

**INVESTIGATION OF CYCLIN E1 (CCNE1) GENE EXPRESSION STATUS IN LARYNGEAL SQUAMOUS CELL CARCINOMA**

Semra Demokan (Department of Basic Oncology, Oncology Institute, Istanbul University, Istanbul, Turkey,) Sena Şen (Department of Basic Oncology, Oncology Institute, Istanbul University, Istanbul, Turkey,) Önder Eryılmaz (Department of Basic Oncology, Oncology Institute, Istanbul University, Istanbul, Turkey,) Sevde Cömert (Department of Basic Oncology, Oncology Institute, Istanbul University, Istanbul, Turkey,) Yusufhan Suoğlu (Department of Otorhinolaryngology, Faculty of Medicine, Istanbul University, Istanbul, Turkey, ) Murat Uluşan (Department of Otorhinolaryngology, Faculty of Medicine, Istanbul University, Istanbul, Turkey, ) Gülsüm Ak (Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, Istanbul University, Istanbul, Turkey.) Nejat Dalay (Department of Basic Oncology, Oncology Institute, Istanbul University, Istanbul, Turkey,)

**Introduction - Purpose :** Laryngeal carcinoma (LC) is the most prevalent type of head and neck cancers. Genetics/epigenetics factors, tobacco and alcohol consumption are the major ethiological factors in LC development. Cyclin E1 (CCNE1) gene, located on chromosome 19, has been found to have crucial roles in cell proliferation and oncogenesis. Inhibition of cellular proliferation occurs upon association of CDK inhibitor with a cyclin-CDK complex. In the literature, increases in the expression level of the CCNE1 gene have been observed in breast, larynx, ovarian cancers and hepatocellular carcinoma. In our study, we investigated the association of differentially expressed levels of CCNE1 with laryngeal carcinogenesis.

**Methods - Tools :** The expression status of CCNE1 was analyzed in tumor and matched-normal tissue samples of 44 patients with LC by the quantitative real-time polymerase chain reaction method (QRT-PCR).

**Findings :** CCNE1 and the reference gene expression status were analyzed by calculating the threshold cycle numbers (Ct) as fold changes using the  $2^{-\Delta\Delta Ct}$  method. After evaluation of the expression levels, we selected the ratio of  $\geq 2$  as the threshold for differentially expressed CCNE1. The increased expression ratio of CCNE1 was observed as 56% (25/44) in tumors.

**Discussion :** Our study suggests that there is an association between increased expression levels of the CCNE1 gene and LC as concordant with the literature. It is still in progress to include a larger cohort of patients. \*This work was supported by Scientific Research Projects Coordination Unit of Istanbul University (Project number: I.U.BAP-ONAP-42152).