## DOES HASHIMOTO THYROIDITIS AFFECT BEHAVIOR OF PAPILLARY THYROID CANCER AND IT'S GENETICS?

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**Background/Purpose:** The aim of the study was to evaluate the relationship of Hashimoto's thyroiditis (HT) with the morphological features of papillary thyroid carcinoma, and it's relations with *BRAF*V600E mutations.

**Methods:** Study is based in retrospective analysis of the 1338 patients operated with a papillary carcinoma proved or found via histological examination.

**Results:** Of 433 patients (32.4%) had multifocal tumor. In 40.7% of cases they were with Hashimoto thyroiditis and 27.7% with no background HT (the difference was significant:  $\chi 2=24,1$ ; p=0,00000045). It was also noted a significant difference ( $\chi 2=5,9$ ; p=0,0076) in the likelihood of multifocal process in patients with focal and diffuse nature of the thyroiditis - 43.3% and 28.6% respectively. In 406 (30.6%) cases capsular invasion was observed. It was significantly more prevalent in HT background (33.3% vs 28,7%;  $\chi 2=3,1$ ; p=0,00387). Also significant difference ( $\chi 2=30,8$ ; p<0,0000001) in rate of capsular invasion was between focal thyroiditis (38.8%) and diffuse (7,1%). The relative risk of invasion by the nature of focal thyroiditis was significant - 5.37. *BRAFv600e* mutation was found in 90,9% of cases with HT with papillary thyroid cancer and in 88.7% cases without HT, difference was insignificant. **Discussion & Conclusion:** There is marked association of papillary carcinoma, and some of its basic features with the presence of Hashimoto's thyroiditis. Meanwhile there is no connection with expression of *BRAFv600e*. Probably, there are same etiological factors underlying both diseases playing strong role in prognosis, maybe more important than *BRAFv600e*.