

A Retrospective Study of Mortality in Maned Wolves (*Chrysocyon brachyurus*) in North American Zoological Institutions

Magdalena Marcinczyk¹, VMD; Nucharin Songassen², DVM, PhD; Elizabeth Hammond³, DVM, DACZM; Melissa Rodden⁴, BSc; Denise McAloose¹, VMD, DACVP

¹Wildlife Conservation Society, Zoological Health Program, Bronx, NY, USA; ²Smithsonian's National Zoo and Conservation Biology Institute, Front Royal, VA, USA; ³Lion Country Safari, Loxahatchee, FL, USA; ⁴Huntly, VA, USA

ABSTRACT

The objective of this 38-yr retrospective study was to review and summarize causes of mortality in maned wolves (*Chrysocyon brachyurus*) in the North American Species Survival Plan® (SSP) population to inform and enhance animal health, husbandry, and conservation efforts. Pathology reports were requested from all zoological institutions housing maned wolves that died between January 1, 1983, and December 31, 2021. The data were reviewed and cause of death (COD) and concurrent diseases were summarized and compared by age group, organ system and disease process. One hundred and seventy-two wolves, 83 females and 89 males, met the inclusion criteria; the majority were geriatric (>11 yr; n=95) or adult (2–11 yr; n=67) wolves. Overall, noninfectious diseases were the most common COD across all age groups (n=95; 55.2%). In adults and geriatrics, neoplasia (dysgerminoma) and metabolic disease (urolithiasis) were the most common COD. The most common COD by organ system were digestive (n=40) and urinary (n=34) system diseases. Cause of death in the former included enteritis (n=10) and gastric dilation/volvulus (n=7). The most common comorbidities were intestinal inflammation and urolithiasis. Infectious COD was reported in 17 wolves and included viral (n=1), babesiosis (n=4), acanthocephalans (n=2), acariasis with anemia (n=1), and dirofilariasis (n=1); bacterial infections were a COD in eight wolves. A total of 135 benign and malignant neoplasms were diagnosed in 44 individuals. All but two tumors, a thymoma and astrocytoma (both in juveniles), were diagnosed in geriatric or adult wolves. Neoplasia was the primary COD in 38 individuals. Dysgerminoma was the most reported tumor (n=17) and the most common neoplastic COD (n=7).

ACKNOWLEDGMENTS

The authors thank all of the participating institutions that provided pathology reports including the following: Abilene Zoological Gardens, Alexandria Zoological Park, Audubon Zoo, BREC's Baton Rouge Zoo, Connecticut's Beardsley Zoo, Birmingham Zoo, Buffalo Zoological Gardens, Denver Zoological Gardens, Detroit Zoological Society, Dickerson Park Zoo, Endangered Wolf Center, Fossil Rim Wildlife Center, Peoria Zoo in Glen Oak, Houston Zoo, Jacksonville Zoo and Gardens, John Ball Zoological Garden, Kansas City Zoo, Lee Richardson Zoo, Lincoln Park Zoological Gardens, Little Rock Zoological Garden, Los Angeles Zoo and Botanical Garden, Louisville Zoological Garden, Montgomery Zoo, Natural Science Center of Greensboro, Oklahoma City Zoological Park, Omaha's Henry Doorly Zoo, Phoenix Zoo, The Philadelphia Zoo, Pueblo Zoo, Rolling Hills Wildlife Adventure, San Antonio Zoological Gardens and Aquarium, San Diego Zoo, Scotch Plains/Terry Lou Zoo, Sedgwick County Zoo, Smithsonian National Zoological Park and Conservation Biology Institute, St. Louis Zoo, Sunset Zoo, White Oak Conservation Center, Wildlife World Zoo, Wildlife Safari, Woodland Park Zoological Gardens, Zoo Boise.

SPEAKER INFORMATION

(click the speaker's name to view other papers and abstracts submitted by this speaker)

[**Magdalena Marcinczyk, VMD**](#)

Wildlife Conservation Society
Zoological Health Program
Bronx, NY, USA

URL: </doc/?id=11054459>