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## NASAL CARCINOMA IN MEXICAN GRAY WOLVES (*Canis lupus baileyi*): PREVALENCE DETERMINATION USING COMPUTED TOMOGRAPHY

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### Abstract

The Mexican gray wolf (*Canis lupus baileyi*), is the rarest, southernmost, and most genetically distinct subspecies of the North American gray wolves.<sup>6</sup> It is also the smallest subspecies of the gray wolf, and one of the most endangered canids in the world. Since the early 2000's at least 14 clinical cases of nasal carcinoma have been described in the captive population of Mexican wolves in the United States and in Mexico. Although cancer represents only 3.3% of the mortality of the registered Mexican wolf population, the majority of these neoplasms have been categorized as sino-nasal carcinomas (Gaffney, Garner, unpublished data).<sup>7</sup> Preliminary studies suggest that, as in dogs, a genetic component is involved in the carcinogenesis of this neoplasm.<sup>7</sup> Advanced imaging techniques such as computed tomography (CT) and magnetic resonance imaging (MRI) are routinely used for the diagnosis of nasal tumors in dogs.<sup>1-5</sup> Because most nasal tumors involve bony structures, including nasal turbinates and sinuses, CT exams are more commonly used to assess the extent of the nasal disease as well as to aid in differentiating between neoplastic and non-neoplastic processes. In addition CT allows exact disease localization and staging, biopsy guidance and treatment planning.<sup>1,5</sup> Mexican wolves housed at the Brookfield Zoo as well as archived specimens (heads and skulls) from deceased Mexican wolves, were examined using CT to identify changes indicative of nasal disease and determine prevalence of nasal carcinoma on this species.

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