MEDICAL POLICY

POLICY TITLE	RADIOFREQUENCY ABLATION OF THYROID TUMORS
POLICY NUMBER	MP 1.165

CLINICAL BENEFIT	☐ MINIMIZE SAFETY RISK OR CONCERN. ☒ MINIMIZE HARMFUL OR INEFFECTIVE INTERVENTIONS. ☐ ASSURE APPROPRIATE LEVEL OF CARE. ☐ ASSURE APPROPRIATE DURATION OF SERVICE FOR INTERVENTIONS. ☒ ASSURE THAT RECOMMENDED MEDICAL PREREQUISITES HAVE BEEN MET. ☐ ASSURE APPROPRIATE SITE OF TREATMENT OR SERVICE.
Effective date:	**5/1/2026**

POLICY

Radiofrequency ablation is considered **medically necessary** for symptomatic nonfunctioning thyroid nodules when all of the following are met:

- Nodule causes compressive symptoms (i.e., pain, difficulty breathing or swallowing or hoarseness); **and**
- Nodule has been confirmed to be benign as evidenced by *one* of the following
    - Benign cytology on two fine needle or core biopsies; **or**
    - Benign cytology on a fine needle or core biopsy and nodule is considered low to intermediate risk

Radiofrequency ablation is considered **medically necessary** for autonomously functioning thyroid nodule (AFTN) when all of the following criteria are met:

- Subclinical or overt hyperthyroidism; **and**
- Radioactive uptake scan confirmation of a hyperfunctioning nodule; **and**
- Nodule has been confirmed to be benign as evidenced by *one* of the following:
    - Benign cytology on two fine needle or core biopsies; **or**
    - Benign cytology on a fine needle or core biopsy and nodule is considered low to intermediate risk

Radiofrequency ablation is considered **investigational** for all other thyroid indications not meeting the above criteria, including thyroid carcinoma. There is insufficient evidence to support a general conclusion concerning the health outcomes or benefits associated with this procedure for these indications.

Policy Guidelines

The American Thyroid Association (ATA) statement on the general principles regarding ablation of benign thyroid nodules lists minimum necessary criteria:

- Dominant nodule contributing to cosmetic or compressive disturbance; OR Autonomously functioning nodule causing subclinical or clinical hyperthyroidism
- Benign cytology on fine needle or core biopsy

- Ultrasound risk stratification for malignancy categorized as very low to intermediate
- Lack of personal risk factors for malignancy
- Clear comprehension and realistic expectations of the ablation procedure, expected outcomes, potential complications, and alternatives

Thyroid nodules categorized at US examination as very low/low suspicion of malignancy according to the ATA (class 1-3) classification system and nodules classified as intermediate suspicion according to the ATA (class 4) with benign cytology can be considered candidates for ablation, provided cytology is benign.

Two benign biopsies are usually recommended. A single benign biopsy may be sufficient for:

- nodules with very low sonographic suspicion
- autonomously functioning nodules with low to intermediate sonographic suspicion.

An American Assoication of Clinical endocrinology (AACE) clinical review of minimally invasive interventional procedures states that a thyroid nodule's benign nature should be defined by 2 US-guided Bethesda II fine-needle aspirations (FNAs) or 1 fine-needle aspiration cytology (FNAC) and 1 benign core needle biopsy (CNB). Autonomously functioning nodules and American Thyroid Association low-risk or very-low-risk nodules could be ablated after 1 Bethesda II FNAC or a benign CNB.

PRODUCT VARIATIONS

This policy is only applicable to certain programs and products administered by Capital Blue Cross and subject to benefit variations. Please see additional information below.

FEP PPO - Refer to FEP medical policy manual. The FEP medical policy manual can be found at: fepblue.org/benefit-plans/medical-policies-and-utilization-management-guidelines/medical-policies.

DESCRIPTION/BACKGROUND

The optimal therapy for patients with thyroid nodules varies with the lesion that is found and whether or not it is functioning.

Symptomatic Nonfunctioning Benign Thyroid Nodules

The majority of benign thyroid nodules are asymptomatic, with symptomatic cases often attributed to their size or anatomical location. Compressive or obstructive symptoms may include dysphagia, dyspnea, neck pressure, foreign body sensation, pain or a cough. While benign thyroid nodules smaller than 2 centimeters (cm) rarely cause symptoms requiring treatment, they may cause symptoms based on anatomic location. The goal of thermal ablation is to reduce nodule size and promote resolution of symptoms. The primary objective of thermal ablation is to decrease nodule size and facilitate the resolution of associated symptoms.

Autonomously Functioning Thyroid Nodule (AFTN)

AFTNs are benign nodules that produce thyroid hormones without the regulation of thyroid stimulating hormone (TSH). AFTNs can result in hyperthyroidism even when TSH levels are low or normal. Hyperthyroidism affects approximately 1.2% of the United States, with 0.5% of cases categorized as overt and 0.7% categorized as subclinical (Doubleday, 2020). AFTNs are frequently identified through scintigraphy showing increased radioactive iodine uptake. Common causes of hyperthyroidism include Graves' disease, non-toxic nodular goiters and toxic adenomas. The presence of an AFTN is the second most common cause of hyperthyroidism. The standard therapy options of AFTNs are surgery or radioactive iodine ablation (RAI).

The 2022 international consensus statement document (Orloff) includes a recommendation that ablation procedures may be used as a first-line alternative to surgery in individuals with benign thyroid nodules. This recommendation is based upon individual international guideline documents. The document notes that thermal ablation procedures can be a safe alternative to treat AFTNs in individuals with contraindications to first-line therapies.

RATIONALE

Radiofrequency ablation (RFA) is the most studied thyroid lesion ablative technique. Cerit and associates (2023) compared the efficacy of 2 ablative techniques in treating individuals with benign thyroid nodules. Individuals were treated with RFA (n=37) or MWA (n=43). The primary comparison endpoint was the efficacy at reducing the volume of thyroid nodules at 1, 3, 6, and 12 months post-procedure. The RFA group reported significantly higher volume reduction rates, compared to the MWA group (77.9% vs. 65%; $p<0.001$, respectively). The authors concluded that both RFA and MWA are effective in treating benign thyroid nodules, but RFA provides superior volume reduction.

Døssing and colleagues (2019) reported on the long-term efficacy of laser therapy to treat benign complex thyroid nodules. Individuals with recurrent cytologically benign cystic thyroid nodules causing local discomfort were treated with laser therapy. Follow-up was completed at 1, 3 and 6 months after treatment, then annually. Following laser therapy, 17% (19/110) underwent surgery due to dissatisfaction with the laser ablation results. The median follow-up in the nonsurgical group was 45 months (12-134 months). In the individuals who did not undergo surgery, the overall median nodule volume decreased by 85% over the course of follow-up.

In a retrospective review, Pacella and colleagues (2015) reported on the effectiveness, tolerability, and complications associated with laser ablation therapy. Consecutive individuals with solid or mixed nodules treated with laser ablation were included (n=1531). The mean nodule volume reduction was 72% ± 11% (range 48%-96%) at 12 months after treatment. The authors reported 17 complications, 8 of them categorized as major and 9 categorized as minor.

In a retrospective study, Cervelli and associates (2019) compared the efficacy of RFA and radiofrequency iodine (RAI) in treating AFTNs. Individuals with a single AFTN treated with RFA (n=25) or RAI (n=25) were treated in a single session. The primary outcome was normalizing thyroid function and reducing nodule volume over 12 months. At 12 months, RFA reduced nodule volume by 79.7% and had a lower incidence of hypothyroidism (requiring hormone replacement, n=1) compared to RAI (20%-32% risk of hypothyroidism and a 68.4% volume reduction).

The evidence is sufficient to determine that the technology results in an improvement in the net health outcome

DEFINITIONS/BACKGROUND

AUTONOMOUSLY FUNCTIONING NODULE refers to a nodule that secretes thyroid hormones independent of thyroid stimulating hormone (TSH), resulting in excess thyroid hormone (hyperthyroidism). (Also known as a hyperfunctioning, toxic or hot nodule.)

RADIOFREQUENCY ABLATION (RFA) is a surgical procedure where cancerous or diseased cells are destroyed using heat produced by high-frequency radio waves.

DISCLAIMER

Capital Blue Cross' medical policies are used to determine coverage for specific medical technologies, procedures, equipment, and services. These medical policies do not constitute medical advice and are subject to change as permitted by law or applicable clinical evidence from independent treatment guidelines. Treating providers are solely responsible for medical advice and treatment of members. These policies are not a guarantee of coverage or payment. Payment of claims is subject to a determination regarding the member's benefit program and eligibility on the date of service, and a determination that the services are medically necessary and appropriate. Final processing of a claim is based upon the terms of contract that applies to the members' benefit program, including benefit limitations and exclusions. If a provider or a member has a question concerning this medical policy, please contact Capital Blue Cross' Provider Services or Member Services.

CODING INFORMATION

Note: This list of codes may not be all-inclusive, and codes are subject to change at any time. The identification of a code in this section does not denote coverage as coverage is determined by the terms of member benefit information. In addition, not all covered services are eligible for separate reimbursement. The codes need to be in numerical order.

RFA for benign thyroid nodules is medically necessary when criteria is met:

Procedure Codes							
60660	60661						

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2. *Haugen BR, Alexander EK, Bible KC, et al. 2015 American Thyroid Association Management Guidelines for Adult Patients with Thyroid Nodules and Differentiated Thyroid Cancer: The American Thyroid Association Guidelines Task Force on Thyroid Nodules and Differentiated Thyroid Cancer. Thyroid. 2016;26(1):1-133. doi:10.1089/thy.2015.0020*
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14. *National Institute for Health and Care Excellence (NICE). Ultrasound-guided percutaneous radiofrequency ablation for benign thyroid nodules [IPG562). 2016;*

15. National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology: Thyroid Carcinoma. Version 1.2025.

POLICY HISTORY

MP 1.165	**10/20/2025 New Policy.**