

## Incidence of Distant Metastases from Visceral Malignancies to Head and Neck Region

*Anna Ivanova<sup>1</sup>, Kalvis Pastars<sup>2</sup>, Janis Zarins<sup>2</sup>, Juris Tars<sup>1</sup>*

*Rīga East Clinical University Hospital, Latvia*

*<sup>1</sup> Oncology Center of Latvia,*

*<sup>2</sup> Center of Plastic and Reconstructive Surgery*

**Introduction.** The head and neck are unusual sites for distant metastases but the hematogenous spread of cancer may rise from tissues outside the head and neck region. Metastases in the upper and middle neck are generally attributed to head and neck cancers, whereas the lower neck or supraclavicular region involvement is often associated with primaries below the clavicles such as lung, breast, oesophageal, gastric, pancreatic, gynecologic, and prostate. Cutaneous metastases in head and neck from visceral malignancies are relatively rare. An estimated 0.7–9% of internal tumors metastasize to the skin.

**Aim, Material and Methods.** The purpose of this study was to investigate the frequency of metastasis to head and neck region and the type of primary tumor. This is the retrospective study. This study was based on the International Statistical Classification of Diseases and Related Health Problems (ICD-10); C00–C80 codes. Clinical records from Riga East University Hospital, Oncology Centre of Latvia, over a five-years time (2009–2014) were reviewed. Diagnosis was proven by histological examination of biopsies.

**Results.** Between 2009 and 2014, 568 patients with malignancies who developed metastases to the head and neck region underwent surgery and adjuvant chemotherapy and radiotherapy at Riga East University Hospital. The median age was 56 years (range 18–94). There were 228 females and 340 males. The metastases to the cervical lymph nodes we found in 137 women (60%) and 207 men (61%). In women, with the location of primary cancer in head and neck area the most common was thyroid gland cancer followed by the head skin carcinoma, in men, primary cancer was localised in larynx followed by skin cancer and hypopharynx cancer. In women who represented internal cancers the most common cervical metastases were developed from breast cancer followed by uterine and ovarian cancer and represented 3%. In men, the most common cervical metastases developed carcinoma of kidney, prostate and carcinoma of unknown primary and represented together almost 2%. In 32% women we detected also head and neck skin metastases. The highest rates 14% of skin metastases in women were found to occur from carcinoma of the head, followed by thyroid gland – 2.6%, colorectal cancer – 1.7%. Melanoma developed skin metastases in 2.2%. In 28% men developed head and neck skin metastases the primary tumour was localised in larynx – 6%, hypopharynx – 5%, the floor of the mouth – 2.4% and head skin – 2%. Melanoma developed skin metastases only in 0.6%. We found that metastases to the oropharynx in female were most common from lips carcinoma and represented 0.8%.

**Conclusions.** The majority of distant metastases to the head and neck region are localised within the lymph nodes. According to our results, skin metastases were found in head and neck region mostly from skin cancer as a result of dissemination of the primary tumour, the thyroid cancer was in the second place in female group. Internal malignancies, however, rarely spread to the head and neck with the exception of breast carcinoma. We also have found the most common internal cancer with metastatic spread to head and neck cervical lymph nodes in female group was breast cancer and in male group kidney cancer. According to our results, melanoma of skin is not the most common malignancy with cutaneous metastases in the head and neck region as it is demonstrated in other studies. We have high incidence skin SCC of the head and neck in the advanced stage (III and IV) with increased metastatic potential. The discovery of skin metastasis may be the first evidence of disseminated disease or visceral cancer.

Λ