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PREVALENCE OF CUTANEOUS FIBROMAS IN WHITE-TAILED DEER (*ODOCOILEUS VIRGINIANUS*) IN NEW YORK AND VERMONT

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The cutaneous fibroma is the most frequent skin tumor diagnosed in white-tailed deer. During the 1962 hunting season in New York State, 1.4% of over 3,000 deer examined had skin tumors, similar macroscopically to fibromas (Friend, 1967, Bull. Wildl. Dis. Assoc. 3: 102-104). A similar survey, based on the presence of gross lesions on deer in Connecticut, revealed fibromas in 1.7% of almost 3,000 deer (Herig, pers. comm.). This survey reports the prevalence of histologically confirmed fibromas in deer in Vermont and New York.

Deer were examined for three consecutive years (1978-1980) during a controlled hunt at the Seneca Army Depot, Romulus, New York. The deer were enclosed in about 3,000 ha by a 2.1 m fence (Hesselton et al., 1965, N.Y. Fish Game J. 12: 17-30). Deer were also examined for two consecutive years (1979-1980) at southern Vermont check stations during the opening week of hunting season. Lesions resembling

fibromas were fixed in buffered 10% formalin, dehydrated in graded ethanol, paraffin embedded, sectioned at 6 μ m, and stained with Harris' hematoxylin and eosin. Criteria for determining age were tooth development and wear (Severinghaus, 1949, J. Wildl. Manage. 13: 195-216).

Fifteen of 146 deer (10.3%) examined at the Seneca Army Depot and 9 of 136 (6.6%) in southern Vermont had fibromas. Only 1 of 79 (1.3%) females was positive whereas 23 of 203 (11.3%) males were affected. There was no year-to-year or area-to-area variation in tumor prevalence. Deer in the 1½ to 2½ yr age classes were most often affected (Table 1). The fibromas ranged from 0.5 to 7 cm in diameter and from one to 22 in number. Most affected deer had one to five tumors which were located primarily around the eyes, mouth, neck, and forelimbs (Table 2). Histologically, fibromas consisted of dermal proliferation of fibroblasts laying down a dense

TABLE 1. Prevalence of fibromas on male white-tailed deer in New York and Vermont during 1978-1980.

Age Class (years)	No. deer examined	Positive for fibromas	
		No.	%
0.5	35	0	0
1.5	90	18	20.0
2.5	35	4	11.4
3.5	28	1	3.6
4.5+	15	0	0
TOTAL	203	23	11.3

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TABLE 2. Number and location of fibromas on 24 white-tailed deer from New York and Vermont during 1978-1980.

	Positive for fibromas	
	No. deer	%
Number of tumors		
1	9	37.5
2-5	9	37.5
6-10	1	4.2
>10	5	20.8
Location of tumors		
	No. tumors	%
Around eyes	37	34.6
Forelimbs	25	23.4
Mouth	12	11.2
Neck	11	10.3
Rear limbs	9	8.4
Back	7	6.5
Ventral midline	5	4.7
Nostril	1	0.9
Total	107	100.0

matrix of whorling collagen fibers. Mitoses were rare. The epidermis covering these tumors ranged from mild acanthosis and hyperkeratosis to pseudoepitheliomatous hyperplasia (Sundberg and Nielsen, 1981, Can. Vet. J. 22: 385-388).

The sampling size in the present survey was smaller than that of previous studies, but prevalence was higher. In

the previous surveys, only readily observable tumors which grossly resembled fibromas were included and minor lesions may have been overlooked. When the prevalence was calculated on the basis of only the most prominent fibromas, it changed from 10.3% to 2.0% in New York and from 6.6% to 1.5% in southern Vermont. These figures approach those given in previous reports.

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