Sefika Burcak Polat, Bekir Cakir, Berna Ogmen, Husniye Baser, Cevdet Aydin, Reyhan Ersoy
1 Yıldırım Beyazıt University, Faculty of Medicine, Department of Endocrinology and Metabolism, Ankara, Turkey

Introduction
The characteristics of multifocal PTC remain controversial. Surgical approach to multifocal tumor changes between centers. In cases that the initial procedure was lobectomy, most clinicians would suggest for completion thyroidectomy since the risk of PTC in the contralateral lobe is significant. This study aimed to evaluate the incidence of bilateral involvement, predictive factors for bilaterality and whether or not bilaterality was related with more aggressive histopathologic features in patients with multifocal PTC.

Methods
- Medical records and pathologic data of 914 patients who underwent total thyroidectomy and diagnosed with PTC were retrospectively reviewed. The patients with multifocal disease were detected and subdivided into two subgroups as unilateral-multifocal PTCs and bilateral multifocal PTCs. These two groups were compared to each other regarding demographic, clinical and histopathological features.

Results
- Multifocal disease was detected in 294 patients (32.7 %). Of all, 102 patients (36.7%) had unilateral whereas 192 cases (65.3%) had bilateral involvement. As a result of univariate analysis, bilaterality was significantly associated with the number of tumor foci (p<0.001), tumor size (p=0.008), TSH (p=0.002) and capsule invasion (p=0.018). Multivariate analysis demonstrated that the number of tumor foci and TSH level were independent risk factors for bilaterality in multifocal PTC (p<0.001 and p=0.006, respectively).

Conclusion
- Incidence of bilateral tumors is high and increases with the number of tumor foci in multifocal PTC. Bilateral involvement in multifocal PTC is not associated with worse histopathological futures. TSH can be taken as a preoperative indicator able to predict multifocal cancers and guide clinical decision making and surgical management.