Total score of the lesion before treatment] X100 ant it was then categorized into a 5-rank scale, ranging from 0 (no improvement) to 4 (healed). Possible candidiasis infection during treatment and relapse rate 3 months after treatment were also recorded.
Results: All patients experienced significant improvement of sign and pain scores with a higher rate of improvement in ozone-treated group (T1 improvement rates: Thongprasom 92.2% vs 28%; VAS pain 76.9% vs 32%; $p<0.05$). Pain and size reduction were significantly higher in ozone-treated group both at T1 and T2 ($p<0.05$). Ozone-treated group showed a higher EI at every time point (T0-T2: 72.77% vs 37.66%, $p<0.01$). Candidiasis (32% vs 11.5%) and relapse (40% vs 34.6%) rates were higher in control group, however the differences were not statistically significant.
Conclusions: Within the limitations of this study, ozonized water seems to be effective as an adjunct therapy, in combination with topical corticosteroids, for the treatment of eOLP.

Extra medullary manifestation of multiple myeloma

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Case report: Multiple myeloma (MM) is an incurable, biologically heterogeneous disease of the plasma cells that results in an overproduction of light and heavy chain monoclonal immunoglobulins. MM is the second most common hematologic malignancy. Internationally, MM constitutes approximately 1% of all cancers worldwide, with approximately 86,000 new cases per year. The median age at diagnosis is 65 years and the current the 5-year survival is approximately 46.6%. Bone disease, the hallmark of multiple myeloma, occurs in virtually all patients during the course of the disease, frequently impairing their quality of life, and represents a major cause of morbidity and mortality. In this case we describe a rare oral manifestation of an uncommon IgA lambda multiple myeloma.
Methods: An 85-years old male patient with refractory multiple myeloma (IgA lambda) presented to our Center. Clinical examination showed a huge tumefaction located in the lingual side of the fourth quadrant with a parenchymatous consistency at palpation. The dental x-ray images revealed a deformation of the right cortical jawbone. The patient history showed that the intraoral mass was firstly observed during the fourth administration of myeloma-specific chemotherapy (Daratumumab, Velcade and Desametasone). The incisional biopsy of the buccal mucosa and underlying tissue was performed. The results confirmed the unexpected diagnosis of extra medullary location of the multiple myeloma with a high quantity of plasma cells (CD20+; CD138+; CD79a+; MUM1+) and restriction for the lambda light chains of IgA. Several therapies may be adopted to treat this kind of multiple myeloma, as for example the radiotherapy or chemotherapy. However, considering the clinical condition of our patient and his age, we opted for surgical removal of the neoplasm to improve his quality of life. The local anaesthesia has been administered and the total surgical removal of the mass was performed, with a curettage of the bone. Stiches were removed 14 days after surgery. No acute or late complications occurred during the surgery or at follow-up. Few months after the surgery the patient died of multiple organ system failure caused by the cancer.
Results: The extramedullary oral location of multiple IgA lambda myeloma has been rarely reported in the Literature and these cases are frequently associated with primary systemic amyloidosis. In this case the patient presented an even more rare form of this extramedullary myeloma.
Conclusions: Further studies on larger population or case series are needed on these issues to better understand the underlying causes of this association.

Effects of fermented wheat germ extract on oral squamous cell carcinoma. An in vitro study

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Aim: Oral cancer represents one of the most aggressive tumors. Despite the advances in cancer therapy, the mortality is still high and the side effects of the current treatments are devastating. A great attention is paid on the natural compounds because of their potential benefic properties for human health. In this study the effects of Fermented Wheat Germ Extract (FWGE) on the cells of Oral Squamous Cell Carcinoma were in vitro investigated.
Methods: Three OSCC cell lines (HSC-3, SAS, SCC-25) and a non-tumoral human cell line (Gingival fibroblasts) were used. MTT assay was performed for evaluate the cell viability after treatment with various

concentrations of FWGE (2-5-10 mg/ml). Invasion and migration capacity of cancer cells were evaluated using two methods: transwells method, coating the filters with Myogel for Invasion assay and spheroids method, both comparing treated and untreated cells. The evaluations were performed at three different timings (24-48-72h). For the timing of evaluation of Spheroids the proliferation and invasion rate of each cell line was considered.

Results: MTT assay revealed a significant ($p<0.0001$) inhibition of cancer cell viability for 5mg/ml and 10mg/ml FWGE treatment, while no effect emerged for the treament with the lowest (2mg/ml) dose of compound. The Fibroblasts subjected to the treatment, showed a negative response only to the treatment with the highest (10mg/ml) concentration of FWGE, suggesting a better tolerance to the compound by non-cancer cells. Migration and invasion capacity of cancer cells was inhibited by the treatment with FWGE, resulting in a significant reduction ($p<0.0001$) of cells passing the transwell filter at every time point. In particular, HSC-3 seem to be more sensitive to the treatment, showing a significant inhibition of migration and invasion already at the concentration of 5mg/ml. SAS, instead, responded only to treatment with the highest (10mg/ml) concentration. The evaluation of HSC-3 Spheroids revealed a significant ($p<0.0001$) reduction of invasion area for the cells treated with 5mg/ml and 10mg/ml at Day 2 and Day4. The Day 7 picture showed a significant effect only for the 10mg/ml treatment. For SAS spheroids, only the highest treatment with 10mg/ml of FWGE produced a significant result in invasion area reduction. Regarding the SCC-25 spheroids, the invasion was very slow, so that the evaluation at Day 2 and 4 have not produced any siginificant result, meanwhile at Day 6, 9, 11 the cells treated with 5mg/ml and 10mg/ml FWGE showed a significantly lower invasion compared to the Untreated cells ($p<0.0001$).

Conclusion: Fermented wheat germ extract shows promising effects in the treatment of oral cancer cell lines, reducing their proliferation and migration/invasion ability. At the same time, normal human fibroblasts seem to be less affected when subjected to the treatment with the same doses of FWGE. Further investigations are needed to better understand the mechanism of action of such compound in view of a potential use in oral cancer treatment.

Evidence of braf and smo genes mutations in ameloblastoma

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Aim: Ameloblastoma is the second most frequent odontogenic tumor, but its molecular pathogenesis and treatment are still controversial. Recently, recurrent activating mutations of the BRAF and SMO genes were identified as potentially important for the pathogensis and the biological behavior of the tumor. These genes encode two receptors of the signaling pathways of MAPK and Hedgehog. This study analyzes the characteristics of these mutations in a series of ameloblastomas treated at the maxillofacial surgery unit of the polyclinic hospital Gemelli in Rome.

Methods: 10 patients, diagnosed of ameloblastoma, underwent surgical treatment for curative intent at the polyclinic hospital Gemelli. All patients were included in this study and a total of 10 specimens were collected and stored. Samples were formalin-fixed and paraffin-embedded. Molecular analysis for the detection of Braf and / or Smo mutations was performed through an amplificability test for a housekeeping gene and DNA was amplified with specific primers for codons 412 and 535 of the SMO gene and for codon 15 of the BRAF gene. The amplification products were loaded and run in 2% agarose gel stained with ethidium bromide and observed under ultraviolet rays. The specific bands, isolated from the gel were purified and directly sequenced with the same amplification primers.

The data relating to: the age and gender of the patient, the location of the lesion (mandibular or maxillary), the radiographic appearance (unilocular or multilocular), the histological type (unicistic or multicistic) and the type of treatment (radical or conservative) were collected and used for the statistical analysis. Statistical analysis was performed by using SPSS 20.0. Patients were categorized if carrying the BRAF or SMO gene mutation. Chi-square test and Mann-Whitney test were used to explore the mutation frequency and difference among the most common clinic-pathological features, such as age, gender, location of the tumor and histological type. Results are shown as test used and p-value for which $< 0,05$ was considered as statistically significant.

Results: SMO resulted wild-type in all patients, meanwhile 5 patients reported a mutation in BRAF gene. There were no difference between genders or young or older patients. BRAF resulted mutated only in the mandibular subsite.

Conclusion: In this study, we show that mutations of BRAF seems involved in the ameloblastoma of the