

LYMPHOSARCOMA IN A WHITE-TAILED DEER

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LYMPHOSARCOMA IN A WHITE-TAILED DEER

In February 1966 a 5½-year-old white-tailed male deer from Franklin County was submitted to the laboratory for pathologic examination. It had posterior paresis for two days prior to euthanasia and was in a severe state of malnutrition. On autopsy a 20-centimeter round mass was found at the pelvic inlet attached to the neck of the urinary bladder and walls of the pelvic cavity (Figure 1). The terminal portion of the large intestine was partially compressed but otherwise not involved. The left ureter went through the mass but was patent and undamaged. A chain of 6 small masses of 2 to 5 centimeters each extended along the dorsal peritoneum from the pelvis to above the left kidney. An 8-centimeter mass was present at the hilus of the right lung attached to the adventitia of the pulmonary artery. Other sites of tissue proliferation included the junction of the pulmonary artery and heart, the endo-

cardium of the right ventricle, the parietal pleura at the third right rib, and adhesions of the right lung apex to the pleura. The peripheral lymph nodes did not appear to be enlarged. The remainder of the examination was essentially negative.

Tissues were fixed in 10% formalin and stained with hematoxylin and eosin. Histologic examination revealed that the tissue masses consisted of pleomorphic cells suggestive of cells of the lymphocytic series (Figure 2). The nuclei were large, the nuclear membrane was dense and sharp, round or indented, and one or more nucleoli of varying size were present. Many cells contained visible pale acidophilic cytoplasm that was irregular in distribution and reminiscent of the pseudopodia of related histiocytes. An occasional giant cell was evident. Although the tumor in the pelvic inlet was surrounded by a connective tissue capsule, the tumors in the thorax were invasive and contained only irregular inter-

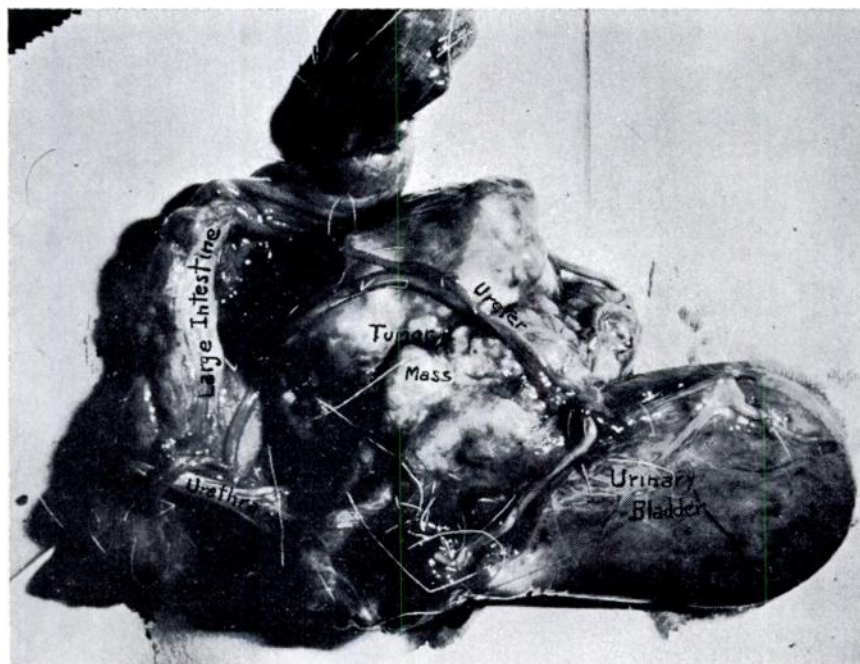


Fig. 1. Gross post-mortem picture of the "primary" tumor mass in the dorsal retroperitoneum.

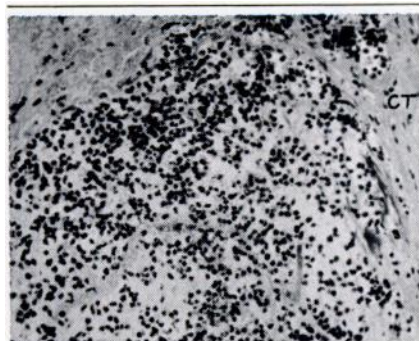


Fig. 2. Neoplasm from the pelvic inlet showing pleomorphic cells suggestive of cells of the lymphocytic series. A connective tissue capsule (CT) surrounds the tumor.

lacing connective tissue strands (Figure 3). Similar cells were found in the alveoli of the lung and in the bronchi and bronchioles adjacent to the tumors. Areas of hemorrhage and calcification were evident in the larger tumors.

Reticulum fibers were present upon silver impregnation staining. However, the tumor did not have the morphologic appearance of a reticulum cell sarcoma.

Discussion

The small number of references in the literature to metastatic tumors in Cervidae prompted this report. To our knowledge this is the first case of a

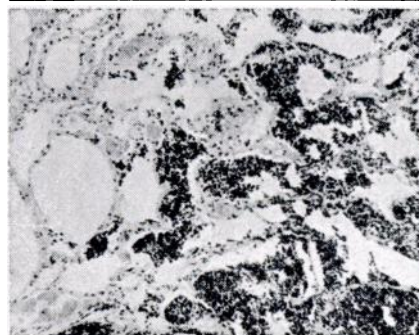


Fig. 3. Lung section showing tumor cells spreading in alveoli and interstitial spaces.

lymphosarcoma reported in free-ranging white-tailed deer, although sarcomatous tumors (Fenstermacher *et al.*, Cornell Vet. 33: 323-332, 1943) and lymphosarcoma (Lombard and Witte, Cancer Res. 19: 127-141, 1959) have been reported in deer; the latter being in captive white-tailed deer. The voluminous reports from worldwide zoological gardens may mention similar lesions. Tumors reported in deer were the subject of a good review by Fay (First White-tailed Deer Disease Symposium, Athens, Ga., 1962). Reticulum cell sarcomas in domestic animals often suggest a primary tumor at the dorsal retroperitoneum but wide distribution of early lesions is also seen (Jubb and Kennedy, Pathology of Domestic Animals, Vol. 1, p. 311, Acad. Press, 1963). Although this tumor appeared to have the dorsal retroperitoneum as its primary site reticulin stain was not conclusive to give a diagnosis of reticulum cell sarcoma.

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LETTER TO THE EDITOR (AS AUTHOR)

"In your paper, 'Diseases and Infections of Snakes: A Review', which appeared in the October issue of the *Bulletin*, you omitted an important reference by Tarshis on 'Control of the snake mite (*Ophionyssus natricis*), other mites, and certain insects with the sorptive dust SG 67', published in 1960 in the J. Econ. 53: 903-908. The sorptive dust SG 67 is now referred to as Dri-Die 67.

"It was through my research with the inert dusts that herpetologists around the world started using Dri-Die 67 and found it to be an effective acaricide against *O. natricis*. Since you mentioned Schroeder's paper (on ascaracides), it would have added much to your paper to list other references."

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