

Forty-Year Bronx Zoo Fennec Fox (*Vulpes zerda*) Morbidity and Mortality Review (1980–2019)

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Abstract

The fennec fox (*Vulpes zerda*) is a small charismatic canid popular in American and European zoological and private collections. The Bronx Zoo has housed fennec foxes since the early 1900s and currently has one of the largest populations managed by the fennec fox Species Survival Plan® (SSP). Of the 83 foxes at the Zoo between 1980 and 2019, 52 medical records and 48 mortality reports were available for review. Common causes of morbidity included trauma and dermatologic disease, especially atopic dermatitis. Average age at death for animals surviving past 10 weeks was 9.76 years. Common causes of death/euthanasia were neoplasia (15/48, 31%), with neoplastic processes incidentally identified in an additional seven animals, as well as infectious disease (14/48, 29%). Significant ante-mortem cardiac changes were identified in 22 animals. Hepatocellular carcinoma (HCC) was diagnosed in eight animals, consistent with previous documentation of HCC as one of the most common neoplasms in this species.¹ Four animals were suspected to have succumbed to vaccine-induced canine distemper virus after receiving a modified-live vaccine. No canine distemper infections have been documented after 1981 in this population and since using a canarypox-vectored recombinant vaccine. Recommendations for management of this species include routine screening for hepatic neoplasia in adult animals, regular cardiac evaluations including ECG and echocardiogram, and dermatologic workup as described by the current consensus statement on canine atopic dermatitis.²

Literature Cited

1. Monahan CF, Garner MM, Kiupel M. Hepatocellular neoplasms in captive fennec foxes (*Vulpes zerda*). *J Zoo Wildl Med*. 2018;49(4):996–1001.
2. Olivry, T, DeBoer, DJ, Favrot, C. *et al*. Treatment of canine atopic dermatitis: 2015 updated guidelines from the International Committee on Allergic Diseases of Animals (ICADA). *BMC Vet Res*. 2015;11:210.

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