

**Conclusions:** Our study demonstrates that MUC1/16 overexpressing HNSCC are "inflamed". Moreover, *HRAS* overexpression and *RAS* oncogenic mutations are associated with MUC1/16 overexpression. In this context, Ras-targeted therapeutic approaches may sensitize this cluster of tumors to immunotherapy.

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### 963P Clinical and histological prognostic factors of recurrent and/or metastatic salivary gland adenoid cystic carcinoma

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**Background:** About 40% of radically treated adenoid cystic carcinoma (AdCC) patients (pts) will recur locoregionally and up to 60% will develop distant metastasis. Factors influencing the risk of recurrence have been studied, but very few data exist about prognostic factors in recurrent/metastatic (RM) disease that could guide clinicians in the selection and tailoring of further treatments. Main aim of the study is to evaluate patient, treatment and disease characteristics impacting on survival for RM pts.

**Methods:** We retrospectively evaluated a series of 135 head and neck AdCC treated with curative surgery at the Otolaryngology Head and Neck Surgery Department of the University of Brescia, Italy, from 1997 to 2016 and we retrieved data from 41 pts who relapsed. The following clinical and histological characteristics, both at first treatment and at diagnosis of relapse, were analysed and linked to overall survival (OS): gender, age, pain, cranial nerve deficit, stage, grading (according to Perzin), subsite of origin, biochemical analysis (neutrophil/lymphocytes, albumin), disease free interval (DFI), site of relapse and site of metastasis.

**Results:** Relapsing patients were mainly female (59%), with median age 55 years (21-83) and with primary disease in major (27%) or minor (73%) salivary gland. Grading was scored as low, intermediate, high in 27%, 39%, and 34% of cases, respectively. 71% of patients had undergone adjuvant radiotherapy after primary surgery. Site of recurrence was local in 73%, regional in 12% and distant in 39%; lung represented the most frequent site of distant failure. Median disease free-interval (DFI) was 25 months (4-142). Only high grade (HR 5.1; 1.2-20.7; p= 0.021) was associated with worse 2-year OS since the diagnosis of RM disease; on the contrary, patients with DFI longer than 25 months had higher 2-year OS (HR 0.351; 0.157-0.786; p= 0.01).

**Conclusions:** Grading of disease at the time of first diagnosis and DFI are the main factors guiding prognosis after relapse of AdCC. Given the paucity of clinical prognostic data, we support extensive molecular analysis as next step of research.

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### 964P Gene expression profiling to improve prognostic characterization of olfactory neuroblastoma and to define new targetable pathways

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**Background:** Olfactory neuroblastoma (ONB) is a rare neoplasm of sinonasal tract with a peculiar behaviour. Limited prognostic factors are available, consisting in stage, grading (according to Hyams' criteria) and Ki67 value. The project aims at studying the pathways of ONB through gene expression analysis and correlating them with clinical outcome.

**Methods:** We collected a series of ONB treated with curative intent at the ENT of Spedali Civili, Brescia and Ospedale di Circolo Varese, Italy. Clinical data of the patients were retrieved, as well as histological specimens, whose diagnosis was re-evaluated by two expert pathologists. We performed gene expression profiling on FFPE samples using Affymetrix Clariom S microarray, and carried out functional enrichment analysis to investigate key pathways associated with progression-free survival (PFS).

**Results:** A series of 42 patients treated between 2001 and 2019 was considered. One patient was excluded due to poor quality of FFPE sample. Main characteristics of the patients: mainly male (52%); median age 53 year; stage I-II 17%, III-IV 83%; Hyams grade I 7%, II 45%, III 48%. Patients were treated by surgery and 79% received postoperative radiation, while only 1 patient received also neoadjuvant chemotherapy. After a median follow up of 51 months, we identified disease progression in 12 cases. Median PFS was 38,8 months (5 - 99). Clinical characteristics (gender, global stage, Hyams grade, T stage and N stage) were not associated with outcome. Patients experiencing recurrence had a disease characterized by enrichment mainly in pathways related to TGF-beta binding, regulation of cytokine biosynthesis, toll-like receptor 4, PIP3, p-53 mediated apoptosis signalling in response to DNA damage, TNF and IFN alfa; on the contrary, patients without any recurrence after surgery showed increased expression of genes related to DNA methylation, ubiquitin ligase complex and retinoid acid binding.

**Conclusions:** ONB is characterized by heterogeneous gene expression pathways, related to patient's outcome. Definition of characterizing transcriptomic pathways may pave the way to tailored treatment approaches.

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