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Title: Review of a study reporting an association between 2,4-dichlorophenoxyacetic acid and canine malignant lymphoma: Report of an expert panel


# of Pages: 8


Keywords: 2,4-D; Health; Canis familiaris; Chemical exposure

Abstract: "Hayes et al. (1991) conducted a case-control study of pathologically confirmed canine lymphoma in dogs based on data collected from veterinary teaching hospitals in St. Paul, Minnesota; Purdue, Indiana; and Colorado State University at Ft. Collins. The case group included 491 dogs diagnosed with canine malignant lymphoma. The control group included 479 dogs that were diagnosed with tumors other than lymphoma and 466 dogs that had died of other causes including accidents but excluding conditions that may have been caused by chemical exposure. In the analysis, dogs from the two distinct control pools were combined on the basis of similarity in the demographic characteristics of the two groups. Information on the habits and possible exposures of the dogs to garden chemicals was gathered initially by means of a mailed questionnaire completed by the dog's owner. Owners who failed to respond to the mailed questionnaire were contacted by telephone and asked the same questions. The questionnaire consisted of 71 questions. Exposure to pesticides was assessed through questions that did not list any garden chemicals by name. In the analysis of the data, the authors made the assumption that exposure to garden chemicals occurred only for dogs that were allowed access to the yard and that exposure was related to the number of times the chemical was used in each year. When all dogs that were reported as not having access to their owners' yards were classified as unexposed, the authors reported that a statistically significant 30% increase in risk (odds ratio 1.3, 95% CI 1.04-
1.67) was associated with owner application of 2,4-D and/or employment of a commercial lawn care service by the owner. When subgroups were analyzed separately (i.e., commercial lawn treatment only, owner application of 2,4-D only and, owner application of 2,4-D plus commercial application of lawn chemicals), the authors reported that none of the associations showed statistical significance. Clear dose-response trends were not observed for a number of commercial lawn chemical treatments per year but the authors reported a positive increasing trend of lymphoma risk with annual number of owner applications of 2,4-D ($P < 0.02$). The association between owner use of 2,4-D and/or commercial lawn treatment was reported to be strongest for those breeds of dogs which the author defined as being at lowest risk for lymphoma, and seemed weakest for mixed breeds and those breeds defined by the authors as being at high risk. The authors, based on their findings in this study, concluded that there was an association between 2,4-D exposure and the development of canine malignant lymphoma and called for further investigations into the human health implications of exposure to 2,4-D in the home environment.

Language: English
References: 13
See Also: See also "Case-control study of canine malignant lymphoma: Positive association with dog owner's use of 2,4-dichlorophenoxyacetic acid herbicides," *Journal of the National Cancer Institute*, 83(17) September 4 1991, p. 1226-1231 R=43355 [click here]

Note: Graphs
See Also: Other items relating to: 2, 4 - D in Turf
ASA/CSSA/SSSA Citation (Crop Science-Like - may be incomplete):

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