Canine “high grade – low grade” orofacial fibrosarcomas – a retrospective analysis of 70 cases

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INTRODUCTION
Fibrosarcomas can be subgrouped based on their histologic grade into high and low grade tumors. In 1994, a distinctive category called “biologically high-grade, histologically low-grade fibrosarcoma” (“high grade – low grade fibrosarcoma”) was described in a series of 25 dogs by Ciekot et al. (J Am Vet Med Assoc. 1994; 204: 610–615). This tumor is characterized by histologically highly differentiated cells with only little or no pleomorphism or other cellular morphologic characteristics of malignancy, despite clinically aggressive (invasive, destructive and in some cases metastatic) behavior. A strong breed predisposition in the USA was described in the first report with more than half of the cases originating in Golden Retrievers.

MATERIAL & METHODS
70 dogs diagnosed at Hofheim Small Animal Clinic with a „biologically high-grade, histologically low-grade fibrosarcoma“ were analyzed regarding their epidemiologic, clinical, and prognostic characteristics. Computed tomography was performed in 50 patients and imaging findings were compared to „classic“ oral fibrosarcomas.

RESULTS
80% of the cases were large breed dogs (> 25 kg BM), with 49mm and 31.5 mm, respectively). Pronounced contrast Retriever breeds disproportionately represented (24%; enhancement was present in the periphery of the tumor Golden Retrievers: 18%). Only 4 patients were <10kg. All mass. The radiobiologic behavior was characterized by dogs were meso- or dolichocephal. Median age was 8 permeative osteolysis of adjacent jaw bone. Soft tissue years (range 3-13 yrs). No sex predisposition was noted. mineralization was occasionally seen (25% of the cases).

In 70% of the patients the tumor presented as a tough, Therapy was chosen mainly based on tumor location and indolent mass, broad-based on the lateral (46%) or rostral size. 15 patients were treated surgically (maxillectomy or (24%) maxilla, less frequently on the caudal maxilla, the mandibulectomy). Survival times (ST) ranged from 2 mandible or other parts of the viscerocranium. 62 % of months to 5 years. 5 cases with surgery alone and 2 cases patients showed an externally visible swelling in the face, with surgery followed by radiation therapy remained patients had metastasis at time of diagnosis.

Computed tomography revealed a large, broad-based, soft tissue mass laterally on the jaw (median length and width, or the owner’s choice not to pursue therapy.

CONCLUSION
This study confirms the predisposition of Golden Retrievers and potentially other Retrievers for this tumor. The tumor originates most commonly from the lateral maxilla and goes along with a typical cortical permeative lysis of the adjacent bone, which differs from the geographic bone lysis in „classic“ oral fibrosarcomas. Based on the clinical and CT characteristics it is proposed that the tumor originates from the periosteum. Surgical resection +/- adjuvant radiation therapy may provide the best prognosis, and can be curative in selected cases.

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