tumors presented as solid masses with few ductiform structures. Tumor cells had basaloid appearance with large pleomorphic and prominent nuclei or densely hyperchromatic with scant cytoplasm. Frequent mitotic figures and comedolike necrosis were seen. Tumor infiltration was detected in the perineurial region of the inferior alveolar nerve and within bone medula. In one case, tumor cells has spread to the dental pulp. Immunohistochemically, tumor cells in one case were positive for CK7, 34BE1, CD117, Ki67 (>5 in 10hpf) and negative for p63 and CK5/6.

**Conclusion:** Two rare cases of mandibular extension of a parotid gland ACC through the mandibular foramen is presented. Computed tomography and magnetic resonance confirmed primary ACC in the parotid gland, suggesting access of tumor cells through mandibular canal. Meticulous clinical and radiographic analysis were essential to detect primary tumor for an appropriate therapy.

## DIFFERENTIAL MAST CELL POPULATION IN SUBTYPES AND METASTATIC ORAL SQUAMOUS CELL CARCINOMA.

*PROF. ENEIDA VENCIO[A], MS. THAÍS SANTOS[A], MR. JONATHAN LIMA[A], DR. AIRTON FRAGAJUNIOR[B]. [A] FEDERAL UNIVERSITY OF GOIÁS, [B] ARAUJO JORGE CANCER HOSPITAL*

Tumor microenvironment is a dynamic network, orchestrated by neoplastic, non-neoplastic cellular, and non-cellular components in tumorigenesis, cancer progression, and metastasis. Mast cells (MCs) can modulate tumor cell activity during angiogenesis and extracellular matrix degradation in breast and lung cancers. MCs are distinguished according neutral proteases like tryptase (MCT), tryptase/chymase (MCTC), and chymase only (MCC). Its role in oral cancer remain controversial. Oral squamous cell carcinoma (OSCC) represents 90% of cases of head and neck cancer with considerable mortality and morbidity.

**Objectives:** To identify MC population in two topographic regions among OSCC subtypes.

**Material and methods:** Immunohistochemical study of mast cell tryptase and mast cell chymase was performed in 54 cases of OSCC. Positive cells were counted in 10 consecutive fields at 400X magnification in peritumoral and intratumoral regions. Negative control was considered at the surgical margin histologically negative.

**Results:** Overall MC density increased 6.3 times in OSCC. MCTC density was significantly higher than MCT ($p<0.001$) mainly in the peritumoral region. High density of MCTC was associated with smokers ($p<0.046$) and metastatic tumors ($p<0.048$). Interestingly, mast cell phenotype of degranulation was registered only in chymase-positive MCs. MCTdensity was low in the periphery of basaloid SCC and higher in less differentiated tumors.

**Conclusion:** MC population is highly increased in OSCC predominantly with MCTC.High density of chymase-positivity cells suggests a subset of MC chymase only in OSCC and its expression may be related to tobacco consumption, metastasis, local invasion, and differentiation.

## SECRETED PROTEINS AS POTENTIAL BIOMARKERS IN ADENOID CYSTIC CARCINOMA OF THE SALIVARY GLANDS.

*PROF. ENEIDA VENCIO[A], MR. KEVIN ALVES[A], MR. JONATHAN LIMA[A], DR. ANTONIO PAULO GONTIJO[B]. [A] FEDERAL UNIVERSITY OF GOIÁS, [B] ARAUJO JORGE CANCER HOSPITAL*

Secreted proteins are involved in several physiological mechanisms. In solid tumors, it can be used as diagnostic and prognostic tools. Human anterior gradient 2 (AGR2) and CD10 are proteins secreted in body fluids in prostate cancer. The main of this study was to evaluate expression of the secreted proteins AGR2 and CD10 in adenoid cystic carcinoma (ACC) of the salivary gland. A total of 20 cases of ACC of the salivary glands were examined by immunohisto-chemistry method. Female was more affected (70%) with age varying from 10 to 79. Tumor sizes ranged from 1.3 to 9 (mean 2.7 cm), located mostly in minor salivary glands and submandibular gland. Eleven cases showed neural invasion. AGR2 was typically citoplasmatic and focally expressed in 75% of cases. Its expression was observed in all solid subtype, followed by tubular (88.8%) and cribiform (55.5%). Interestingly, half of ACC exhibited AGR2 expression in the extracellular space or inside ductiform structures. Clinically, neural invasion, nodal involvement, and systemic metastasis were associated to AGR2 expression. The surface protein CD10 was also focally expressed mainly in ductal structures in solid and tubular subtypes. Interestingly, its expression was restricted only to stroma in cribriform subtype. This secreted protein was also found freely inside ductiform structures. Furthermore, peripheral nerves involved in the tumor significantly expressed CD10 ($p = 0.029$) in the tubular subtype.

**Conclusion:** Neural invasion may involve participation of CD10 in ACC of the salivary gland. Further studies should confirm if extracellular AGR2 and CD10 represent potential biomarkers for salivary detection as diagnostic and prognostic tools in the clinic.

## METASTATIC NEUROENDOCRINE PROSTATE CANCER, AN AGGRESSIVE PROSTATE MALIGNANCY: A REPORT OF TWO CASES WITH ORAL MANIFESTATIONS.

*DR. STEPHEN ROTH[A], DR. JELA BANDOVIC[B], DR. SALVATORE RUGGIERO[C], DR. JOHN FANTASIA[A]. [A] ZUCKER SCHOOL OF MEDICINE AT HOFSTRA/NORTHWELL, [B] STONY BROOK UNIVERSITY SCHOOL OF MEDICINE, [C] NEW YORK CENTER FOR ORTHOGNATHIC AND MAXILLOFACIAL SURGERY, STONY BROOK SCHOOL OF DENTAL MEDICINE, ZUCKER SCHOOL OF MEDICINE AT HOFSTRA/NORTHWELL*

**Objectives:** Neuroendocrine prostate cancer (NEPC) is a lethal prostate malignancy with a median survival of less than 1 year from time of detection. NEPC can occur de novo or more commonly as a treatment emergent phenomenon (t-NEPC). t-NEPC occurs in a subset of patients with metastatic-castration resistant prostate cancer. Two cases of t-NEPC with oral manifestations are presented highlighting the pathologic features and the varied clinical context in which these lesions presented.

**Patients and Methods:** Case 1) A 79 year-old man with a history of prostate adenocarcinoma undergoing hormone treatment presented with a fungating mass of the right maxilla and palate, clinically suspicious for squamous cell carcinoma. Biopsy revealed a high grade neuroendocrine carcinoma. Case 2) A 76 year-old man with a history of metastatic prostate adenocarcinoma receiving zoledronic acid and denosumab treatment for bony metastases, presented with mandibular fracture. A segmental resection without reconstruction with debridement