

Knauf-Witzens, T.; Blazey, B.; Luders, I.; Hermes, R.; Schwarzenberger, F.; Roller, M., 2022. Endometrial adenocarcinoma in a one-horned rhinoceros (*Rhinoceros unicornis*) – diagnostic and therapeutical approaches. Zoos and Wildlife Health Conference (Emmen, The Netherlands) 2022:46 (abstract)

ENDOMETRIAL ADENOCARCINOMA IN A ONE-HORNED RHINOCEROS (RHINOCEROS UNICORNIS) – DIAGNOSTIC AND THERAPEUTICAL APPROACHES

TOBIAS KNAUF-WITZENS¹, BIRGIT BLAZEY², IMKE LÜDERS³, ROBERT HERMES⁴,
FRANZ SCHWARZENBERGER⁵, MARCO ROLLER⁶

¹Wilhelma Zoo, Stuttgart, Germany

²Chemical and Veterinary Investigations Office, Stuttgart, Germany

³GEOlives - Animal Fertility and Reproductive Research, Hamburg, Germany

⁴Leibniz Institute for Zoo and Wildlife Research (IZW), Berlin, Germany

⁵Dept. of Biomedical Sciences – Endocrinology, University of Veterinary Medicine (Vetmeduni Vienna), Vienna, Austria

⁶Zoologischer Stadtgarten Karlsruhe, Karlsruhe, Germany

Short Abstract

In 2019, the female One-horned Rhinoceros (*Rhinoceros unicornis*) SANI (GAN: 24000021) was lost due to generalized metastasising adenocarcinoma originating from the endometrium. Here, we report her medical history including diagnostic procedures.

Born 1992 in Nepal the female arrived at the Wilhelma, Stuttgart in 1993. Between 2000 and 2008, she contributed five calves to the EEP without any problems. Then she stopped displaying overt signs of behavioural oestrus despite ongoing ovarian activity as confirmed by faecal hormone analysis. Hormonal treatments with GnRH (Ovuplant®, Dechra Veterinary Products Deutschland GmbH) did not alter her behaviour and artificial insemination was discussed, but dismissed. Instead, continuous socialisation with the bull resulted in her last birth in 2014.

Thereafter, she rejected the bull despite regular ovarian activity. Transrectal ultrasound of the reproductive tract revealed neoplastic tumours, also affecting the vagina, presumably explaining the rejection of penile penetration. Therefore, the GnRH vaccine Improvac® (Zoetis Deutschland GmbH) was applied to prevent further tumour growth as previously reported. Faecal hormonal analysis documented the success of treatment. Nevertheless, the female developed a bloody cough. Tuberculosis and other infectious causes of pneumonia were ruled out via broncho alveolar lavage. Due to increasing physical degeneration she was euthanized. Necropsy revealed metastasized endometrial adenocarcinoma in almost every organ, including the lungs.

In summary, it is known that continuous breeding is important to prevent reproductive tract pathologies in megaherbivores. However, neoplasia may not always correspond to benign leiomyomas, which are treatable tumours, and malignant conditions should also be considered as differential diagnosis.
