

# Effectiveness of radiofrequency ablation of the autonomously functioning benign thyroid nodules



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The usual treatment for autonomously functioning benign thyroid nodules was surgery until the advent of new techniques such as radiofrequency ablation (RFA). This study aimed at estimating RFA efficacy of autonomously functioning benign thyroid nodules.

## Material & Method

The analysis included the results of treatment of 108 patients with autonomously functioning benign tumors of the thyroid gland, received in the Samara Oncology Center.

All patients had high level of thyroid hormones and low level of thyreotropin.

In all of them scintigraphy determined hot nodules.

All the patients underwent fine needle biopsy twice.

RF ablation was performed using an 18-gauge, internally cooled electrode, length 10 cm, working part 0.7 cm.

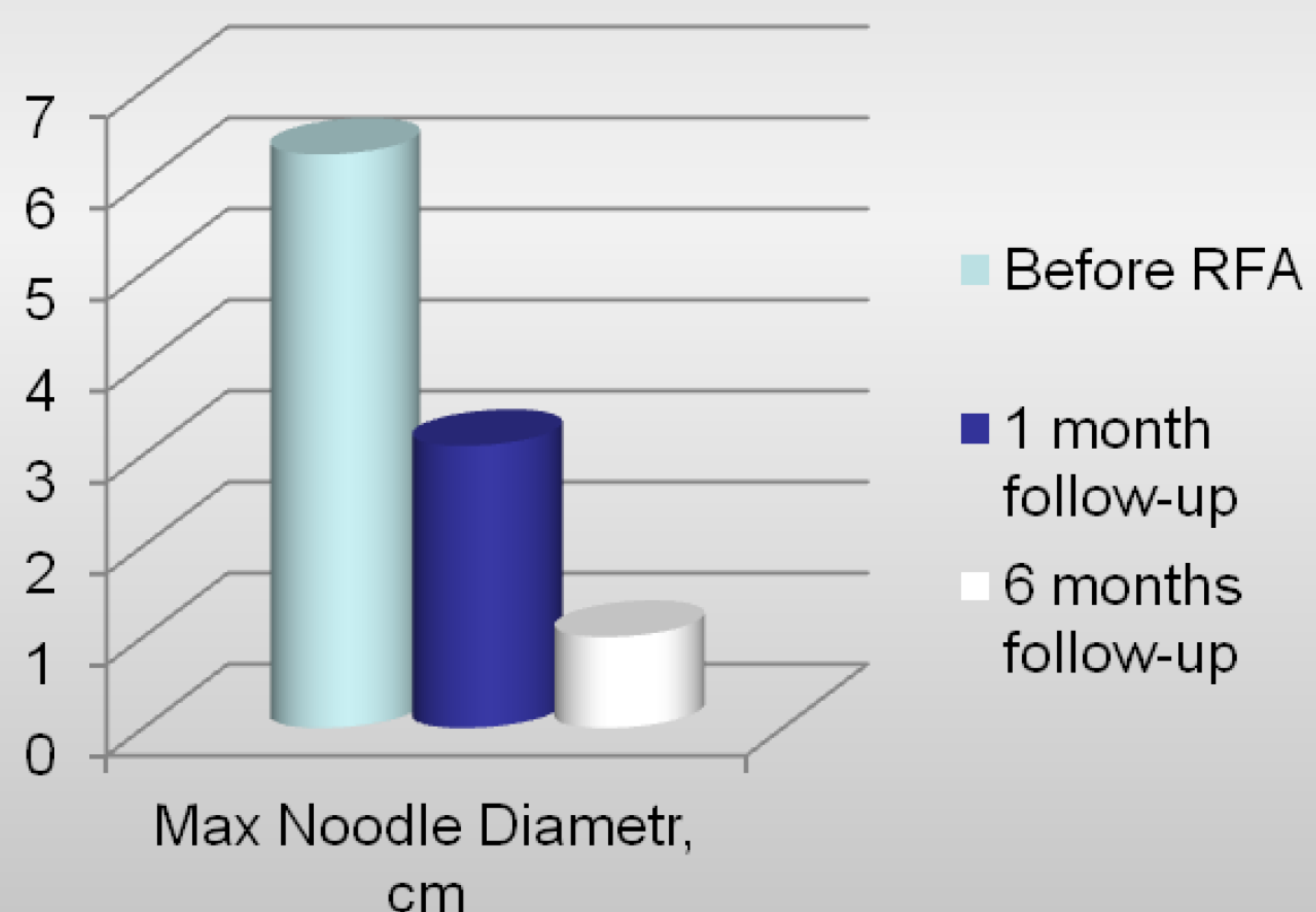
During the follow-up nodule volume and thyroid function were evaluated.

Characteristics	Number
Age	57 (24-78)
Sex	
men	11
women	97

## Results

The mean follow-up was  $15.3 \pm 3.6$  months. The mean nodule max diameter was initially  $6.5 \pm 4.1$  cm and significantly decreased after treatment at 1 month ( $3.1 \pm 1.9$  cm,  $p < 0.05$ ) and at 6 months ( $0.5 \pm 2.9$  cm,  $p < 0.05$ ). Levels of triiodothyronine, free thyroxine, and thyrotropin reach normal in 2-3 weeks after RFA.

No serious complications such as thyroiditis, voice change, and hematomas were observed.



### Complications:

- Pain – 1.8 %

## Conclusion

**RFA was effective and safe for treating autonomously functioning benign thyroid nodules and it might be recommended for treating “hot” benign thyroid nodules as the first-line treatment.**