Therapeutic options in the management of low-grade papillary thyroid carcinomas

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The papillary thyroid carcinoma (PTC) represents the predominant form of differentiated thyroid malignancy, accounting for nearly 85 – 90% of all thyroid cancers and demonstrating disease-specific survival rates above 90% at 20 years of age. Within this spectrum, T1 low-grade tumors – defined as intrathyroidal lesions ≤2 cm in diameter, without extrathyroidal extension, aggressive histological variants, or distant metastases – exhibit particularly indolent biological behavior. In this context, treatment strategies have shifted from routine radical approaches toward individualized, risk-adapted management. While the total thyroidectomy remains an established option, lobectomy has emerged as a safe and oncologically adequate alternative for carefully selected patients, with the added benefit of reducing surgical morbidity and long-term dependence on thyroid hormone replacement. Increasing evidence also supports an active surveillance for intrathyroidal microcarcinomas, provided that high-resolution ultrasonography and strict follow-up protocols are available, reserving surgery for disease progression or patient preference. These evolving paradigms reflect an effort to minimize overtreatment and its associated risks, including recurrent laryngeal nerve injury and hypoparathyroidism, without compromising disease-specific survival. A multidisciplinary, patient-centered approach –integrating tumor biology, molecular markers such as BRAF V600E, and patient comorbidities – remains essential to optimize outcomes. Current trends emphasize tailoring therapy to the biological and clinical heterogeneity of T1 low-grade PTC, thereby aligning oncological safety with the preservation of life quality.

Key words: T1 low-grade Papillary thyroid carcinoma, lobectomy, total thyroidectomy, active surveillance