

# Maxillary sinus invasive chondrosarcoma in an Holstein cow

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## INTRODUCTION

Chondrosarcomas are rare in domestic animals, including cattle<sup>1,2</sup>. In the slaughterhouse inspections, the frequency of cartilaginous neoplasms in cattle does not exceed 1% of all neoplasms<sup>3</sup>.

An 11-year-old Holstein cow pregnant in the 6th month was referred for dysphagia and a distortion of the left upper jaw.

### First examination

The general clinical examination showed a decreased in the body condition score (1.5/5), a dehydration at 5% and congestion of the ocular mucosa. The oral cavity revealed the presence of ulceration of the palatal mucosa with a swelling that decreased the volume of the oral cavity.



Figure 1: Distortion of the upper left jaw



Figure 2: Ulceration of the palatal mucosa with swelling

### Radiography

It revealed a densification associated with a fluid level in the left rostral and caudal maxillary sinuses (LMS), also reaching the roots of the three premolar teeth.



Figures 3 and 4: densification area in the LMS

**Initial diagnosis** was a sinusitis of the LMS with severe dental and bone damage.

### Treatment

Trepanning of the sinus with very little fluid obtained, antibiotics (Oxytetracyclin) and anti-inflammatory (flunixin meglumin).

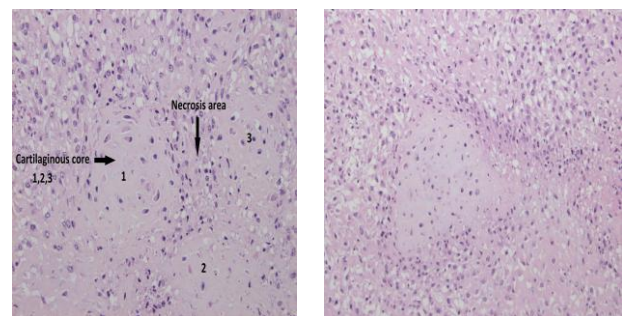
According to the bad evolution, the abortion and the poor prognosis, the animal was  **euthanized**.

### Necropsy

After dissection of the head, a tumor of  $\pm 8$  cm in diameter was observed between molars in the hard palate. The left second premolar was absent and the third was shaky, pushed away by the neoplasm. Sagittal section of the head showed that this tumor contained some necrosis areas and that it was the lower part of a greater one (10 x 8 x 8 cm), extending until the right maxillary sinus, the septum being lysed. This tumor was adherent to the entire wall of the LMS and appeared less adherent to the wall of the right jaw.

### Histopathological examination

showed mitotic figures and typical cell environment leading to chondrosarcoma diagnosis.



Figures 5 and 6: Neoplastic cells, mitotic figures and necrosis area

Although Chondrosarcomas have already been described in Holstein and Simmental cows, to our best knowledge, it's the first description for that location.

### References

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3. Richardson DW, Acland HM. Chondrosarcoma in a cow. *Cornell Vet* 1983;73:137–143.