



# Coexisting Papillary Thyroid Carcinoma and Renal Cell Carcinoma : 4 Cases



Mehmet Celik<sup>1</sup>, Semra Ayturk<sup>1</sup>, Buket Yılmaz Bulbul<sup>1</sup>, Ebru Tastekin<sup>2</sup>, Nuray Can<sup>2</sup>, Atakan Sezer<sup>3</sup>, Funda Ustun<sup>4</sup>, Ahmet Kucukarda<sup>1</sup>, Sibel Guldiken<sup>1</sup>

<sup>1</sup>Trakya University, Medical Faculty, Department of Endocrinology and Metabolism, Edirne, Turkey

<sup>2</sup>Trakya University, Medical Faculty, Department of Pathology, Edirne, Turkey

<sup>3</sup>Trakya University, Medical Faculty, Department of Surgery, Edirne, Turkey

<sup>4</sup>Trakya University, Medical Faculty, Department of Nuclear Medicine, Edirne, Turkey

- Papillary thyroid cancer (PTC) constitutes 85% of all differentiated thyroid cancers. PTC is usually sporadic, but may occur in a familial form. Familial cancer syndromes such as Cowden’s syndrome and familial adenomatous polyposis are associated with PTC. Lal et al. recently published a study in which subsequent thyroid cancer was most common among the patients with renal cell cancer (RCC). RCC is a common malignancy of uroepithelial region, which constitutes about 3% of all adult malignancies. We presented 4 cases consecutively diagnosed with PTC and RCC within 12 months (Table). 3 cases with BRAF positivity had lymph node metastasis. The BRAF gene is located on chromosome 7. BRAF is a signaling protein downstream of Ras that activates the MAP-kinase pathway and implicated in cell differentiation and proliferation. Mutations of this gene have been found in cancers, including non-Hodgkin lymphoma, colorectal cancer, malignant melanoma, PTC and lung carcinoma, while few studies reported RCC cases with BRAF mutation. In 2016, Natasha Banerjee et al. reported a case with metastatic RCC and BRAF mutation, in whom a good clinical outcome was achieved following BRAF inhibition. BRAF positivity observed in 3 of our cases suggests that further studies are required on a common mutation that exists in RCC and PTC.

- Table:

	CASE 1	CASE 2	CASE 3	CASE 4
Age	64	48	56	67
Gender	Male	Male	Male	Male
Clinic	Euthyroid	Euthyroid	Hyperthyroid	Hyperthyroid
PTC-variant	Classic and follicular	Classic and follicular	Classic and oncocytic	Classic, follicular and oncocytic
PTC-grade	pT1a –pN1	pT1a –pNx	pT3a –pN1	pT4a –pN1
Focality	Multifocal	Multifocal	Multifocal	Multifocal
Metastasis	+	-	+	+
BRAF mutation	V600E (+)	Not analyzed	V600E (+)	V600E (+)
RAI (I-131)	+	-	+	+