

# What Is Your Diagnosis?

In cooperation with

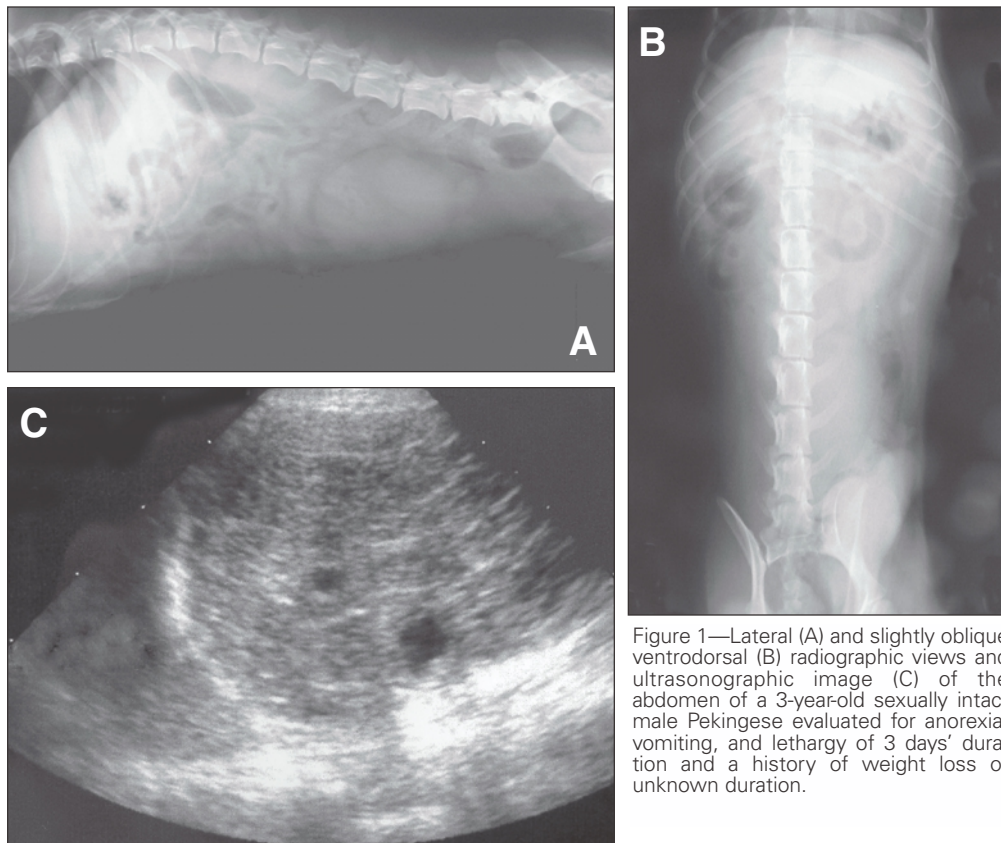


Figure 1—Lateral (A) and slightly oblique ventrodorsal (B) radiographic views and ultrasonographic image (C) of the abdomen of a 3-year-old sexually intact male Pekingese evaluated for anorexia, vomiting, and lethargy of 3 days' duration and a history of weight loss of unknown duration.

## History

A 3-year-old sexually intact male Pekingese was evaluated for anorexia, vomiting, and lethargy of 3 days' duration and a history of weight loss of unknown duration. On physical examination, the dog was underweight and had a grade 3/6 systolic cardiac murmur and only 1 small scrotal testicle. Radiographs of the abdomen were obtained, and ultrasonography of the abdomen was performed (Figure 1).

Determine whether additional imaging studies are required, or make your diagnosis from Figure 1—then turn the page ▶

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### Diagnostic Imaging Findings and Interpretation

Radiographically, an oval-shaped abdominal mass cranial to the urinary bladder is evident on the ventral midline (Figure 2). The small intestine is displaced cranially, and the right kidney is displaced caudally and is lying adjacent to the L3 through L5 vertebral bodies.

Ultrasonographically, a mixed echogenic, irregular-shaped mass is adjacent to the caudate lobe of the liver, interposed between the right kidney caudally and the liver cranially.

Ultrasonographically, the location of the mass is consistent with an adrenal or pancreatic mass; however, its location radiographically suggests retained testicle or paraprostatic cyst. The size of the mass is larger than would be expected for a retained testicle, and the mass has shifted the right kidney to an abnormal location caudally.

### Comments

Because the dog had only 1 small scrotal testicle, retained testicle was the likely diagnosis. Because of the likelihood of a neoplastic process, radiographs of the thorax were obtained; no abnormalities were detected.

Abdominal exploratory and cryptorchid castration were performed; the descended testicle was also removed. An irregular-shaped, firm testicle measuring 4 × 6 × 5 cm was detected cranial to the urinary bladder. The testicle was twisted 720° on its vascular pedicle. Histologic diagnosis of the retained testicle was malignant Sertoli cell tumor. The descended testicle had undergone testicular degeneration and atrophy with absence of spermiogenesis.

Pekingese are predisposed to cryptorchidism.<sup>1</sup> Abdominally retained testicles have a 13.6-times higher risk of developing Sertoli cell tumors and are more susceptible to testicular torsion than descended testicles.<sup>1,2</sup> Malignant Sertoli cell tumors are rare and often associated with large cryptorchid neoplasms. In the dog of this report, both the testicular torsion and metastatic disease could have contributed to its clinical signs, but there was no evidence of metastasis at the time of surgery.

Embryologically, testicles normally descend from their initial position at the caudal pole of the ipsilateral kidney. They migrate caudally adjacent to the urinary bladder, through the inguinal ring, and into the scrotum. The

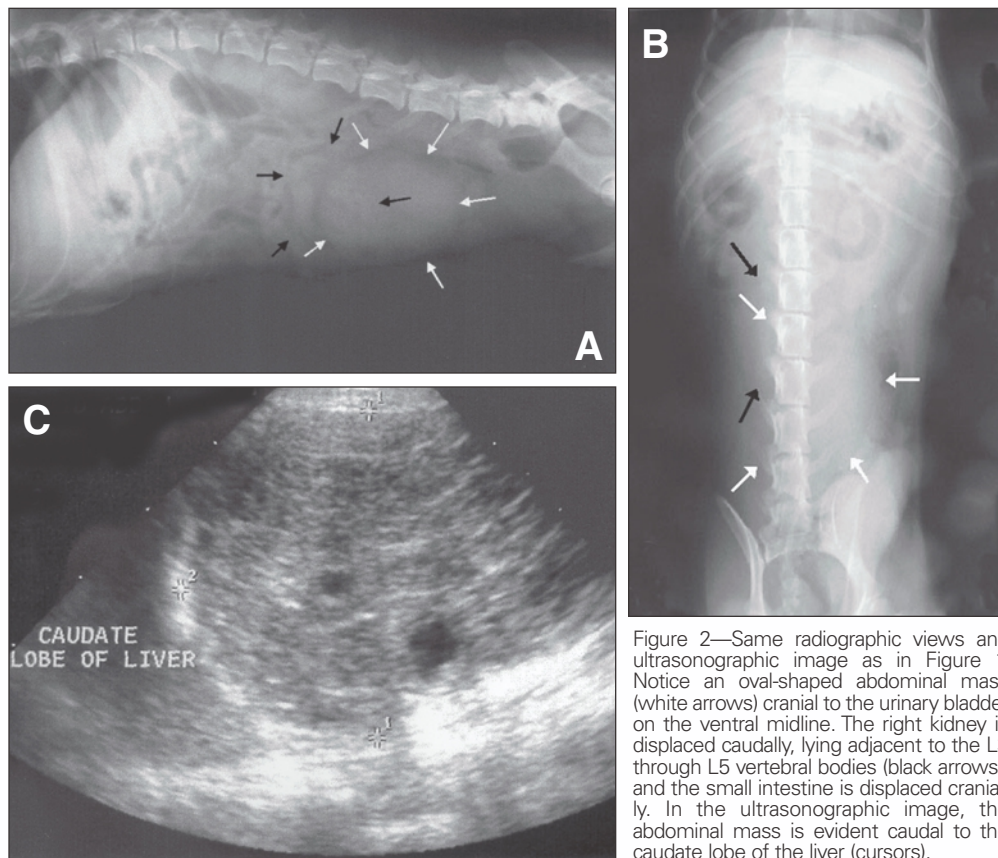


Figure 2—Same radiographic views and ultrasonographic image as in Figure 1. Notice an oval-shaped abdominal mass (white arrows) cranial to the urinary bladder on the ventral midline. The right kidney is displaced caudally, lying adjacent to the L3 through L5 vertebral bodies (black arrows), and the small intestine is displaced cranially. In the ultrasonographic image, the abdominal mass is evident caudal to the caudate lobe of the liver (cursors).

gubernaculum, a mesenchymal structure, connects the caudal pole of the testicle with the inguinal region and helps guide the testis into the scrotum.<sup>3</sup> Retained testicles may readily move within the abdominal location<sup>4</sup>; this may have accounted for the apparent change in the location of the mass at the time of ultrasonography as well as a second abdominal radiograph obtained 12 hours later.

Findings in the dog of this report were unusual in that the retained testicle was intermittently located cranial to the right kidney, as seen radiographically, and it was able to mechanically pull the right kidney to an abnormal caudal location near the urinary bladder. However, during ultrasonography, the mass was located cranial to the right kidney and abutting the caudate liver lobe, indicating that this was a mobile structure. It is unusual that an abdominal mass would be this mobile; this mobility could be confusing to clinicians. A soft tissue neoplasm associated with viscera would not likely have this mobility. Therefore, presumptive diagnoses for a cranial abdominal mass not associated with the liver, kidney, or pancreas in a sexually intact male dog should include abdominally retained testis.

1. Pendergrass TW, Hayes HM. Cryptorchidism and related defects in dogs: epidemiologic comparison with man. *Teratology* 1975;12:51–56.

2. Hayes HM, Pendergrass TW. Canine testicular tumors: epidemiologic features of 410 dogs. *Int J Cancer* 1976;18:482–487.

3. Feldman EC, Nelson RW. Disorders of the canine male reproductive tract. In: Feldman EC, Nelson RW, eds. *Canine and feline endocrinology and reproduction*. Philadelphia: WB Saunders Co, 1987;493–494.

4. Pearson H, Kelly DF. Testicular torsion in the dog: a review of 13 cases. *Vet Rec* 1975;97:200–204.