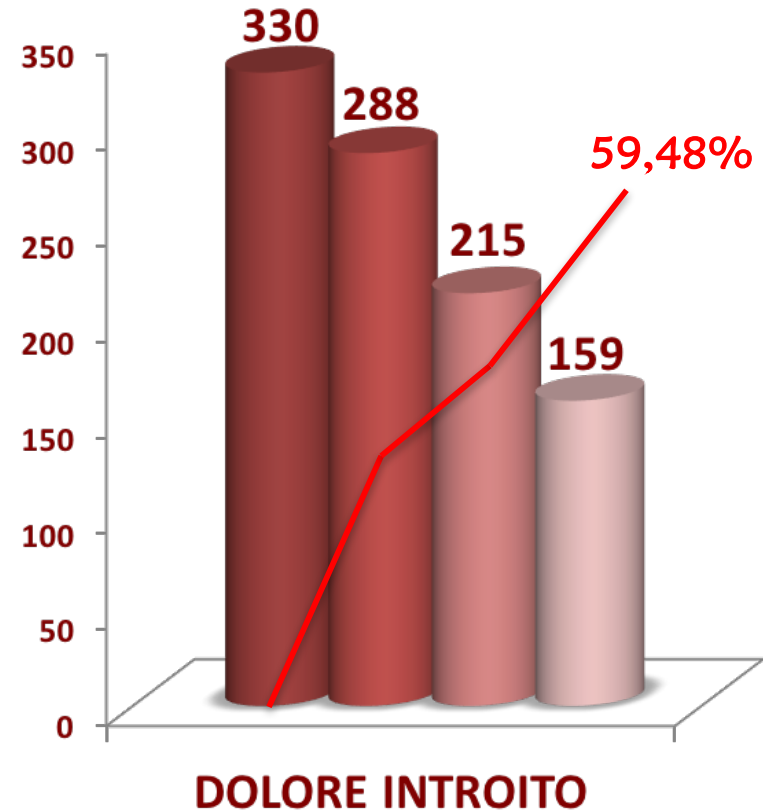
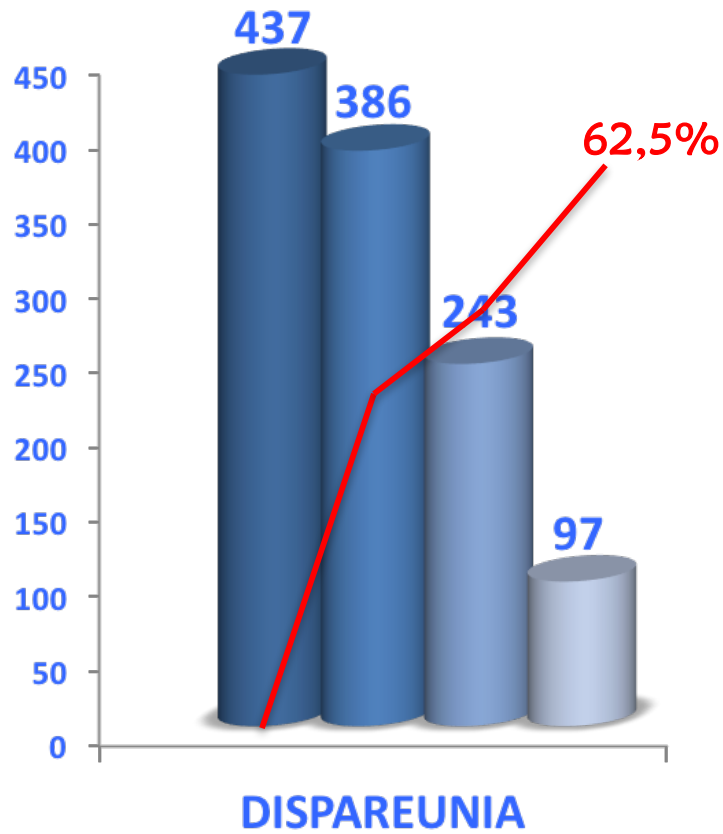


RIDUZIONE IN PERCENTUALE DI TUTTI I SINTOMI DOPO 3 TRATTAMENTI



Ospedale di Stato della Repubblica di San Marino

Riduzione del sintomo (%)
2 mesi dopo ultimo trattamento



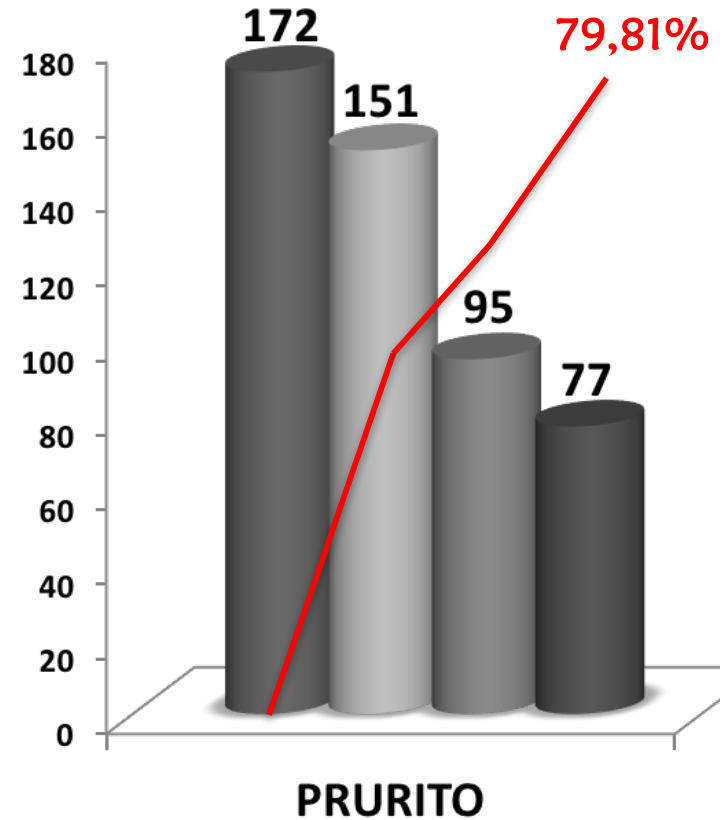
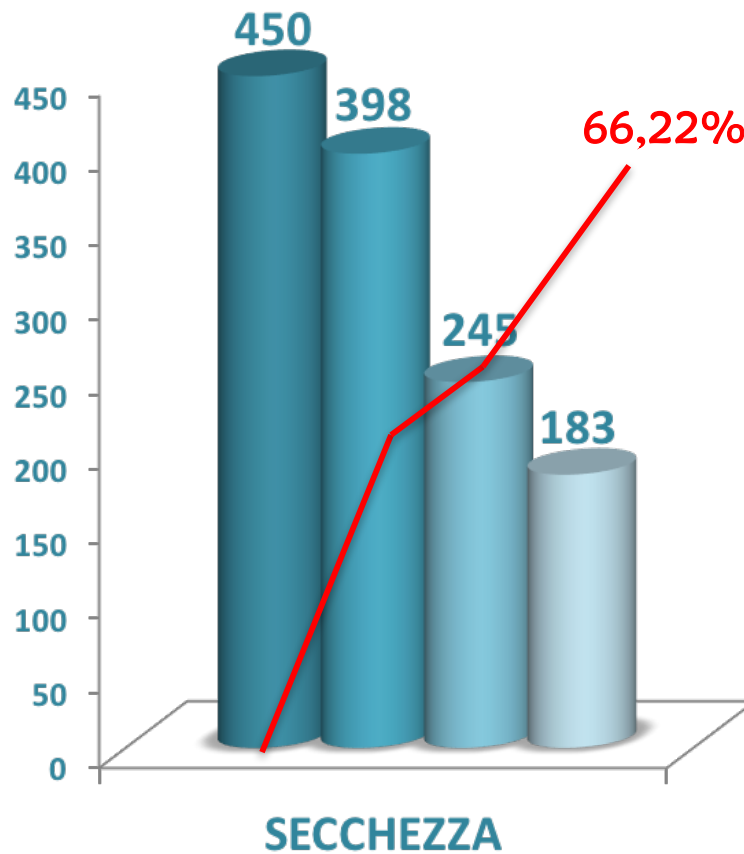


RIDUZIONE IN PERCENTUALE DI TUTTI I SINTOMI DOPO 3 TRATTAMENTI



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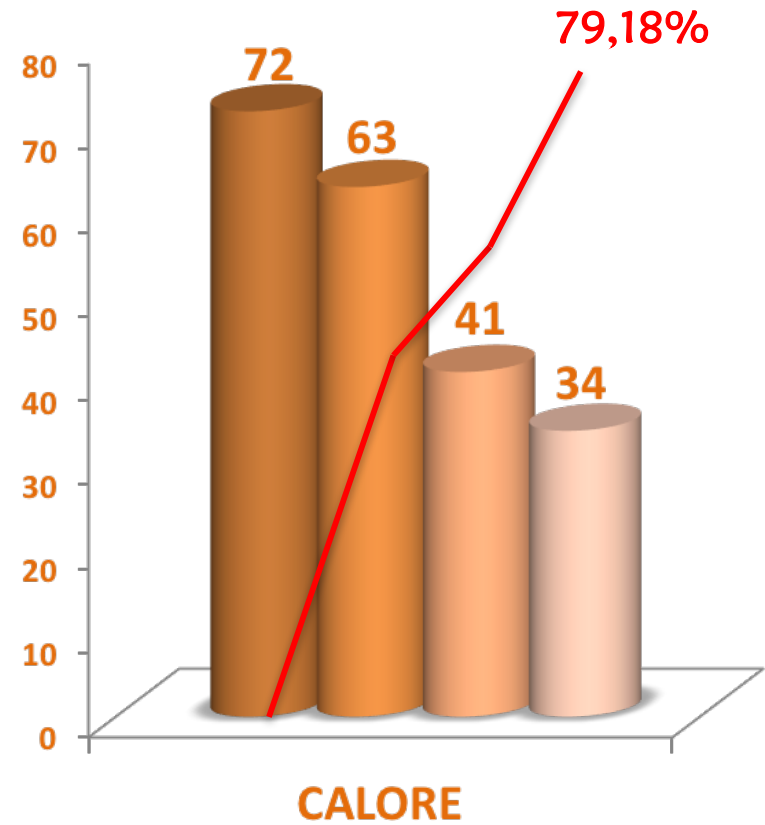
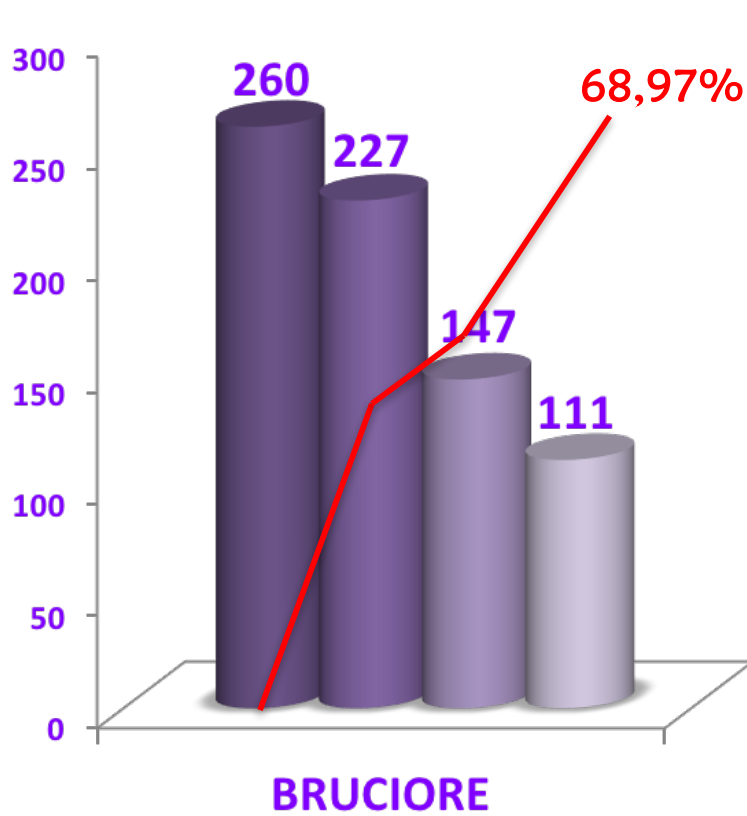


RIDUZIONE IN PERCENTUALE DI TUTTI I SINTOMI DOPO 3 TRATTAMENTI



Ospedale di Stato della Repubblica di San Marino

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PATOLOGIA NEOPLASTICA

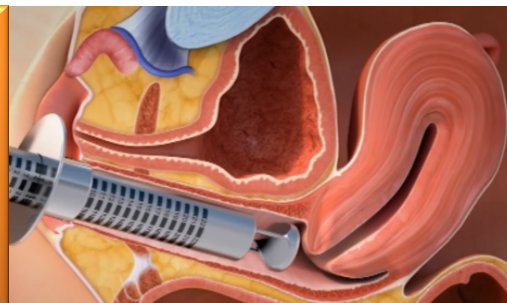


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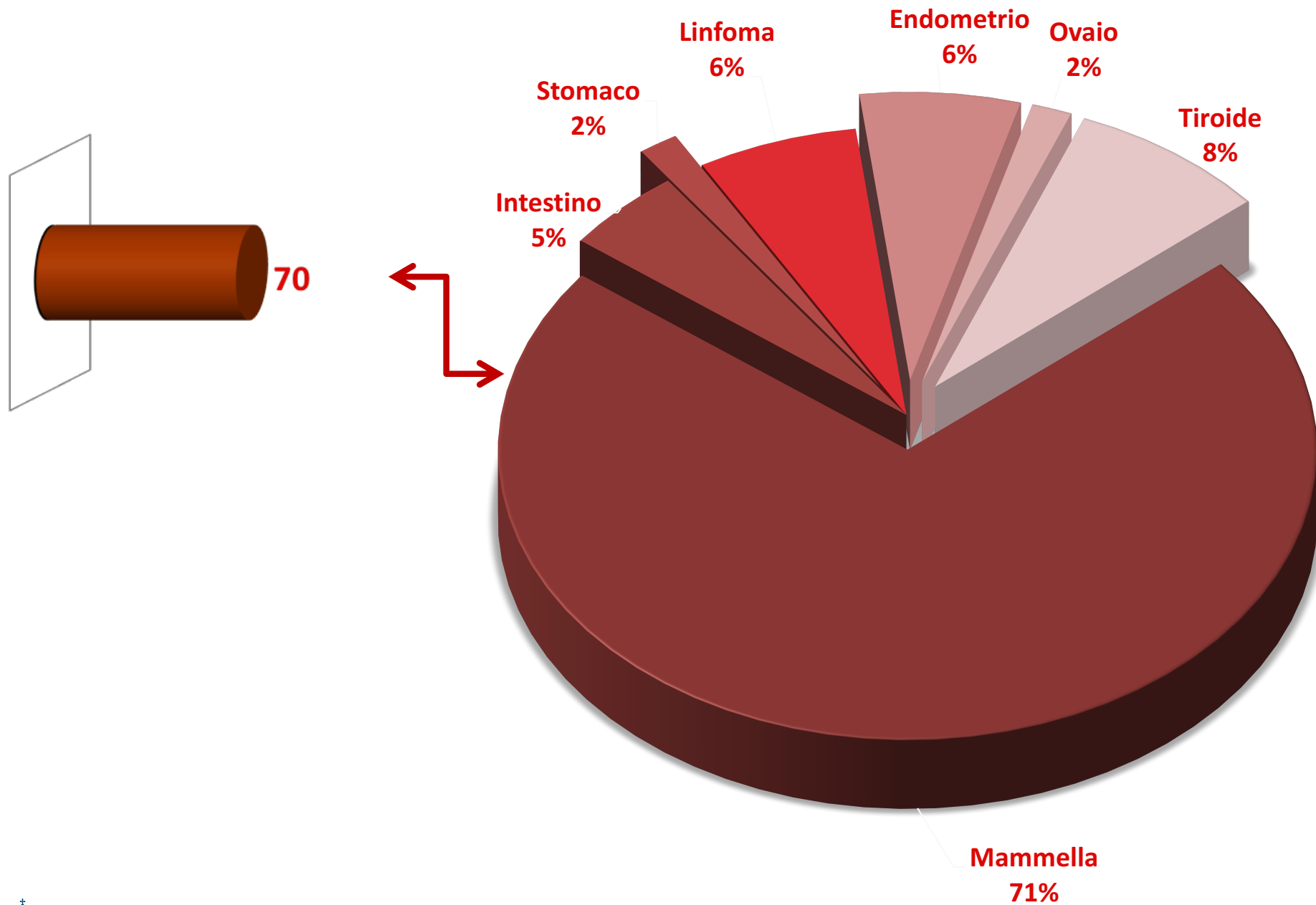


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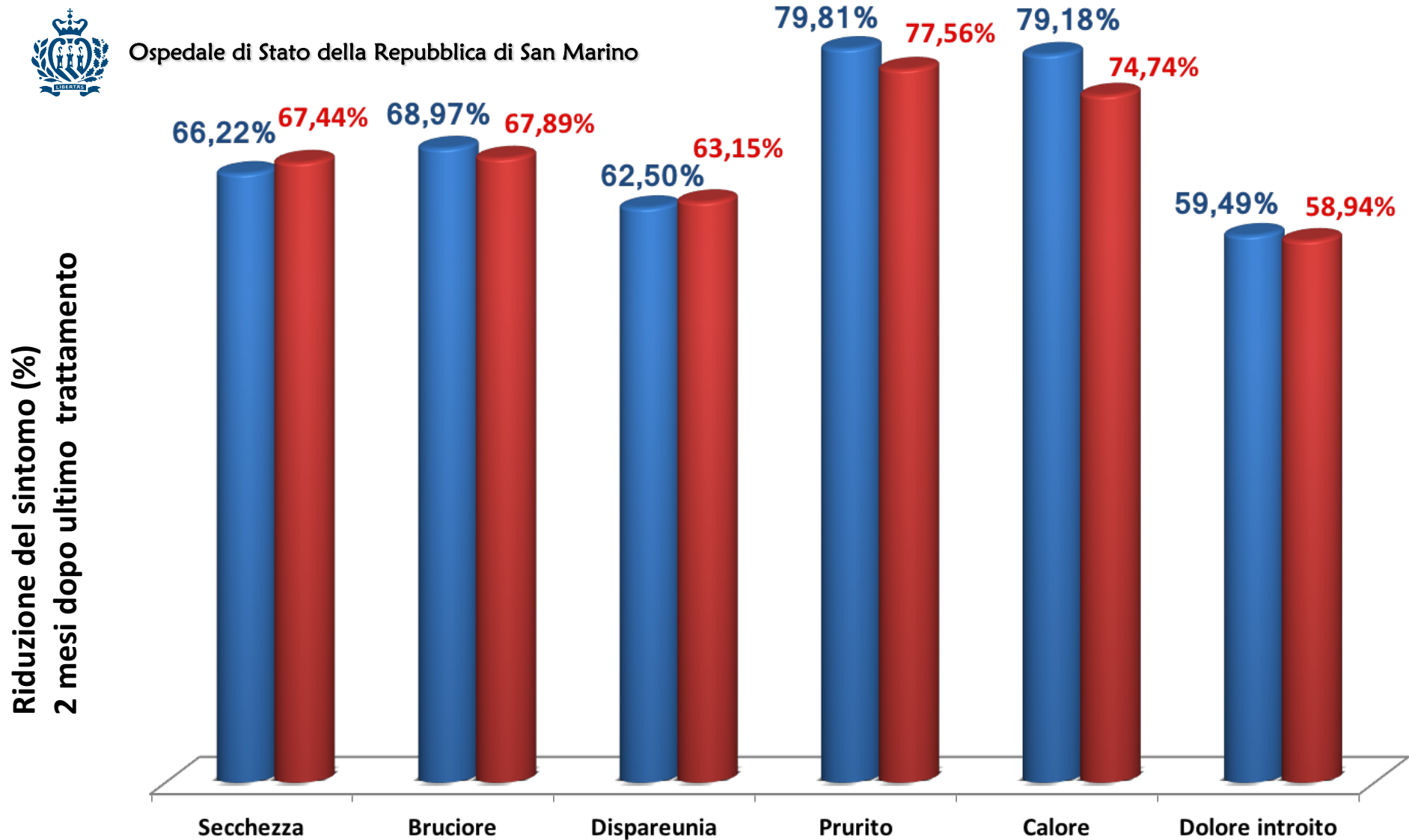


PATOLOGIE NEOPLASTICHE ASSOCIATE





RIDUZIONE IN PERCENTUALE DI TUTTI I SINTOMI DOPO 3 TRATTAMENTI





Use of the *MonaLisa Touch*[®] Treatment on Cancer Patients

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Objectives: This pilot study aimed to assess the efficacy in treating atrophic vaginitis symptoms in those women who cannot receive local or systemic hormone-based therapies, since they have had a hormone-sensitive tumour.

Materials and methods: 46 treatments with the *MonaLisa Touch*[®] were performed from 01/23/2013 to 10/31/2014 at the Republic of San Marino State Hospital involved patients with neoplasias. The intensity of atrophic vaginitis symptoms was recorded for each patient.

Results: About two months after the first treatment the percent reduction of the individual symptoms was very significant, not unlike that obtained from patients who received the treatment but without neoplastic pathologies. Furthermore, after the treatment, a significant improvement in quality of life was shown.

Conclusions: Considering the absence of complications and especially the absence of contraindications, the *MonaLisa Touch*[®] laser treatment is a valuable and irreplaceable aid for all patients who cannot and prefer not to receive hormone replacement therapy.

Key words: vaginal atrophy, oestrogen-sensitive tumour, induced menopause, laser

INTRODUCTION

Vaginal atrophy, also called atrophic vaginitis, affects many women throughout the world, occurring almost always after menopause, but also in all cases where there is a lack of oestrogen, such as after childbirth, during the breastfeeding stage when ovulation is blocked or after an oestrogen-sensitive tumour (such as in the breasts, endometrium or the ovaries) where a chemotherapeutic or surgical "castration" of the menstrual cycle occurs. In these cases the use of hormone replacement therapies, even local or at low dosage, are therefore absolutely contraindicated¹.

The symptoms related to vaginal atrophy normally begin to appear between the ages of 45 and 55. Unlike other symptoms of menopause, such as the hot flashes which often decrease over time, these usually continue and can worsen as time progresses.

This condition can cause dryness, irritation, burning or pain during sexual intercourse, affecting up to 40% of postmenopausal women^{1,2}.

Until now, treatment for this condition involved the prescribing of vaginal oestrogens in the form of tablets, ovules or creams to insert into the vaginal canal using an applicator, infiltrations with substances

that have a stimulating or revitalizing action such as natural hyaluronic acid.

Borrowing from dermatological treatment for collagen stimulation which has been done for many years using CO₂ fractional laser scanning systems, scientific research has come up with a very effective therapeutic solution to improve the symptoms of vulvo-vaginal atrophy^{3,6}.

This new therapeutic opportunity is an excellent chance for all women who suffer from these disorders, especially women who do not want to take hormones for personal or psychological reasons, believing that they are the cause of the pathology.

The importance of this treatment is all the more reason to be considered for those women who cannot receive local or systemic hormone-based therapies, since they have had a hormone-sensitive tumour^{7,8}.

MATERIALS AND METHODS

359 treatments with the *MonaLisa Touch*[®] using the CO₂ laser system SmartXide[®] (DEKA - Florence, Italy) were performed from 01/23/2013 to 10/31/2014 at the Republic of San Marino State Hospital; 46 of these treatments involved patients with neoplasias (36

