

Breast Lifting and Improved Breast Volume and Tone as a Result of GentleYAG® Skin Tightening of the Upper Chest

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Introduction

The non-invasive treatment efficacy of the GentleYAG laser from Candela® for skin tightening has been well established. Numerous publications, including two peer-reviewed papers, have documented treatment techniques and have presented striking before-and-after photography substantiating this laser application.

Interestingly, the focus of most of these studies has been restricted to facial skin. Yet, we know that 1064 nm energy has been used to address skin laxity of other anatomical sites, including the abdomen, arms, and knees. It appears that the proposed mechanism of action—using laser energy to contract the skin by targeting water to reformulate new, more robust collagen—is as effective on the breast tissue as it is on the body and face. Whereas minimizing wrinkles and improving sagging skin can be seen as a direct benefit of any skin-tightening procedure, the indirect effect and benefit from treatment of the chest and breast with the GentleYAG exceeds simple skin tightening.

As shown in this clinical bulletin, treating the breasts can also improve the volumetric effect on overall skin tone and the underlying structures, resulting in an impressive cosmetic enhancement of the breast tissue. While expected to show some skin tightening effects on the treated area, this paper reports on the safety and efficacy using the 1064 nm GentleYAG laser to tighten the skin overlying the breast and the ability to increase breast volume, shape and tone. This remarkable change is documented in clinical photography which shows this significant cosmetic enhancement of the breast tissue shape and volume.

Method

The subject of this study was a 57-year-old female with Fitzpatrick Skin Type III. She was treated six times at one-month intervals using the GentleYAG. Prior to each treatment, her

chest area was divided into a grid-like pattern of 10 by 10 cm “boxes” by use of a white (laser safe) cosmetic eye liner pencil. The full treatment area on this patient, from just below the breast up to the clavicles, resulted in approximately 16 treatment boxes. A full treatment session was completed in less than 60 minutes, and treatments were reported by the patient as “comfortable.”

Treatment parameters for the 1064 nm laser were as follows: 10 mm spot size, 12 J/cm² fluence and 0.40 ms pulse duration. Pulses were delivered at a very high repetition rate (10 Hz), with no Dynamic Cooling Device™ (DCD™) cooling. Multiple passes were used in a continuous-motion technique cross-hatch pattern to raise the skin surface temperature to 41–43 C (as measured with infrared thermometry). The therapeutic temperature was maintained in each treatment box for approximately two minutes before moving to the next box. The attainment of the desired temperature goal for each box treated was evident by tolerable warmth and erythema of the treated tissue.

Results

Clinical photography before treatment and after three and six treatments, documents how quickly the breast tissue responded to GentleYAG treatment. The photography shows a remarkable lifting of the patients’ breasts and improved breast shape and volume, presumably as a result of improvement in overall skin laxity. Improvement of breast lifting approximated 2 cm bilaterally, as measured from the sternal notch to each nipple. Improvement in tone and shape of the breasts was reported by the patient. The patient noted improved tone of her skin; increased volume of the breast tissue and an overall “rejuvenation” effect of her chest area after the first and each subsequent visit. The patient experienced no discomfort whatsoever during treatments; no adverse events occurred; and the patient rated her satisfaction as “extremely high”.



Discussion

Volumetric enhancement and breast lifting are of significant desire for many women, regardless of age. For most women, the ravages of gravity, child bearing (with or without breast feeding), and weight changes become more apparent in the breast tissue with each passing year. The shape and volume of a woman's breast often leads women to the plastic surgeon's office for enhancement, lifting and/or reduction. This study showed a significant improvement in the lift of the breasts as well as enhanced volume and tone of breast tissue, as reported by the patient and evident by clinical photography. This paper documents clinically significant results in the appearance and tone of the breast tissue by using the comfortable, non-invasive GentleYAG laser treatments.

Originally introduced to safely and permanently remove hair from darker skin types, the use of the Nd:YAG 1064 nm wavelength quickly expanded to the successful treatment of skin laxity; primarily on the face. Equally impressive are the ever-expanding body parts benefiting from Nd:YAG skin tightening. The major advantages of GentleYAG skin tightening remain not only its multiple anatomical applications, but also the non-invasive nature of the treatment, and the zero downtime patients experience posttreatment. What appears to perhaps be a novel and effective benefit of the use of this laser is its effect on the tone and turgor of the breast tissue.

With newer treatment techniques (lower fluences, higher repetition rates) and a more defined clinical endpoint (skin temperature as measured by Infrared thermometry (IR), treatment outcomes have become more predictable. With IR thermometry, the skin is heated to an epidermal temperature of 41–42 C, corresponding to a dermal temperature of approximately 60 C. This allows for significant skin contraction and collagen remodeling. This author is concerned about the effects of implants in the breast tissue and any possible changes to the implant capsule as a result of the deep dermal heating. To date, only patients without breast implants have been studied. Additional patients at the Center have successfully completed the breast lift, Nd:Yag treatment protocol, and all have equally experienced a significant improvement in lift, tone, and volume of their tissue, regardless of starting cup size or degree of laxity.

Donald J. Brideau, M.D. earlier reported on his success using the GentleYAG to address female breast asymmetry (*Candela GentleYAG Clinical Bulletin #12, Use of GentleYAG® for Non-Facial Skin Tightening: Lifting Breast Tissue*). While Dr. Brideau only treated one breast, in this paper, we report on the successful lifting of both breasts as a result of complete, upper-chest skin tightening by the GentleYAG 1064 nm laser.

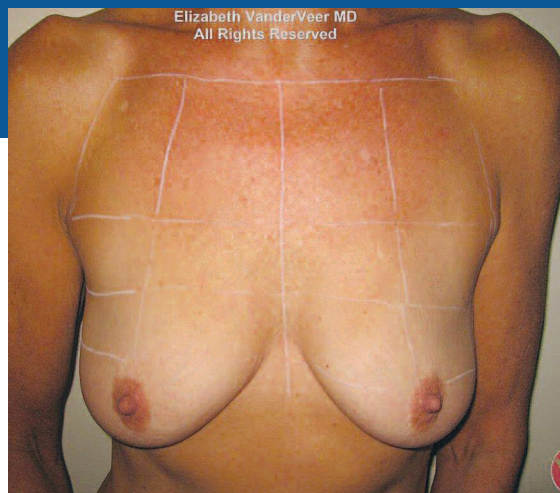


Figure 1 - Pretreatment.



Figure 1 - Post three treatments.

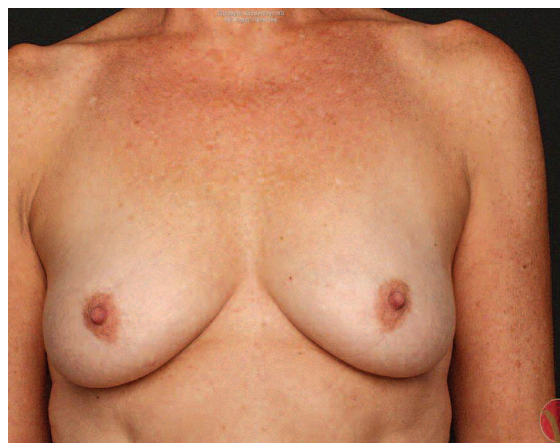


Figure 1 - Post six treatments.

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*Skin tightening by reduction of wrinkles.

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