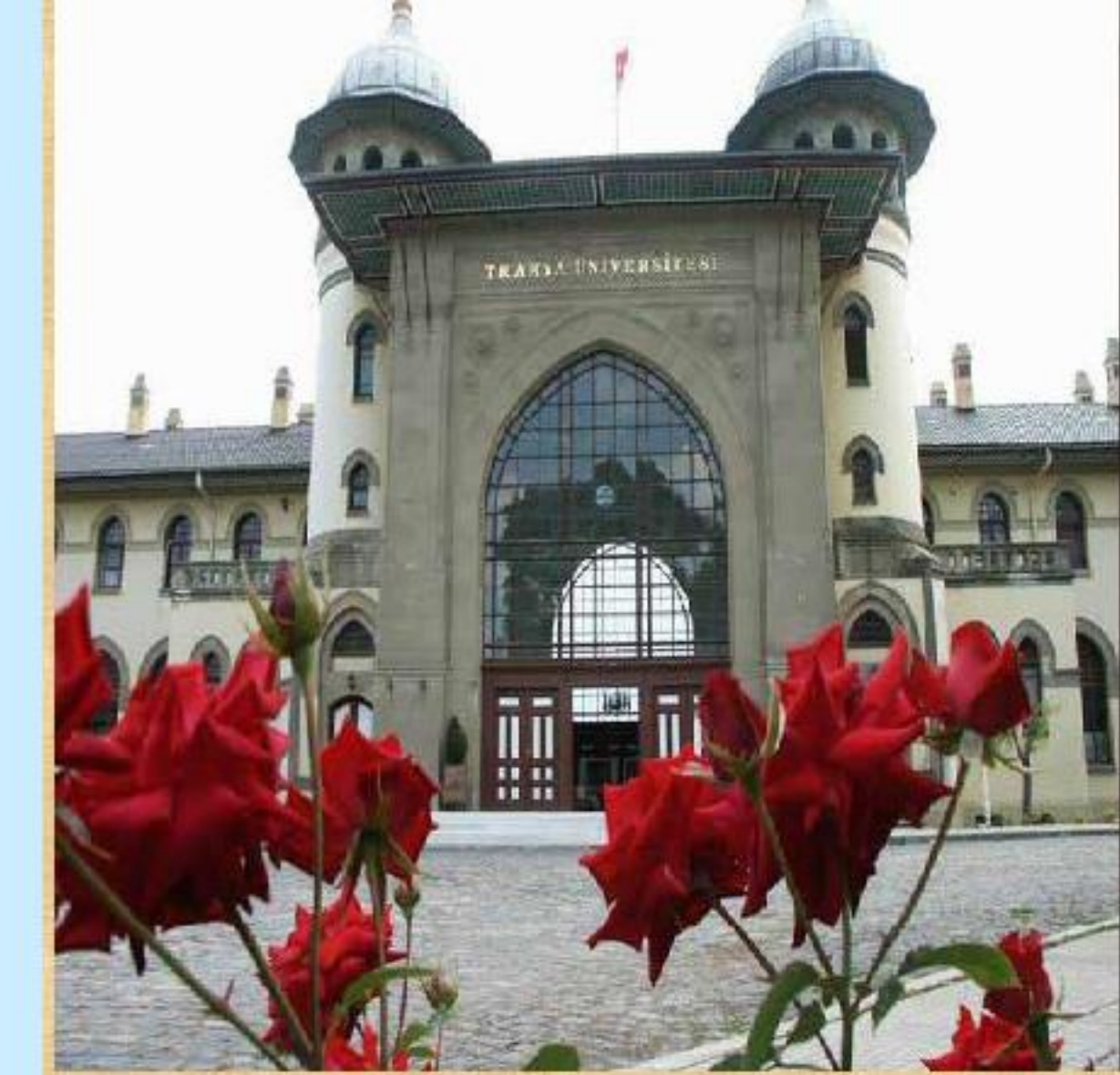




Is Beta2-microglobulin a specific marker of Anaplastic Thyroid Carcinoma?



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- Anaplastic thyroid carcinoma (ATC) is the most aggressive and lethal thyroid malignancy. The median survival time following diagnosis is typically six months or less. β 2 microglobulin (β 2-MG) is a component of MHC class I molecules, which exists in all nucleated cells except red blood cells and placental trophoblast cells. Levels of beta-2 microglobulin can be elevated in multiple myeloma, lymphoma and amyloidosis. In few studies on anaplastic thyroid cancer, β 2-MG levels were found to be elevated especially in the subjects with lymph node metastasis.
- A 71-year-old woman presented with a rapidly enlarging neck mass present for the last 4 weeks. Physical examination revealed a 3 cm sized tender thyroid mass on the right lobe and 2 cm sized lymph nodes on right cervical region. Anti-thyroglobulin antibody and anti-TPO were positive, TSH, FT4 and FT3 levels were normal. Leukocyte:4730 uL(n:3980-10040), hemoglobin:10.6(n:12-15) gr/dl, thrombocyte:210000 uL(n:150000-450000), sedimentation:44 mm/h(n:0-20),CRP:0.11 mg/dl(n:0-0.34), urea:36mg/dl(n:15-43),creatinin:1(n:0.57-1.11), LDH:622 U/L(n:125-220), calcitonin<2 pg/mL(n:0-10) and β 2-MG levels obtained at different time points were 3418, 3296 and 3882 ng/mL(n:1010-2500). On neck ultrasonography, thyroid parenchyma was heterogeneous and there were multiple, macrocalcific, hypoechoic nodules, the biggest one was being 35x28x30 mm in size in the right thyroid lobe. There were 2 cm sized, multiple, spherical lymph nodes with irregular borders and invisible fatty hilum in the right anterocervical region. Lymphoma and thyroid cancer were considered as differential diagnoses. Peripheral blood smear and protein electrophoresis were found to be normal. Tru-cut biopsy samples obtained from lymph nodes in the right anterior cervical region and nodule in the right thyroid lobe detected anaplastic carcinoma with rhabdoid variant. The patient was referred to the department of oncology for chemo-radiotherapy.
- In conclusion, further studies are required to confirm whether β 2-MG can be used as a specific marker for thyroid cancer.

