

# Sinuso-nasal adenocarcinoma in a roe deer (*Capreolus capreolus*)

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## INTRODUCTION

The roe deer (*Capreolus capreolus*) is a common wildlife species in Europe. However, little is known about the type and the frequency of its naturally occurring noninfectious diseases, especially neoplasms. The most frequently reported tumors of deer are papillomavirus-associated dermal fibropapillomas and papillomas. Here, we report and describe the pathomorphologic characteristics of a suspected sinusal carcinoma in a roe deer.

## MATERIAL and METHODS

The Surveillance Network of Wildlife Diseases operating in Wallonia (Southern Belgium) received one adult female roe deer for necropsy. The roe deer was culled for sanitary reasons (abnormal naso-frontal mass) in May 2014 (figure 1) (Voeren/Fourons – 3790). At necropsy, the head was submitted for pathologic investigation of a grossly evident mass (15.5 cm length – 11 cm width – 33.5 cm circumference) located upon naso-frontal bones. This was processed for Xrays, Gram and Diff-Quick staining, bacteria culture and histopathology.

## RESULTS

- The carcass was in a good body condition with low level of internal parasite infestation.
- Xrays of the head showed a soft tissue mass with zones of calcification and partial lysis of the chamfer (figure 2). The cranium seemed not to be invaded.
- Following bacteriology, Gram and Diff-Quick-stained smears of the hemo-purulent fluid obtained by puncture showed neutrophils, cell debris and yeasts. No bacteria were isolated on aerobic culture.
- Examination of sections of the muzzle at the level of the mass suggested thickening of the frontal sinus wall with necrotic tissue (figures 3 and 4).
- Microscopically, the tumor was composed of irregular lobules with a tubulopapillary pattern and invasive cords of epithelial cells. The tissue had large areas of necrotic debris surrounded by irregular proliferating epithelial cells (figure 5).



Fig.1: Picture of the head exhibiting an abnormal naso-frontal mass.



Fig.2: Lateral radiographic view of the head showing a soft tissue mass with zones of calcification and partial lysis of the chamfer .



Fig.3: Transverse section of the muzzle showing necrotic tissue invading the frontal sinus (star).



Fig.4: Longitudinal section of the skull displaying an infiltrative neoplastic mass (star) effacing the naso-maxillary bone.

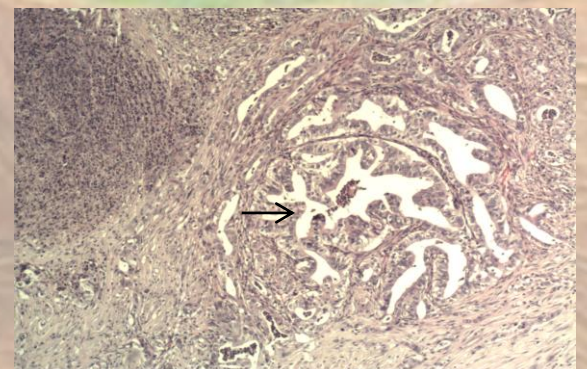


Fig.5: Histologic characterization showing cords and nests of neoplastic epithelial cells (arrow) with an abundant collagenous stroma. Hematoxylin and eosin.

## CONCLUSION

Here, we reported the description of a head neoplasm in one roe deer. Some exams are still in progress to determine the type of this tumor, but all results suggest a sinuso-nasal adenocarcinoma.