

## **INCREASED PREOPERATIVE SERUM THYROGLOBULIN IN PATIENTS WITH PAPILLARY THYROID CARCINOMA IS ASSOCIATED WITH LYMPH NODE METASTASIS**

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**Background/Purpose:** Serum thyroglobulin is a reliable tumor marker for detecting recurrent and persistent disease during the follow-up of patients with differentiated thyroid carcinoma. There is limited evidence that high preoperative serum Tg may influence patient outcomes. We investigated whether serum Tg determination before surgery in patients with papillary thyroid carcinoma may have any prognostic value with regard to tumor extension and disease outcome in a retrospective study.

**Methods:** Between October 1994 and December 2008, Patients who underwent initial total thyroidectomy at our institution were included. Selection criteria : Absence of anti-Tg antibodies, No abnormality of thyroid function, No thyroid specific treatment, Absence of chronic lymphocytic thyroiditis. Serum Tg was measured by radioimmunoassay method with a functional sensitivity of 0.2 ng/ml. Classified into one of three groups according to the Tg level.

**Results:** A total of 1910 patients were included. A significant correlation was found between presurgical serum Tg levels and the tumor size ( $p < 0.001$ ). Serum Tg levels were positively correlated with lymph node metastasis ( $p < 0.001$ ). In univariate analysis, high Tg group ( $\geq 70$  ng/ml) demonstrated a worse disease-free survival ( $p=0.049$ ; HR = 2.0, 95% CI: 1.03-4.26) than low Tg group. However, the multivariate analysis did not reveal a significant prognostic value of serum Tg level.

**Discussion & Conclusion:** Presurgical serum Tg measurement has little significance on prognosis. However, increased preoperative serum Tg level was associated with lymph node metastasis in patients with papillary thyroid carcinoma. High preoperative serum Tg levels in patients with papillary thyroid carcinoma may reflect more tumor burden than in patients with lower Tg-secreting tumor.