Survivin and pAkt as potential prognostic markers in squamous cell carcinoma of the head and neck.

The purpose of our study was to investigate the expression patterns of cell cycle regulatory proteins and members of the epidermal growth factor receptor (EGFR) signaling pathway in squamous cell carcinoma of the head and neck (HNSCC). The expression levels of survivin, Bub1 B (budding uninhibited by benzimidazoles 1 homolog beta), PLK-1 (polo-like kinase 1), Ki-67, cyclin D1, p53, EGFR, pMAPK (phosphorylated mitogen-activated protein kinase), pAkt (phosphorylated protein kinase B), and PTEN (phosphatase and tensin homolog) were studied in a series of 180 tumor samples obtained from HNSCC surgical resections, 50 metastatic lymph node samples, and 72 corresponding noncancerous epithelium samples. Protein expression analysis was performed by immunohistochemical staining. The results were correlated with clinicopathologic features and survival data. Prognostic significance could be found only for the markers survivin and pAkt. Only the marker combination of cyclin D1 and p53 had positive prognosis potential regarding overall survival. Both pAkt and survivin show a positive correlation with distant metastases and may have utility as predictors of long-term outcomes for patients with HNSCC.