from VC to SCC-WD to SCC-PD (p=0.002). The CD8:CD4 ratio was highest in VC followed by SCC-WD then SCC-PD, but the difference was not statistically significant. No significant difference in B: T cell ratio was observed between diagnostic groups.

Conclusions: This study demonstrated a lower level of CD4 positive lymphocytes and a slightly increased CD8:CD4 ratio within the VC infiltrate as compared to SCC. B lymphocyte involvement did not appear to differ between VC and SCC in this sample. Further studies may help elucidate the clinical implications of these differences.

ORAL SYPHILIS: A REPORT OF TWO CASES AND A LITERATURE REVIEW OF THIS RE-EMERGING ENTITY.

DR. RICHARD J. VARGO, DR. ELIZABETH ANN BILODEAU. UNIVERSITY OF PITTSBURGH

Objective: Syphilis is a sexually transmitted, infectious disease caused by Treponema pallidum. It can manifest clinically in three stages: primary, secondary, and tertiary. While rare, oral syphilis cases are starting to re-emerge. Our objective is to report 2 additional cases of oral syphilis—one case of primary syphilis and 1 case of secondary syphilis—to highlight the need to consider this entity in the histopathologic differential diagnosis of nonspecific mucositis.

Findings: Both cases presented to outside oral surgeons in separate geographic regions. In case 1, a 25-year-old male presented with a six-week history of a 1.0 cm non-healing ulcer of the right lateral tongue. In case 2, a 28- year-old male presented with welt-like, slightly raised, red/white lesions of the lateral tongue, buccal mucosa, and hard and soft palates. The clinician reported no other lesions on the body and a negative STD test. An excisional biopsy was performed for case 1 and an incisional biopsy for case 2. Histopathologically, case 1 showed an ulcer with an underlying lichenoid lymphoplasmacytic infiltrate with perivascular plasma cells. Case 2 showed epithelial spongiosis and prominent neutrophilic microabscesses with an underlying lichenoid lymphoplasmacytic infiltrate. Perivascular and perineural plasma cells were also present. Because of the perivascular plasma cells in both cases, Treponema immunohistochemistry was ordered, and it highlighted many spirochetal organisms in the epithelium and superficial lamina propria in both cases. Given their respective clinical presentations, case 1 was diagnosed as a chancre of primary syphilis, while case 2 was diagnosed as a mucous patch of secondary syphilis.

Conclusion: Due to the resurgence of oral syphilis cases, clinicians should be aware of the histopathologic features and order the appropriate ancillary studies in suspected cases. Proper histopathologic diagnosis is important to prevent the spread and further re-emergence of this treatable infection and avoid misdiagnosis as nonspecific mucositis.

ODONTOGENIC MYXOMA: A 23-YEAR RETROSPECTIVE SERIES OF 38 CASES.

DR. ABDULAZIZ BANASSER[A], DR. INDRANEEL BHATTACHARYYA[B], DR. SARAH FITZPATRICK[A], DR. DONALD COHEN[B], DR. MOHAMMED ISLAM[B]. [A] UNIVERSITY OF FLORIDA COLLEGE OF DENTISTRY, [B] UNIVERSITY OF FLORIDA

Introduction: Odontogenic myxoma (OMX) is an uncommon benign tumor arising in the jaw. Though it has some histologic overlap with other entities, correct diagnosis is imperative considering the aggressive nature, high recurrence rate, and necessity of radical surgical intervention in large sized lesions.

Materials and Methods: With IRB approval, a retrospective search of the University of Florida College of Dentistry Oral Pathology Biopsy Service archives from 1994-2017 for diagnosis of OMX of the mandible or maxilla was performed. Biopsy reports and original slides for each case were assessed and reviewed along with any accompanying radiographs to confirm the diagnosis. Immunohistochemical (IHC) staining was utilized to exclude entities with histologic overlap such as intraosseous myxoid neurofibroma.

Results: A total of 38 cases were included. The patients' ages ranged between 13 to 82 years, with a mean age of 38.5 years. Females comprised two-thirds of the cases (n=25) versus males (n=13). The mandible was the most affected at 56% (n=21), followed by maxilla 34% (n=13) with 10% (n=4) not specified. Posterior jaw involvement was higher than anterior in both the mandible (n=17 versus n=1) and the maxilla (n=8 versus n=4). The right side was more commonly affected than the left side in both arches. Most lesions presented clinically as expansile masses with variable radiographic appearance, and the submitting providers' clinical impressions included gelatinous masses, reactive gingival lesions, abscess, odontogenic lesions, fibro-osseous lesions, and soft tissue or bone neoplasms. In 30 cases (79%) the histologic diagnosis was compatible with OMX, while in 8 cases (21%) a more fibrous stroma was identified with diagnoses of fibromyxoma.

Conclusion: OMX may exhibit varied demographic and clinical profile and wide spectrum of histologic presentation. Oral and maxillofacial pathologists and surgical pathologists should be sentient of this variability of presentation for accurate diagnosis and management.

IMMUNOHISTOCHEMICAL EXPRESSION OF EZH2 IN ATYPICAL PAPILLARY EPITHELIAL PROLIFERATIONS OF THE ORAL CAVITY: A POTENTIAL MARKER FOR MALIGNANT TRANSFORMATION.

DR. FARAJ ALOTAIBY[A], DR. SARAH FITZPATRICK[B], DR. MOHAMMED ISLAM[B], DR. INDRANEEL BHATTACHARYYA[B], DR. DONALD COHEN[B]. [A] UNIVERSITY OF FLORIDA COLLEGE OF DENTISTRY, [B] UNIVERSITY OF FLORIDA

Background: Enhancer of zeste homolog-2 (EZH2) is a member of the polycomb group PcG of proteins; the genes that are involved in transcriptional repression. Cell cycle regulation and cell proliferation is associated with EZH2 expression and EZH2 overexpression stimulates cell proliferation and invasiveness. Conversely, inhibition of EZH2 precludes cancer cell invasiveness through inhibition of cell proliferation. Atypical papillary epithelial proliferation (AEP) is a histologic diagnosis rendered for oral lesions with confounding microscopic features, neither overtly benign nor unequivocally malignant.

Aim: To evaluate EZH2 antibody expression through immunohistochemical testing to delineate the potential of malignant transformation in AEP by comparing and contrasting with unequivocally benign papillary lesions represented by inflammatory papillary hyperplasia (IPH) and malignant papillary lesions represented by papillary well differentiated squamous cell carcinoma (PSCC).

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.

DR. JASBIR UPADHYAYA[A], DR. DONALD COHEN[B], DR. INDRANEEL BHATTACHARYYA[B], DR. MOHAMMED ISLAM[B], DR. JAMES LEWIS[C], DR. JOHN WRIGHT[D], DR. LESTER THOMPSON[E], DR. SUSAN MULLER[F], DR. ELIZABETH ANN BILODEAU[G], DR. JINPING LAI[H], DR. MARINO LEON[H], DR. RICARDO PADILLA[I], DR. JUSTIN BISHOP[J], DR. RAJA SEETHALA[G], DR. ROMAN CARLOS[K], DR. SARAH FITZPATRICK[B]. [A] UNIVERSITY OF FLORIDA COLLEGE OF DENTISTRY, [B] UNIVERSITY OF FLORIDA, [C] VANDERBILT UNIVERSITY MEDICAL CENTER, [D] TEXAS A&M COLLEGE OF DENTISTRY, [E] WOODLAND HILLS MEDICAL CENTER, [F] ATLANTA ORAL PATHOLOGY, [G] UNIVERSITY OF PITTSBURGH, [H] UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE, [I] UNIVERSITY OF NORTH CAROLINA, [J] UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER, [K] CENTRO CLÍNICO DE CABEZA Y CUELLO / HERRERA LLERANDI HOSPITAL

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.

DR. SCOTT PETERS, DR. ANDREW TURK. COLUMBIA UNIVERSITY

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.

DR. MONI AHMADIAN, DR. PAUL FREEDMAN, DR. RENEE REICH. NEW YORK PRESBYTERIAN QUEENS

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