

## **Aggressive squamous cell carcinoma of the cranium of a 10-year-old male Collie.**

History: A 10-year-old male Collie was presented to the clinic approximately 7 weeks after a suspicion of head trauma with evidence of head deformation, exophthalmos, and mild nasal mucopurulent discharge. The patient was in good physical condition, retained his appetite and showed no discomfort on palpation of the lesion.

CT findings: Figure 1: Transverse CT image of the caudal skull (A) and reconstructed image (B) of the skull in the midsagittal plane in bone algorithm. There is a generalized periosteal response parallel to the bony contours of the skull (yellow arrows). The frontal sinus contains a soft tissue density (orange arrow). The nasal bone shows focal osteolysis (red arrow).

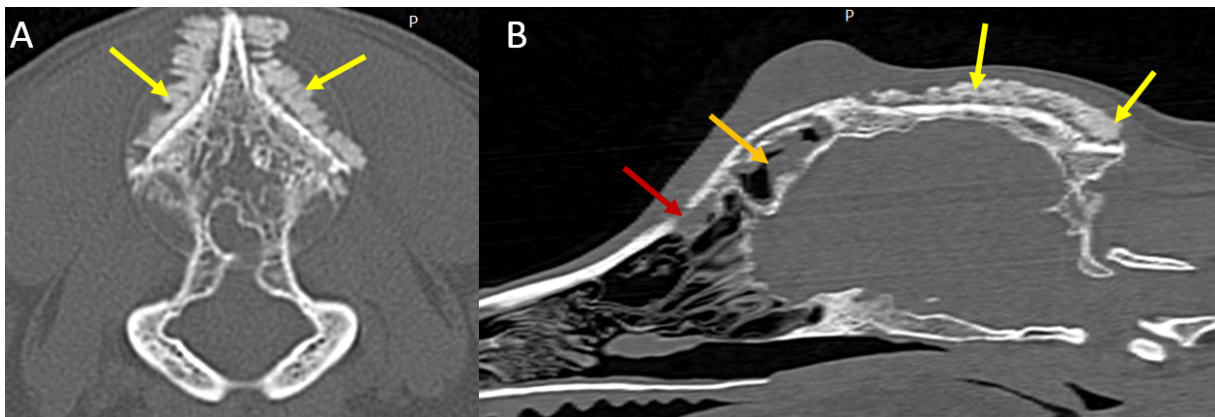


Figure 2: Transverse CT images at the level of the frontal sinuses: (A) soft tissue algorithm after IV administration of contrast medium, and (B) bone algorithm. On the images made after iv contrast administration there is a heterogeneous enhancement of the soft tissues around the skull with fluid pockets (hypodense zones) (green arrows). The frontal sinuses contain a soft tissue density (orange arrows). There is focal osteolysis of the wall of the frontal sinus present (red arrow).

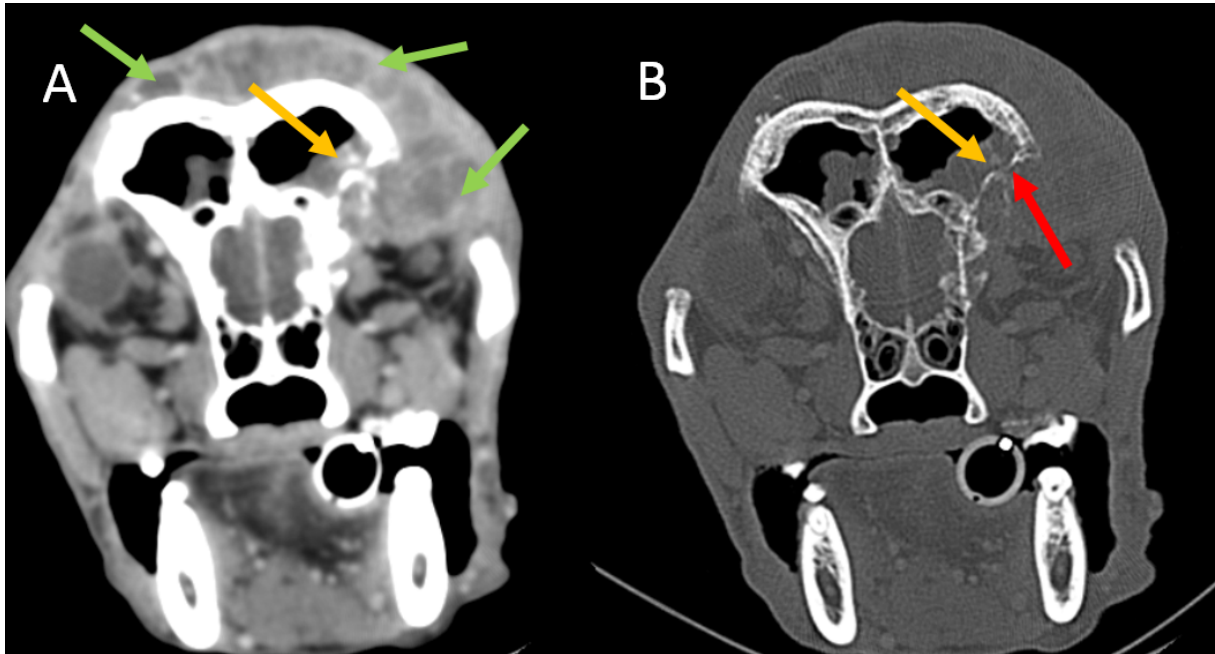
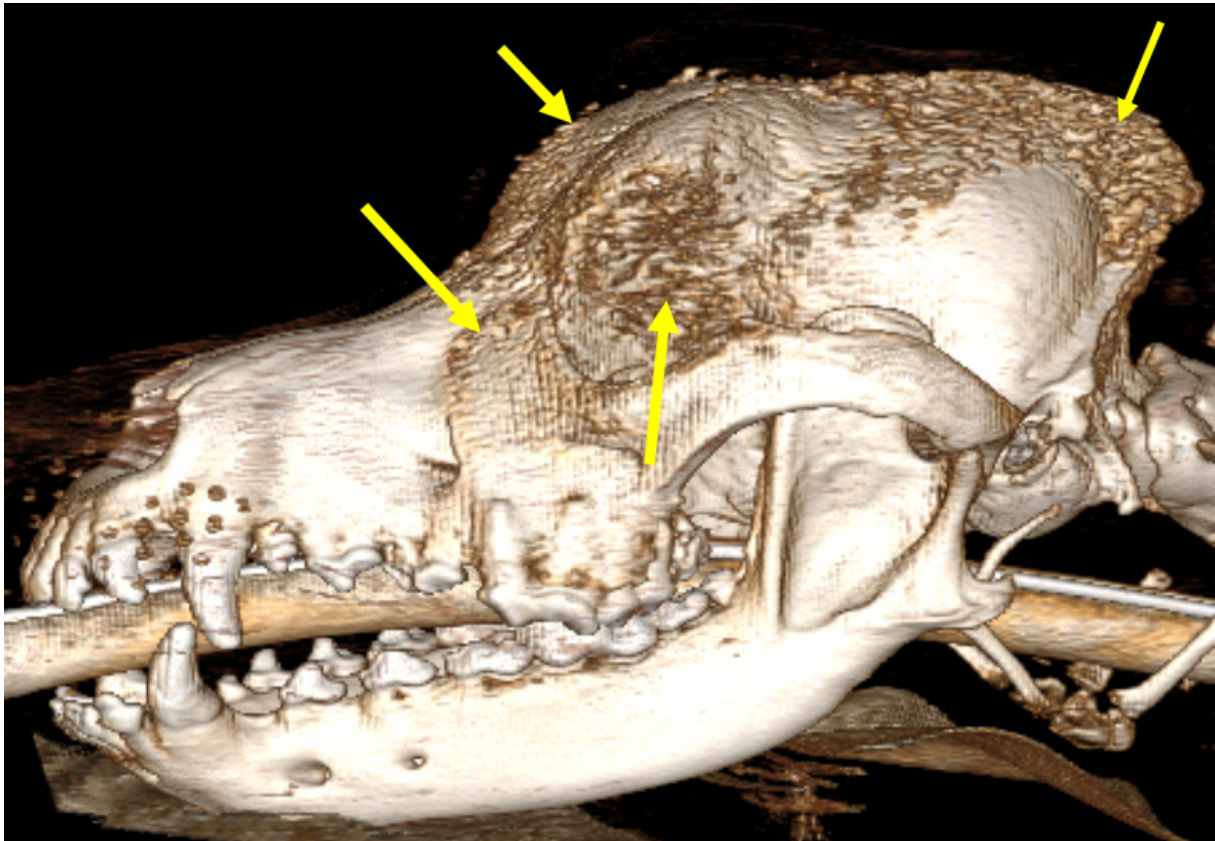


Figure 3: Mid-sagittal (A) and dorsal (B) CT reconstruction of the skull in soft tissue algorithm after IV administration of contrast medium. There is heterogeneous enhancement of the soft tissue around the skull (green arrows). Soft tissue swelling extends into the retrobulbar area behind the left eye (purple arrow).



Figure 4: 3D CT of the skull. The bony lesions are characterized by a generalized periosteal response from the caudal area of the skull to the caudal area of the nose (yellow arrows).



Diagnosis: These findings suggested a neoplastic process. A biopsy was taken and histopathologically a squamous cell carcinoma of the skull was diagnosed.

Squamous cell carcinoma is a malignant tumor originating from squamous epithelium and in dogs accounts for approximately 5% of all skin tumors. In cats, it is the most common epithelial tumor at the head along with mast cell tumors and soft tissue sarcomas. Squamous cell carcinoma is mainly local aggressive and expands rapidly. Metastases to lymph nodes and other organs are rare.

*Aggressive squamous cell carcinoma of the cranium of a dog. Anna Łojarczyk et al. BMC Veterinary Research (2021) 17:144*