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## Mystery Photo- March 2023 - NDSU VDL

~1 minute



**Diagnosis:** Canine herpesvirus-1

Multifocal hemorrhages along the surface of the kidney are nearly pathognomonic for canine herpesvirus-1 infection. There can also be multifocal hemorrhages in the liver and lung, as in this case. On histology, there may be intranuclear inclusions within hepatocytes, respiratory epithelial cells, renal tubular epithelium, and adrenal cortical cells.

Canine herpesvirus-1 is a highly fatal systemic disease of neonatal puppies (typically under two weeks). The virus is temperature sensitive. Thus, keeping puppies warm after birth is essential to hampering viral replication and systemic infection. Puppies are infected in utero or during whelping via contact with vaginal or nasal secretions. Puppies can also transmit the virus directly to littermates.