

Introduction to the 2026 KSThR/KTA Guidelines for Thyroid Radiofrequency Ablation

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Radiofrequency ablation (RFA) has evolved into a recognized minimally invasive treatment option for primary low-risk papillary thyroid carcinoma (PTC). The Korean Society of Thyroid Radiology (KSThR) and the Korean Thyroid Association (KTA) jointly developed comprehensive, evidence- and consensus-driven clinical practice guidelines for RFA of low-risk PTC — the first multidisciplinary guidelines addressing this topic in Korea.

The management of low-risk PTC, particularly papillary thyroid microcarcinoma (PTMC) ≤ 1 cm, has undergone a paradigm shift. While surgery remains the standard treatment, growing concerns about overtreatment and procedure-related morbidities have driven interest in less invasive alternatives. RFA now occupies a therapeutic middle ground between surgery and active surveillance (AS), offering definitive local tumor control while preserving thyroid function and avoiding surgical morbidity.

A multidisciplinary task force conducted a systematic literature review through August 2025, producing several key questions with recommendations. Core recommendations include: RFA as a first-line option for cytopathologically confirmed (Bethesda V BRAF-positive or VI) low-risk PTC measuring 5 mm–1 cm, without gross extrathyroidal extension or nodal metastasis. A three-tiered appropriateness framework — **Ideal**, **Appropriate**, and **Inappropriate** — guides patient selection based on tumor location and hydrodissection feasibility.

Pooled data from over 9,000 patients demonstrate complete tumor disappearance rates of 90–94% and disease progression rates of approximately 1–2%, comparable to surgical lobectomy, with significantly lower complication rates. Operator competency requirements and structured post-procedural surveillance protocols analogous to post-lobectomy follow-up are also addressed.

These guidelines provide a rigorous, imaging-centered framework for standardizing the safe and appropriate application of RFA in low-risk PTC management.