



WSAVA VAC Protocol for Treating Cancer in Dogs

Hemangiosarcoma (HSA) is a malignant neoplasm that can affect many sites (eg, spleen, right atrium, liver, subcutis). Tumors are aggressive; median survival times (MSTs) are highly variable depending on affected organ and stage (I, II, III). MST of dogs ($n = 67$) with stage III and stage I/II HSA were compared when treated with vincristine, doxorubicin, and cyclophosphamide (VAC). Twenty-five dogs had evidence of metastasis (stage III); 42 did not (stage I, $n = 14$; stage II, $n = 28$). The most common sites of metastasis were the lung and liver. Fourteen dogs received VAC chemotherapy as the only treatment modality and 50 received postoperative chemotherapy. Three dogs received neoadjuvant chemotherapy followed by surgery. MST for the 67 dogs was 189 days (range, 17–742 days). MST for dogs with

stage III and stage I/II tumors was 195 (range, 17–742) and 189 (range, 21–730) days, respectively, with no significant difference in MST between stage III and I/II. The MST for dogs with stage III splenic HSA was 195 days (17–742); for stage I/II, it was 133 days (23–415). Overall response rate was 86%, and overall 1-year survival rate was 10%. It was concluded that HSA dogs with signs of metastasis should not be denied treatment.

■ Commentary

Treatments for hemangiosarcoma, an aggressive cancer with a poor prognosis and modest treatment results, include surgery and chemotherapy, usually with anthracycline-based protocols. A modified VAC protocol is safe, although not likely superior to previously reported

doxorubicin-containing protocols. The high response rate to modified VAC, and similar survival rates of dogs with stage III compared with stage I/II disease is encouraging; however, numerous limitations of this study make true conclusions difficult to establish. A comparison of outcomes between disease stages (I vs II vs III) would be interesting, as stage-I dogs are thought to do better. Modified VAC is another reasonable protocol for dogs with hemangiosarcoma.—*Cecilia Robat, DVM, DACVIM (Oncology)*

■ ■ Source

VAC protocol for treatment of dogs with stage III hemangiosarcoma. Alvarez FJ, Hosoya K, Lara-Garcia A, et al. *JAAHA* 49:370-377, 2013.

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¹ C. Sitzman, Evaluation of a hydrophilic gingival dental sealant in beagle dogs. *J Vet Dent* 2013; 30 (3): 150-155.



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