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Thyroid Lobectomy vs Total Thyroidectomy for Low Risk Papillary Thyroid Cancer: A Systematic Review

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INTRODUCTION: The 2015 American Thyroid Association (ATA) guidelines called for consideration of thyroid lobectomy as an acceptable surgical treatment for small and less aggressive papillary thyroid cancers (PTC) with no clinical evidence of metastasis or extrathyroidal extension. Extent of surgery however, remains controversial.

METHODS: A systematic literature review was performed on Pubmed, EMBASE, Scopus and Cochrane Library databases using a combination of the keywords: papillary thyroid carcinoma, lobectomy, completion thyroidectomy and guidelines during the years 2012 to 2017. Eight retrospective studies comparing lobectomy to total thyroidectomy on 1,294 patients with low risk PTC were included for analysis. Studies were grouped according to the major themes: survival and completion thyroidectomy.

RESULTS: Compared to lobectomy, total thyroidectomy does not confer a survival advantage in low risk PTC. Despite appropriate preoperative risk stratification approximately 30% of thyroid lobectomy candidates will require completion thyroidectomy.

CONCLUSIONS: The 2015 ATA guidelines encourage personalization of care for patients with low risk PTC including a more conservative approach to initial extent of surgery and administration of radioactive iodine. A significant proportion of patients treated with lobectomy may require completion procedures for loco regional disease control, but which may not pose a negative impact in overall survival. Risks and benefits should be discussed carefully with patients. Future research considering outcomes such as complication rates, recurrence free survival, need for completion thyroidectomy, and long-term follow-up is warranted.