

General Principles for the Safe Performance, Training, and Adoption of Ablation Techniques for Benign Thyroid nodules: An ATA[®] Statement

Pre-Procedure Management

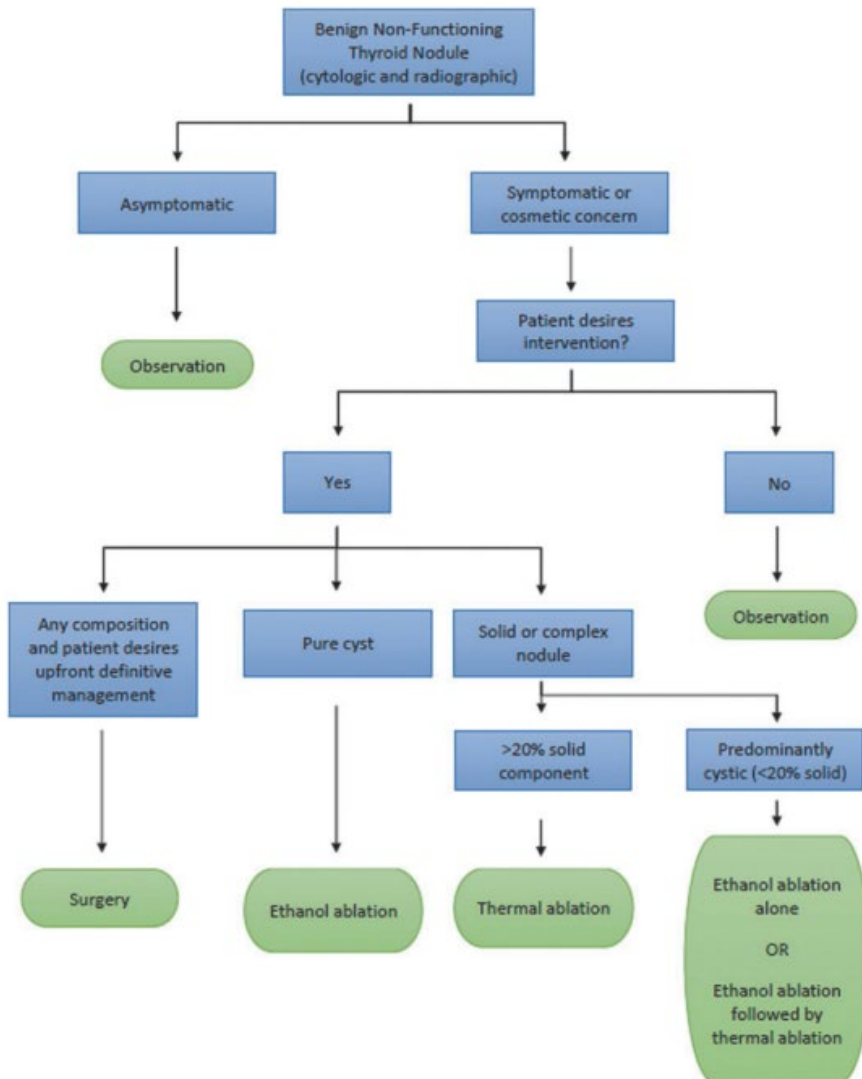
Patient Eligibility & Selection

- Compressive and/or cosmetic complaints due to a single nodule
- Solitary autonomously functioning nodules
- Ensure nodule is benign prior to treatment:
 - TIRADS 1 or 2 = single benign biopsy
 - TIRADS 3 or 4 = two benign biopsies
 - Autonomously functioning nodule = single benign biopsy

Patient Eligibility & Selection

- Non-functioning nodules:
 - Minimum 2 - 3 cm
 - No maximum size
 - Volume >20 - 30 ml are more likely to need multiple treatments
- Autonomous nodules:
 - Confirm hyperfunctioning nodule with RAIUS
 - Volume <10 - 12 ml optimal to achieve euthyroidism

Considerations of technique



- Solid nodules are candidates for thermal ablation
- Purely cystic nodules, or those >20% cystic are best treated with ethanol ablation

Relative contraindications

- TIRADS 5 nodule
- Indeterminate biopsy results with negative molecular markers
- Multinodular goiter with bilateral nodularity
- Significant substernal extension
- Pregnancy
- Pacemaker or ICD
- Unable to discontinue anticoagulants prior to procedure

Absolute contraindications

- Cytologically indeterminate biopsy result with positive molecular testing
- Known malignancy >1.5 cm
- Treatment areas not able to be visualized on ultrasound

Patient Counseling

- Set realistic expectations
- Present alternative management options without bias
- Review risks and benefits (see following slides)
- Review need to discontinue anticoagulation:

Anticoagulant	Discontinue	Resume
Warfarin	5 days prior	Day following procedure
Anti-platelet agents	7-10 days prior	Day following procedure
Direct oral anticoagulants	24 - 36 hours prior	Day following procedure

Benefits of Ablative Techniques

- Reduction in nodule volume
- Improvement in compressive symptoms and cosmetic concerns
- Avoidance of scars and thyroid hormone supplementation
- Outpatient procedure
- Less recovery time compared to surgery

Risks of Ablative Techniques

- Thermal/chemical injury to the recurrent laryngeal nerve
- Nodule rupture
- Bleeding/hematoma
- Failure to correct hyperthyroidism (for autonomous nodules)
- Possible need for repeat procedures (for large nodules)
- Delayed diagnosis of missed malignancies