

# The percutaneous laser thermal ablation treatment for thyroid nodules

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**The percutaneous laser thermal ablation treatment** is indicated for treating benign and malignant lesions of the thyroid with a micro-invasive approach. It employs laser energy to heat and destroy pathologic tissues, avoiding the surgical approach with its real discomfort and possible complications.



Depending on the tissue, anatomical location, size and nature (benign or malignant) of the thyroid nodule to be treated, the indications for this procedure include:

- **For benign lesions (benign thyroid nodules):** to produce a volumetric reduction of the nodule by cytoreduction (reducing the number of cells in the nodule), a process induced by laser ablation with consequent regression of the size of the nodules;
- **For malignant lesions (metastatic lymph nodes of the neck and thyroid microcarcinoma):** to destroy cancerous tissue masses with a sufficient safety margin.

This outpatient procedure, performed without any kind of anesthesia, consists in the insertion of one or two extremely thin optical fibers into the thyroid nodule under ultrasound guidance which will deliver laser

energy that heats the tissues to be treated until they are destroyed. The procedure entails no incisions or stitches with the entire treatment session, including preparation time, lasting for approximately 30 minutes.

Recovery times are very short and the patient can return to normal activities just a few hours after the treatment. In the months following the procedure, the patient just needs to carry out follow-up examinations to monitor the outcome produced in a single treatment session.

## Advantages

- It is an outpatient procedure requiring no local nor general anesthesia
- It entails a short duration of time (about 30 minutes - including preparation of the patient)
- It uses very fine, painless and minimally invasive needles causing no damage to the skin nor underlying tissues
- It does not leave any marks on the neck (no scarring) ensuring good cosmetic results
- It significantly reduces compressive symptoms – in case of benign lesions
- It does not require life-long thyroid hormone replacement therapy, as is the case of surgical removal

## References:

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## About Elesta & ModiLite treatment:

Scotti Bruno is Product Marketing Engineer for Elesta.

ModiLite is the EchoLaser Therapy for treating neck lesions.

The name of the treatment contains in a single word the application area (the neck, "Modi" was the nickname of Tuscan painter, Amedeo Modigliani, who portrayed female subjects with very long, slim necks) and "Lite", which on one hand refers to the lightweight and micro-invasiveness of the treatment, and on the other, the therapeutic source (Light, therefore Laser).

The name ModiLite marks the difference of the procedure performed with EchoLaser (micro-invasiveness and multi-fiber approach in a single system) from the other thermal ablation techniques.