

## ***The correlation of p53 and p16 expressions and esophageal cancer patients one-year survival***

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**BACKGROUND:** Esophageal cancer (EC) is assumed as an important public health problem worldwide considered the eighth most common cancer and the sixth leading cause of cancer-related deaths. Despite recent advances in multidisciplinary treatments, the 5-year survival rate of patients with EC remains less than 30%, requiring the discovery of prognostic and predictive biomarkers for disease. For this purpose, tumor suppressors proteins (p53 and p16) commonly altered in cancer have been widely studied and may show relevant value in patients with esophageal squamous cell carcinoma (ESCC). The differential expression of p53 and its mutations are frequently seen in EC and related to cell invasion, metastasis, advanced stages and survival of patients with some types of cancer, such as head and neck. Regarding p16, its expression is usually considered as a surrogate marker for HPV infection as well better prognosis of head and neck squamous cell carcinoma patients who underwent radiotherapy. Despite evidences suggest correlation of p53 and p16 differential expression with prognosis in EC, these data are still limited and inconsistent.

**HYPOTHESIS:** The survival of EC patients is influenced by differential expression of p53 and p16. On this basis, our study evaluated the survival of ESCC patients related to p53 and p16 expression.

**METHODS:** This prospective study enrolled patients of both genders, aged above 18 years, clinical indication for endoscopy, none previous treatment for cancer, ESCC histopathological confirmed and admitted at Barretos Cancer Hospital. During endoscopy, esophageal tumor biopsies were collected and p53 and p16 expression evaluated using immunohistochemical. Clinical and follow-up data were obtained from medical records. The survival rate of patients were estimated using Kaplan-Meier methods. Multivariable analysis was performed using Cox proportional hazards regression.

**RESULTS:** Univariate analysis of our cases showed that survival is statistically influenced by gender, clinical stage, tumor location, surgery, chemotherapy and radiotherapy variables. However, the exploratory multivariate analysis demonstrated that only the surgery and chemotherapy variables remained significant. But, there was no significant relationship between ESCC patients one-year survival p53 and p16 expression.