Materials and Methods: 10 cases each of AEP, IPH and PSCC were retrieved from the University of Florida, Oral Pathology Biopsy Service archive and stained with Anti-KMT6/EZH2 antibody. The cases were reviewed and the extent and pattern of EZH2 expression were assessed. The results were analyzed for statistical significance using Fischer's exact test.

Results: The pattern and intensity of EZH2 expression in AEP and PSCC demonstrated statistically significant differences when compared to IPH (p=0.002). In addition, the basal cell layer showed EZH2 expression in all the cases of AEP (100%) and PSCC (100%) but only 3 out of 10 (30%) in IPH (p=0.000), comparable to normal oral epithelial control tissue.

Conclusion: EZH2 expression in AEP is more similar to malignant processes than benign lesions. The pattern of basal cell layer expression of EZH2 could be a potential prognostic indicator of malignant transformation risk in oral AEP lesions. A subsequent study by our group to assess EZH2 expression with respect to clinical outcome in AEP lesions is ongoing.

INTER-OBSERVER VARIABILITY AMONG PATHOLOGISTS IN THE INTERPRETATION OF LESIONS OF PROLIFERATIVE VERRUCOUS LEUKOPLAKIA SPECTRUM: A COLLABORATIVE PILOT STUDY.

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Objective: The use of diverse terminology may lead to inconsistency in the diagnosis and subsequent treatment of lesions within the proliferative verrucous leukoplakia (PVL) spectrum. The objective of this study was to determine inter-observer variability between pathologists in the diagnosis of PVL spectrum lesions.

Methods: Digitally scanned slides of 40 PVL lesions of varying stages were diagnosed by six oral pathologists (OP) and six head and neck pathologists (HNP) at multiple institutions. Inter-observer agreement on diagnoses was evaluated by Fleiss' kappa analysis using Microsoft Excel 2013 and IBM SPSS version 25 software.

Results: The responses provided were grouped into five broad categories. Category 1, simple hyperkeratosis with/without low-grade dysplasia; category 2, verrucous hyperplasia/keratosis with/without low-grade dysplasia; category 3, high-grade dysplasia or carcinoma-in-situ with/without verrucous surface change; category 4, verrucous carcinoma (VC) or atypical epithelial proliferation suggestive of but not fulfilling criteria of VC or squamous cell carcinoma (SCC) and; category 5, papillary or conventional SCC. The overall level of agreement between all pathologists for all cases as measured by Fleiss' kappa (KF) was 0.270, considered fair agreement. Amongst OP the KF was 0.225, whereas amongst HNP the KF was 0.344. The best agreement between pathologists was on category 5 lesions (KF=0.650) followed by category 1 (KF=0.312). The least agreement was within categories 2 (KF=0.150), 3 (KF=0.192) and 4 (KF=0.156).

Conclusion: This study reflects the lack of standardized diagnostic criteria and terminology for lesions in the PVL spectrum. We recommend that standardized criteria and terminology be proposed and established by an expert panel position paper, which would assist pathologists and clinicians to uniformly diagnose and manage PVL spectrum lesions more effectively.

SALIVARY GLAND ANLAGE TUMOR: MOLECULAR PROFILING SHEDS LIGHT ON A MORPHOLOGIC QUESTION.

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Objectives: The salivary gland anlage tumor (SGAT), previously referred to as a "congenital pleomorphic adenoma" or a "squamous proliferative lesion," is a rare, benign entity which presents within the first few months of life. It occurs almost exclusively in the nasopharynx or the posterior nasal cavity, and affected neonates typically present with respiratory distress and difficulty feeding. Despite this ominous clinical picture, the SGAT can be easily treated by surgical excision, with no recurrence reported in the limited cases available in the literature. Histologic examination of this lesion reveals a distinct biphasic composition containing both epithelial and mesenchymal elements. Although the clinical and histologic features of the SGAT are well-described, the etiology of this entity is still poorly understood. The SGAT is currently believed to be a hamartoma rather than a true neoplasm due to its benign nature and lack of reported recurrence following treatment, however molecular studies have yet to be performed to verify this claim.

Findings: We present three new cases of SGAT on which whole exome sequencing has been performed. Specific attention was given to variants affecting 964 cancer-related genes compiled from five sources: the Cancer Gene Census, Oncomine, and the targets of the cancer panels designed by the Columbia Combined Cancer Panel, Memorial Hospital for Cancer and Allied Diseases, and Foundation Medicine. In the current study, examination of the entire exome from the three cases shows no plausible sequence-level driver mutations.

Conclusions: Our demonstration of apparently normal exome sequences from the three cases provides molecular support for the concept of SGAT as a non-neoplastic process. These results enhance the characterization and understanding of this tumor, and illustrate the manner in which molecular studies may contribute to resolution of morphologic debates and impasses.

AMELOBLASTOMA ARISING IN ODONTOGENIC KERATOCYST: REPORT OF FOUR RARE CASES, IMMUNOHISTOCHEMICAL ANALYSIS AND REVIEW OF LITERATURE.

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Odontogenic keratocyst (OKC) is a developmental cyst of the gnathic bones arising from the rests of dental lamina. This cyst demonstrates propensity for aggressive behavior and a