

VASCULAR INVASION (VI) IS NOT AN INDEPENDENT PREDICTOR OF OUTCOME IN WELL-DIFFERENTIATED PAPILLARY THYROID CARCINOMA (WDTC)

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Background/Purpose: VI is an important indicator of distant metastasis potential and possible radioactive iodine (RAI) benefit in follicular-, Hurthle cell-, and poorly differentiated thyroid carcinomas, but its role in WDTC remains unclear.

Methods: Archived pathological material of all differentiated thyroid carcinoma patients undergoing primary surgical treatment at Memorial Sloan-Kettering Cancer Center between 1986 and 2003 was reviewed by a dedicated thyroid pathologist (RAG). Only WDTCs were included in the present study. Standard statistical methods were used to assess the relationship between VI and outcomes of interest, including overall survival (OS), disease-specific survival (DSS), recurrence-free survival (RFS), local recurrence-free survival (LRFS), neck-recurrence-free survival (NRFS), and distant recurrence-free survival (DRFS), at a median follow-up of 10 years.

Results: VI was present in 47 of 698 WDTC (6.7%). VI was significantly associated with tumor size > 4.0 cm, positive margins, extrathyroidal extension, distant metastasis, and application of RAI treatment. On univariate survival analysis, VI was predictive of decreased 10-year RFS, and DRFS, but not OS, DSS, LRFS, or NRFS. On multivariate analysis, VI was not an independent predictor of these outcome parameters. Univariate subset survival analysis of 422 RAI-naïve WDTC, showed that both size > 4cm, and VI were predictors of outcome, but only size remained independently predictive in multivariate analysis.

Discussion & Conclusion: The presence of VI is not an independent predictor of outcome, but is generally associated with other adverse prognostic factors, which impact upon treatment decisions, and outcomes.