



## THYROID NODULES

### Laser treatment for benign thyroid nodules

#### BACKGROUND

Thyroid nodules are extremely common in adults. Large nodules (>1 cm) are usually biopsied and a diagnosis of either thyroid cancer or suspicious for cancer is made in about 20-30% of nodules, leading to thyroid surgery. The remaining 70-80% are benign (non-cancerous) and usually monitored without surgery. However, there are other options that are not commonly used to try to shrink these benign nodules. One such treatment is using laser treatments to shrink the nodule. This is performed by inserting the laser probe into the thyroid through a large biopsy needle. This study was done to see how effective using lasers are in shrinking benign thyroid nodules.

#### THE FULL ARTICLE TITLE:

Døssing H et al. Long-term outcome following interstitial laser photocoagulation of benign cold thyroid nodules. *Eur J Endocrinol* 2011;165:123-8. Epub May 6, 2011.

#### SUMMARY OF THE STUDY

The study included 78 Danish patients with a single benign thyroid nodule. Each patient received one laser treatment to the nodule. Treatments varied and lasted anywhere from 5-40 minutes. On average, nodules

shrank to about half of the original size and most patients reported an improvement in neck pressure and their cosmetic appearance. The best response occurred in those with smaller nodules. However, 36% of patients needed to eventually have thyroid surgery because of an unsatisfactory result. The major complication was a moderate amount of pain to the neck for up to 4 days.

#### WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The results of this study suggest an alternative treatment for patients with benign thyroid nodules. Laser treatment can shrink thyroid nodules in patients for whom surgery is not a suitable option. However, the treatment can be expensive, take a long time and requires special equipment. The results are somewhat unpredictable and work best in patients with small nodules. Most times, the patients with these small nodules may not even require any treatment other than routine monitoring with an ultrasound.

— Angela Leung, MD

#### ATA THYROID BROCHURE LINKS

Thyroid Nodules: [http://thyroid.org/patients/patient\\_brochures/nodules.html](http://thyroid.org/patients/patient_brochures/nodules.html)

#### ABBREVIATIONS & DEFINITIONS

**Thyroid Nodule:** an abnormal growth of thyroid cells that forms a lump within the thyroid. While most thyroid nodules are non-cancerous (Benign), ~5% are cancerous.

**Thyroid Fine Needle Aspiration Biopsy (FNAB):** a simple procedure that is done in the doctor's office to determine if a thyroid nodule is benign (non-cancerous) or cancer. The doctor uses a very thin needle to withdraw cells from the thyroid nodule. Patients usually return home or to work after the biopsy without any ill effects.