

Significance of molecular markers in survival prediction of oral squamous cell carcinoma

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Abstract

An accurate system for predicting the survival of patients with oral squamous cell carcinoma will be useful for deciding appropriate therapies. The prediction accuracy of prediction models can be improved by using molecular biomarkers. We constructed a nomogram for predicting the survival of OSCC patients using clinical variables and molecular markers.

P53, IMP3, COX2 and HuR were localized immunohistochemistry in 96 patients with primary oral squamous cell carcinoma who underwent surgical resection between January 1994 and June 2003 at the Yonsei Dental Hospital in Seoul, Korea.

In the univariate and multivariate analysis, the expression of IMP3 was significantly associated with the risk of death. P53 was also significantly associated with survival of OSCC in the case of negative IMP3 and the prediction accuracy was improved by including these two factors in the prediction model.

The survival of OSCC can be predicted more accurately by using biomarkers. The constructed nomogram predicted the survival after treatment for an individual patient with OSCC and it can be practically used as a tool to help deciding which adjuvant treatment is most appropriate.

Keyword: survival prediction, significant factors, molecular markers, oral squamous cell carcinoma