



# Western Surgical Association 2020 Annual Meeting

Monday, November 9, 2020  
4:00pm – 6:15pm Pacific Time  
– Virtual Meeting --

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## Q 2. TOTAL THYROIDECTOMY VS. THYROID LOBECTOMY FOR LOCALIZED PAPILLARY THYROID CANCER IN CHILDREN: A PROPENSITY-SCORE MATCHED SURVIVAL ANALYSIS

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**Background:** Current guidelines recommend total thyroidectomy (TT) and radio- ablation for most papillary thyroid cancer (PTC) in children. This recommendation has been criticized as being very aggressive, especially for early-stage PTC, as it likely does not influence patient survival, increases the risk for surgical complications, and requires children to undergo life-long thyroid hormone replacement therapy. There currently are limited data in support of thyroid lobectomy (TL) for PTC in children. We, therefore, sought to study whether the extent of thyroidectomy (TL vs TT) influences overall and disease-specific survival in pediatric patients with localized PTC using two large national databases.

**Methods:** Both the National Cancer Database (NCDB) and the Surveillance, Epidemiology, and End Results (SEER) registry were used for this analysis. Pediatric patients ( $\leq 17$  years old) with localized PTC (defined as unifocal tumors  $< 4$ cm, with no distant or extrathyroidal disease), were included between 2004 and 2016. Patients with multifocal, extrathyroidal, and/or distant disease were excluded from the analysis. Patients who underwent TT for PTC were identified and matched with a similar cohort of patients who underwent TL. Both groups were matched in a 1:1 ratio using propensity score matching for age, sex, race, year of diagnosis, and tumor size of  $< 2$ cm. Primary endpoints for this study were overall survival (OS) (from NCDB and SEER) and disease-specific survival (DSS) (from SEER).

**Results:** 15,705 patients with PTC were identified in both databases and 1331 patients were pediatric patients with tumors  $< 4$ cm in size. Of those 324 patients were selected and matched using a 1:1 propensity score matching. 162 patients (143 females) with a mean age of 16(13- 17) had TT. 162 patients (139 females) with a mean age of 16(14- 17), had TL. Median follow up was 55 months (IQR 27 -89) for both groups. We did not find any statistically significant difference in OS or DSS in patients with PTC  $< 4$ cm regardless of whether patients underwent a TT or TL.  $p=0.32$  and  $p= 0.92$  in NCDB and SEER database respectively.

**Conclusion:** This study suggests that the extent of thyroidectomy does not influence survival for pediatric patients with early-stage PTC and therefore that TL may be an appropriate therapy in this patient population.