previous studies have shown high frequency of BRAF(V600E) mutation in ameloblastomas. Interestingly, recent studies have reported that BRAF mutation is associated with the expression of SOX2 in colorectal cancers. Here, we investigated if SOX2-positive cell component is expanded in BRAF(V600E) mutated than wild type ameloblastomas.

Methods: Fifty-five formalin fixed paraffin embedded ameloblastoma tissue sections were used for macro-dissection of tumor component, DNA extraction and SOX2 immunohistochemistry. Sanger sequencing was further performed to detect the BRAF (V600E) mutation. The correlation between SOX2 positive cell numbers and BRAF status in ameloblastomas was evaluated by T-test.

Results: Among 55 ameloblastoma cases, forty-eight cases harbored BRAF(V600E) mutation. SOX2 positive cells were found in all cases regardless of BRAF status with average 22.3% SOX2 positive cells in ameloblastomas. BRAF(V600E) mutated ameloblastoma cases showed significantly more Sox2-positive cells (24.5%) than in wild type (6.6%) ($p<0.05$).

Conclusion: SOX2 positive cells were found in all ameloblastomas and BRAF(V600E) mutated ameloblastomas showed significantly more SOX2-positive cells. The results suggested BRAF(V600E) mutation may contribute to the expansion of SOX2 positive cell compartment.

CHONDROMYXOID FIBROMA OF THE MAXILLA: CASE REPORT.

DR. GILBERTO URIBE AYALA[A], DR. JHONATAN LOPEZ[B], DR. HERMINIA DEL SOCORRO ARVELO SAAVEDRA[B], DR. PABLO EDGAR EDGAR[C]. [A] UNIVERSIDAD LATINA DE AMÉRICA, [B] PRIVATE PRACTICE, [C] ÁNGELES HOSPITAL MORELIA

Objectives: Chondromyxoid fibroma (CMF) is a rare benign cartilaginous bone tumor with a characteristic lobular architecture and chondromyxoid background, this tumor account for 5% of all maxillofacial bone tumors.

Clinical presentation: we present a CMF of the left maxilla in a 15 years old female, presented with a bone swelling in the molar area, No systemic disease, other than hypothyroidism, were know. Tomographic evaluation exhibit a bone formatting lesion on the left maxilla, incisional biopsy was performed and processed histologically.

Histopathological diagnosis: Fibro-osseous lesion not otherwise specified.

Intervention: the patient was subjected to a left max-illectomy. A final diagnosis of CMF was emitted.

Outcome: the patient is treated by a Maxillofacial Prosthetics and close clinical follow up by the Oral and Maxillofacial Surgeon, the patient is 6 months free of disease.

Conclusions: Lesion was identified as Fibro-osseous lesion not otherwise specified by the incisional biopsy; it exhibited lobular architecture and chondromyxoid background, after the tumor resection the histopathological features were confirmed in the entire tumor, this case in particular exhibit extensive chondroid areas give the possibility of another diagnosis like: chondrosarcoma, chondroid osteosarcoma, chondroblastoma or chondroma.

BENIGN ALVEOLAR RIDGE KERATOSIS: CLINICOPATHOLOGICAL STUDY OF 174 CASES AND P53 EXPRESSION PATTERN.

DR. ASMA ALMAZYAD[A], DR. CHIA-CHENG LI[A], DR. VIKKI NOONAN[B], DR. SOOK BIN WOO[A]. [A] HARVARD SCHOOL OF DENTAL MEDICINE, [B] BOSTON UNIVERSITY HENRY GOLDMAN SCHOOL OF DENTAL MEDICINE

Objectives: Benign alveolar ridge keratosis (BARK) is a benign hyperkeratosis that occurs as a poorly demarcated white papule or plaque on the retromolar area or edentulous alveolar ridge mucosa caused by trauma. Histopathologic features are identical to cutaneous lichen simplex chronicus, a condition that results from chronic habitual skin scratching/picking. P53 protein is a tumor suppressor protein that plays a critical role in DNA repair. P53 protein has been shown to be present within 5-25% of the basal cell nuclei in normal oral mucosa and reactive lesions. The objective of this study is to report on the histopathologic features of BARK and to explore P53 expression pattern.

Study Design: Cases of BARK were identified from the biopsy service of the Harvard School of Dental Medicine from January, 2016 to December, 2017. Randomly selected cases were studied for the presence of P53.

Results: There were 174 cases comprising 119 males and 55 females (2.2:1; M:F) with a median age of 57 years (range 15-86). The majority were in the sixth (31.0%) and seventh (29.3%) decades. There were 112 (64.4%) cases on the retromolar pad and 62 (35.6%) on the edentulous alveolar mucosa; 27 (15.5%) cases were bilateral. Histopatho-logically, the oral mucosa showed hyperkeratosis often with wedge-shaped hypergranulosis and occasional focal parakeratosis. The epithelium exhibited mild to moderate acanthosis and slight surface undulations or papillomatosis, with tapered rete ridges, often confluent at the tips. The study for P53 performed in 11 cases showed less than 25 % nuclear positivity.

Conclusion: BARK is a distinct benign clinicopathologic entity caused by friction that is the intraoral counterpart of cutaneous lichen simplex chronicus with which it shares similar histopathologic features. It is not a mere hyperkeratosis which would relegate it to the clinical entity of leukoplakia, and which is a potentially malignant condition.

UNUSUAL DENTAL FOLLICULAR HAMARTOMA ASSOCIATED WITH A DENTIGEROUS CYST WITH FOCAL PARAKERATOSIS: A CASE REPORT AND REVIEW OF THE LITERATURE.

DR. DIANA WANG[A], DR. JOHN KASHMANIAN[B], DR. SOOK BIN WOO[A]. [A] HARVARD SCHOOL OF DENTAL MEDICINE, [B] PRIVATE PRACTICE

Introduction: Dental follicular hamartoma with central odontogenic fibroma-like features is a rare condition that has been reported primarily in black African teenagers and young adults and is characterized by involvement of multiple teeth that either show amelogenesis imperfecta or enamel dysplasia, hypodontia, open-bite malocclusion, and gingival overgrowth.

Case Report: We report a case of an unusual dental follicular hamartoma associated with a dentigerous cyst in the left mandible of a 23-year-old male who was otherwise healthy. The patient presented to his oral surgeon with pain in the left mandible. Clinical examination revealed soft tissue swelling and suppuration associated with the distal aspect of tooth #18. A panoramic radiograph revealed a 3.3 cm x 2.3 cm unilocular radiolucency associated with impacted tooth #17 that extended from the superior aspect of the crown to the mandibular notch. This lesion had been present at least four years prior when it measured 2.6 cm x 2.0 cm. Tooth #17 was extracted and the bulk of the lesion was curetted. The biopsy revealed a cellular proliferation of spindled fibroblast-like cells in a

delicately and densely collagenous matrix. Scattered throughout were clustered basophilic spherical calcifications associated with condensations of spindled cells, rarely associated with odontogenic rests. A dentigerous cyst was also present. Following this, the residual lesion was curetted and revealed only an inflamed dentigerous cyst. The differential diagnoses for this condition include regional odontodysplasia or unusual hyperplastic dental follicle with dystrophic calcifications.

Conclusion: We review the past and current literature on dental follicular hamartoma. To the best of our knowledge, our case report represents only the 9th documented case of dental follicular hamartoma and the first not to be associated with any dental-related dysplasia and other dental abnormalities.

A 10-YEAR RETROSPECTIVE CASE-CONTROL ANALYSIS OF MEDICATION-RELATED OSTEONECROSIS OF THE JAW AT A MAJOR TERTIARY CARE DENTAL INSTITUTION.

DR. LAUREL HENDERSON, MRS. AMNA IMRAN, MS. PARDIS BARATI MAHVAR, MR. ANDREW SANAPANYA, DR. PARISH P. SEDGHIZADEH. UNIVERSITY OF SOUTHERN CALIFORNIA

The connection between antiresorptive medications, like bisphosphonates and denosumab, and osteonecrosis of the jaw has been well studied in the literature. A 10-year retrospective case-control analysis of the patient population at the University of Southern California, Herman Ostrow School of Dentistry, found a robust population of patients of record with a history of bisphosphonate or denosumab use and a significant subset of those patients had medication-related osteonecrosis of the jaw (MRONJ). This study explores the demographic and clinical factors associated with risk for MRONJ in patients taking antiresorptive medications. Multivariate analysis indicated that patients at greatest risk were over 60 years of age, female sex, Asian race, had cancer as a comorbidity, had a history of tooth extraction, and also patients on long-term antiresorptive pharmacotherapy. The findings of this study should help guide clinicians to identify patients at high risk for MRONJ, and thus patients that would benefit from risk reduction and prevention protocols.

DIFFERENTIAL EXPRESSION OF PD1 AND PDL1 IN ORAL POTENTIALLY MALIGNANT LESIONS AND ORAL SQUAMOUS CELL CARCINOMA:A PILOT STUDY.

DR. KANAN DAVE, MS. DENISE LOPEZ EYMAEL, DR. MARCO MAGALHAES. FACULTY OF DENTISTRY, UNIVERSITY OF TORONTO

Background: Programmed cell death protein 1 (PD-1, CD279) is a 50-55 kDa type I transmembrane receptor expressed by activated T and B cells, as well as subset of monocytes and dendritic cells (DCs). PD-1 and its ligands (PDL1, PDL2) are part of "checkpoint" immune recognition and peripheral tolerance system that emerged as a critical signaling pathway in cancer. PDL1 is expressed in various types of cancers and activation of PD1-PDL1 inhibits T-cell mediated cancer surveillance. Here we describe a quantitative, reproducible 2-color fluorescence-based protocol to determine the differential expression of PD1/PDL1 in oral biopsy specimens.

Methods: Histopathological samples with a diagnosis of hyperkeratosis (HK), OMPL (mild, moderate, severe dysplasia) and squamous cell carcinoma (OSCC) were selected from the archives of the Toronto Oral Pathology service, University of Toronto. FFPE sections were stained with monoclonal antibodies for PD1 and PDL1 (Abcam) and Alexa Fluor-labelled secondary antibodies allowing visualization of both proteins in the same section using a spinning disk confocal microscope (Quorum). PDL1 staining was assessed in basal/spinous layers of the epithelium while PD1 staining was assessed in inflammatory cells in tumor stroma/lamina propria. The mean fluorescent intensity (MFI) was quantified and normalized against background signal.

Results: Our results show a significant increase in PD1 expression in inflammatory cells in dysplasia and OSCC compared to hyperkeratosis. PDL1 expression in epithelial cells was significantly increased in OSCC but not in dysplasia or HK. The results suggest that PD1 increase in inflammatory cells precedes malignant transformation while PDL1 overexpression in epithelial cells only occurs after malignant transformation.

Conclusion: We developed a new quantitative method to study PD1/PDL1 expression in FFPE oral biopsy samples. The expression of PD1 and PDL1 may be used as predictive markers of transformation and the data may be used to develop early intervention in OPML using PD1 inhibitors.

ATAXIA-TELANGIECTASIA-MUTATED PROTEIN EXPRESSION AS A PROGNOSTIC MARKER IN ADENOID CYSTIC CARCINOMA OF SALIVARY GLANDS.

MRS. SHADAVLONJID BAZARSAD[A], PROF. JIN KIM[B]. [A] DENTAL SCHOOL OF MONGOLIAN NATIONAL UNIVERSITY OF MEDICAL SCIENCE, [B] ORAL CANCER RESEARCH INSTITUTE, DEPARTMENT OF ORAL PATHOLOGY, YONSEI UNIVERSITY COLLEGE OF DENTISTRY, SEOUL, KOREA

Adenoid cystic carcinoma (ACC) is one of the high grade malignant tumors in salivary glands, prognosticallycharacterized by multiple recurrences and late distant metastasis. Recently, Myb-NFIB fusion or rearrangements of Myb have been detected as a hallmark of ACC. However, no biological marker estimating the outcome of ACC has been proven yet. Purpose of this study was to investigate whether the protein expression of ATM gene is related to patients' survival in ACC.

Experimental Design: This study consists of 48 surgical samples for detecting expression of ATM and its downstream p53. Kaplan-Meier plots were used to evaluate the relationship between the protein expression ratios of ATM, p53 and its ATM-mediated phosphorylation and the overall survival rate of patients with ACC.

Results: low expression of ATM in cancer cells correlated with poor survival rate ($p = 0.037$). However, low expression of ATM in stromal fibroblasts was not significantly associated with patient outcome. Moreover, this study evaluated ATM expression stratified by p53 and its ATM-mediated phosphorylation status. ATM loss was associated with a significantly decreased overall survival in patients simultaneously showing overexprssion of p53 ($p = 0.01$) and low expression of p53 phospho S15 ($p = 0.05$). These data supported that loss of ATM and its functional status in p53 pathway is an important factor associated with poor outcome of patients in ACC of salivary glands.

DESTRUCTIVE LESION OF THE ANTERIOR MANDIBLE: A UNIQUE PRESENTATION OF LEPROSY.

DR. ARIEL BLANCHARD, DR. ANDREW KANTER, DR. PAUL FREEDMAN, DR. RENEE REICH. NEW YORK-PRESBYTERIAN QUEENS