

# Morfologiczna ocena nacieku nowotworowego oraz ekspresji metaloproteinazy błonowej macierzy zewnątrzkomórkowej typu I jako prognostyczny wskaźnik powstawania mikroprzerzutów w raku krtani

Morphological tumor front grading and matrix metalloproteinases type I expression as a prognostic parameter of the presence of lymph node micrometastases in laryngeal carcinoma

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## Summary

**Introduction.** Occult foci of neoplasm cells in lymph nodes (referred to as micrometastases) in various squamous cell carcinomas may be discovered by immunohistochemistry by using anti-CKs (cytokeratine filaments) polyclonal antibodies which reactive with epithelial cells. Matrix metalloproteinases (MMPs) are proteolytic family enzymes represent a group of endopeptidases which are capable to degrading components of the extracellular matrix and have been implicated as playing an important role in cancer invasion and metastases. The purpose of this study was to analyze the morphological parameters and to investigate MT1-MMP expression in laryngeal carcinoma to relate the expression to CKs in pN0 lymph nodes. **Materials and methods.** To presented the direct correlation between the morphological features of tumor front and the probability of micrometastases and prediction of prognosis we have analyzed 22 patients operated for squamous cell carcinoma of the larynx. The total score of TFG classification, tumor clinicomorphological features and grade of matrix metalloproteinase membrane type 1 staining in tumor front were analyzed to predict the presence of micrometastases and prognosis. Immunohistochemical methods with a panel of CKs antigens in lymph nodes and MT1-MMP expression in tumor tissue were performed. **Results.** Our study showed that the total morphologic score TFG is very useful in the prediction of micrometastases in patients with laryngeal squamous cell carcinoma. The statistical analysis has revealed a significant correlation between the total TFG score and the depth of invasion and the presence of micrometastases. Positive MT1-MMP expression in 68,2% cases was observed. There was no significant relationship for immunoexpression of MT1-MMP in examined group of patients with advanced laryngeal carcinoma and positive poliCKs stain in lymph nodes. **Conclusions.** The results of study suggest that extended traditional pathologic evaluation by features from the TFG classification, especially the depth of invasion, could aid in diagnosis of micrometastases. The positive expression of poliCKs in the conventional pathological examination of pN0 lymph nodes appears to play an important role in determining prognosis in patients with carcinoma of the larynx.