Exophthalmos Caused by Pericardial Masses?
A 1.45-kg, 5-year-old, neutered male chinchilla rabbit was presented for recurrent bilateral exophthalmos. Abnormalities noted on physical examination included mild hyperpnea and bilateral, transient, and stress-related exophthalmos with protrusion of both third eyelids. Retropulsion and other aspects of the ophthalmic examination were considered normal. Thoracic radiography revealed a large precordial mediastinal mass. An ultrasound-guided, fine-needle aspiration revealed mature lymphocytes and 10% to 20% lymphoblasts, thereby requiring biopsy for a definitive diagnosis. Computed tomography was done to rule out a primary orbital lesion and to evaluate the extension of the thoracic mass. The results showed a symmetrical laterodorsal deviation of the eyes and dorsal shifting of the heart and both left and right lung lobes by a large hyperdense mass extending from the thoracic aperture to the heart. The rabbit's owners elected to euthanize the rabbit. Necropsy was done and revealed a large cystic mass in the cranial thorax associated with severe hydrothorax, hydropericardium, and ascites. The retrobulbar venous plexus was also congested. Histologic evaluation identified the mass as thymic carcinoma with metastatic disease to the kidneys. As the classification of this tumor relied on the presence of metastatic disease, the authors point out the difficulty in diagnosing thymic tumors on the basis of cytologic or histologic features of the primary tumor alone. In this case, the tumor could have been classified as a benign thymoma if the renal disease had not been recognized. While the cause of the exophthalmos was not clear, several reports of bilateral exophthalmos associated with pericardial masses in rabbits point to a causal link. The authors suggest that compression or obstruction of the cranial vena cava by a mediastinal mass may result in permanent or recurrent bilateral exophthalmos in rabbits and should be considered when this clinical sign is seen.

COMMENTARY: This paper is worth a read even if you don't see rabbits in your practice because information about thymic tumors that pertains to dogs and cats is included. Unless you are lucky, thymic carcinomas can be difficult to diagnose with just a fine-needle aspirate. Unfortunately for our rabbit patients, a cranial mediastinal mass has to be added to our rule-out lists for bilateral exophthalmos.—Chris Wong, DVM