Spotlight

By Anne Forde

Metastatic Players in Oral Tongue Carcinoma

Vered *et al*.
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Relative to other tumors in the oral cavity, oral tongue squamous cell carcinoma (OTSCC) is associated with a very high rate of metastasis. In this study, Vered *et al.,* analyzed factors that might contribute to this phenomenon.

Cancer-associated fibroblasts (CAFs) are thought to be important facilitators of invasion; they are capable of remodeling the extracellular matrix and providing a mechanical propulsive force. CAFs have been associated with tumor recurrence in tongue and colorectal cancer but had not been studied to date in OTSCC.

Looking at paired primary and metastatic lymph nodes of OTSCC from 19 patients, 11/19 metastatic tumors were found to have a CAF-rich pattern. The authors also investigated whether epithelial mesenchymal transition is also involved in OTSCC metastasis. Epithelial mesenchymal transition is a process whereby carcinoma cells lose their epithelial phenotype and acquire mesenchymal features such as enhanced mobility and invasion. The authors tested tumors and lymph nodes for several markers of epithelial mesenchymal transition: cadherin-11 and Twist were found to be most commonly expressed in both primary and metastatic OTSCC. The former is associated with invasive properties and the latter associated with down regulation E-cadherin. Indeed, triple immunostaining showed considerable E-cadherin loss in metastatic carcinoma cells in contact with CAFs.

This study is the first to find CAFs in the metastatic lymph nodes of OTSCC patients. Epithelial mesenchymal transition was commonly observed in primary and metastatic tumors. The authors speculate that CAFs in regional lymph nodes, along with epithelial mesenchymal transition, could facilitate development of metastasis and support cancer cell survival. Thus, the tumor microenvironment and the carcinoma may co-evolve and share invasive properties at primary and metastatic sites.