

## Short Communication

# Radiofrequency Ablation of Solid Benign Non-Functioning Thyroid Nodules. Follow Up to One Year

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## Background

Minimally invasive non-surgical therapy “Radiofrequency Thermal Ablation” (RFA) represents a safe and effective treatment option in benign symptomatic cold nodules and hyper-functional hot nodules.

## Objective

The aim of our study is to evaluate the clinical outcome and safety of RFA for Benign Thyroid Nodules (BTNs) over a 1-year follow-up.

## Methods

Twenty consecutive patients with symptomatic BTNs afferent to Thyroid Ultrasound Division of the Hospital of Ariano Irpino were

enrolled. Entry criteria were a single benign thyroid nodule and normal thyroid function. Three subgroups were formed according to the baseline volume of nodules: small ( $\leq 10$  mL), medium (from 10 to 20 mL), or large ( $>20$  mL). All patients underwent US thyroid examination for volumetric assessment and morphostructural features, serum dosage of TSH, FT3, FT4, Ab antiperoxidase and antitreoglobulin, dual needle-aspirated US-guided. The symptomatic and cosmetic score was evaluated in all patients.

## Results

The Volume Reduction Ratio (VRR) at 3 months was 59.3%, at 9 months of 72%, and at 12 months of 70% respectively. Both the volume of the nodules and the VRR showed significant differences in the comparison between the pre- and post-intervention ( $p < 0.001$ ), in the same way the reduction in the perception of the discomfort assessed with the cosmetic and symptomatic scores was statistically significant. Thyroid function had remained normal after treatment and no complications were reported.

## Conclusion

The US-guided RFA is an effective technique for percutaneous treatment of benign thyroid nodules.