

Metastatic Cancer in Dogs

Metastatic cancer of unknown primary (MCUP) is defined as a biopsy-proven malignancy in a metastatic stage, in which the anatomic location of the primary tumor cannot be found. In human and veterinary patients, MCUP carries a poor prognosis.

This retrospective study aimed to describe clinical characteristics, treatment, and outcome of dogs with MCUP. It included 21 cases with biopsy-diagnosed metastatic disease in which physical examination, CBC, serum chemistry profile, urinalysis, histopathology, and total-body CT did not reveal a primary tumor. The most common cancer type was carcinoma (57.1%), followed by sarcoma (33.3%), amelanotic melanoma (4.8%), and mast cell tumor (4.8%). The most frequent locations for metastasis were bones, lymph nodes, lungs, and spleen.

Median survival time for dogs diagnosed with MCUP was 30 days. For the 10 dogs that underwent some form of treatment, median survival time was 80 days. Several theories regarding the biologic basis of MCUP include that the primary tumor remains small enough to escape detection or that it may undergo spontaneous immune-mediated regression after seeding the metastasis. In this study, 1 patient with metastatic amelanotic melanoma in the mandibular lymph node developed melanoma of the ipsilateral pad 7 months after radiation and immunotherapy for the metastatic lesion. The pad tumor was thought to be the primary tumor. MCUP treatment remains uncertain in



In human and veterinary patients, metastatic cancer of unknown primary carries a poor prognosis.

veterinary patients; poor prognosis and cost of diagnostic investigation remain challenges.

Commentary

With little information available about diagnosis, treatment, and prognosis, MCUP is vexing for clinicians and clients. This study is interesting in its description of tumor types (carcinoma being most common) and metastatic locations. Although a short median survival time (30 days in this study) for metastatic cancer is not surprising, it is important to note that these dogs had

various tumor histologic types and locations. Further, 52.4% of dogs were not treated and were euthanized shortly after diagnosis. Dogs that were treated had various tumor types and treatment protocols. For accurate prognostic information, a larger study of dogs with the same metastatic tumor type and treatment protocol is warranted.—*Sandra Bechtel, DVM, DACVIM (Oncology)*

Source

Rossi F, Aresu L, Vignoli M, et al. Metastatic cancer of unknown primary in 21 dogs. *Vet Comp Oncol.* 2015;13(1):11-19.