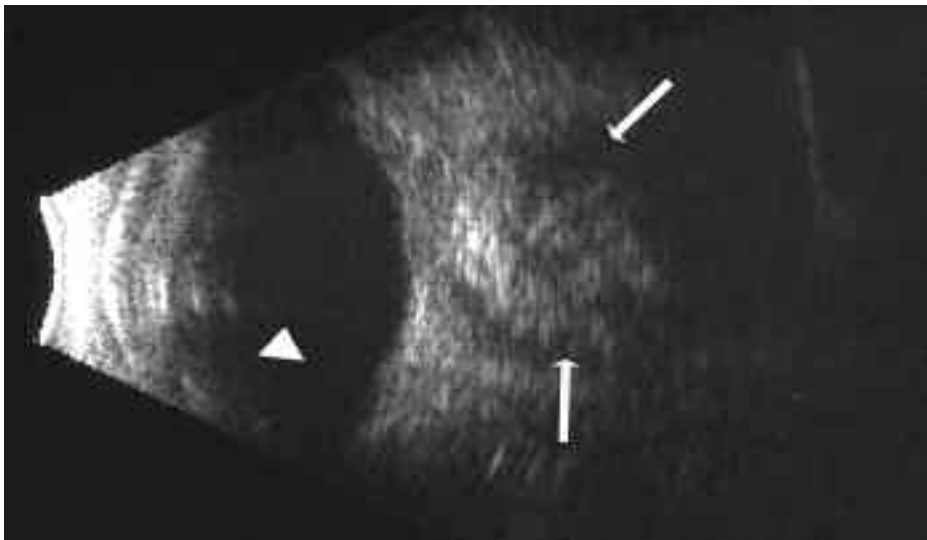


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Orbital Imaging Techniques



▲ Ocular B-scan ultrasonographic image obtained by using a 10-MHz probe in contact with the cornea. A mixed echogenicity mass is present behind the globe (*arrows*). Multiple small hyperechoic areas (mineralization) can be visualized within the mass. The *arrowhead* indicates the normal vitreous cavity of the globe.



◀ Contrast-enhanced axial CT image obtained at the mid level of the frontal sinuses and displayed in a soft tissue window. A right-sided orbital mass (*large arrow*) is visible. The hyperattenuating foci within the mass are areas of mineralization. There is moderate ring enhancement of the mass by the contrast material. Lysis of the palatine bone of the medial orbital wall is evident (*small arrow*). The right globe was not included in this plane.

Orbital masses, including tumors and abscesses, can be difficult to detect with traditional radiography. Orbital ultrasonography can depict masses and differentiate fluid from solid tissue, while CT and MRI can further define the extent of a mass within the orbit and adjacent structures. CT is most helpful for delineating bony destruction associated with an orbital mass.

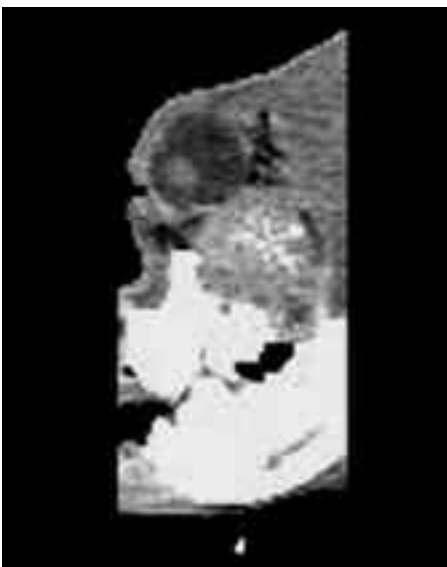
Ultrasonography (performed with the probe placed on the cornea or via a temporal approach) is often recommended as an initial screening procedure, with CT or MRI recommended according to the results of ultrasonography. Although these imaging techniques are very useful, the cause of an orbital mass can be definitively diagnosed only by performing a biopsy or aspiration of affected tissues. The following images were obtained from a dog with an orbital spindle cell sarcoma diagnosed by biopsy.



◀ Contrast-enhanced axial CT image obtained at the level of the caudal nasal cavity. The right globe is dorsolaterally displaced. There is bony lysis with invasion of the tumor into the maxillary recess of the nasal cavity (arrow).



◀ Contrast-enhanced CT image obtained at the level of the caudofrontal sinuses. The orbital tumor is visible (small arrow). There is lysis of the frontal bone (large arrow).



◀ A reconstructed sagittal CT image demonstrates the extent of the tumor. The rostral-most portion of the tumor is at the level of the maxillary border of the zygomatic bone, and it extends caudally to the alar foramina of the orbit. Dorsal displacement of the globe is evident in this image. ■

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CT = computed tomography; MRI = magnetic resonance imaging

Urbanization & Disease Transmission

The National Science Foundation has awarded Colorado State University scientists a \$2.3 million grant to study how habitat fragmentation in parts of the United States influences disease transmission among bobcats, pumas, and domestic cats. This work will help identify how urbanization influences infectious disease among wildlife populations and domestic pets. Preliminary studies have shown that large wild cats share FIV strains in California and Florida in restricted habitats, demonstrating rare cross-species virus transmission. Dr. Kevin Crooks (conservation biology) and Sue VandeWoude, DVM, whose interest is feline immunodeficiency virus, will collaborate with veterinarians Michael Lappin and Mo Salman as well as colleagues at various U.S. agencies, University of California—Davis, and University of Florida. For more information, visit www.newsinfo.colostate.edu.—
Press release 10/2/07

Hill's Funds Fellowship

Hill's Pet Nutrition announced its sponsorship of a new fellowship in clinical nutrition at the University of Tennessee's College of Veterinary Medicine. Beth Hamper, DVM, was named the first fellow in the program in October.—*Press release 10/16/07*

Migrating Tick Populations

IDEXX Laboratories, Inc, Westbrook, Maine, reports that this year dogs in 48 states have already tested positive for Lyme disease exposure, signaling a nationwide risk for families and their pets. Researchers attribute the phenomenon to tick migrations brought on by warmer temperatures, increasing white-tailed deer populations, reforestation, and urban sprawl. As tick populations continue to migrate, new diseases are introduced into local areas and ticks become more likely to carry and transmit multiple diseases. For more information, visit www.dogsandticks.com/.—*Press release 10/10/07*