

## “What’s Your Diagnosis?”

### **Signalment:**

Species: Canine  
Breed: Retriever/Golden/Mix  
Sex: Male Castrated  
Date of Birth: 11/01/98

### **Presenting Complaint:**

- Unable to urinate for previous 4 days – spent this time at rDVM
- Owner reported history of stranguria leading to eventual anuria
- Tarry, dark-colored stool
- Previous 4 month history of progressive weight loss – 20 lb weight loss total

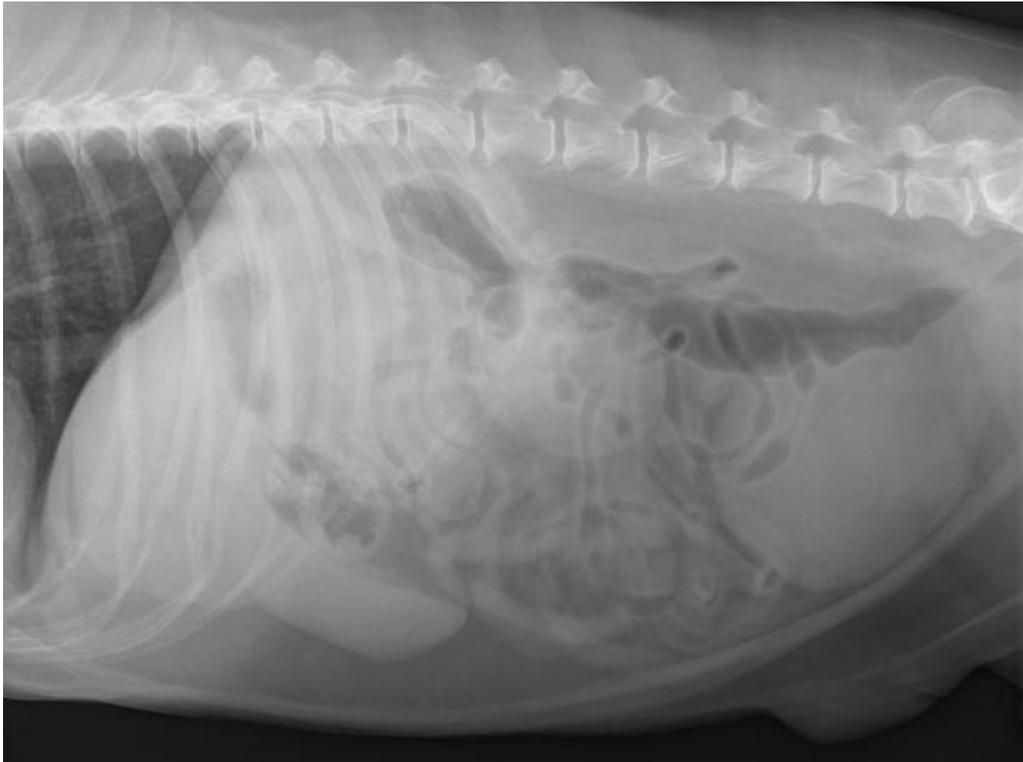
### **Physical Examination:**

- Abdominal palpation revealed a large, distended bladder
- Rectal examination revealed a painful, enlarged prostate as well as smooth subiliac lymph node enlargement
- No melena noted during rectal examination
- No abnormalities in temperature, pulse, respiratory parameters

### **Diagnostic Plan:**

1. Abdominal radiographs
2. Abdominal ultrasound
3. Urinary catheterization and collection of urine for cytology

What are your initial radiographic and ultrasonographic impressions?



**Right Lateral Cranial Abdomen**



**VD Cranial Abdomen**

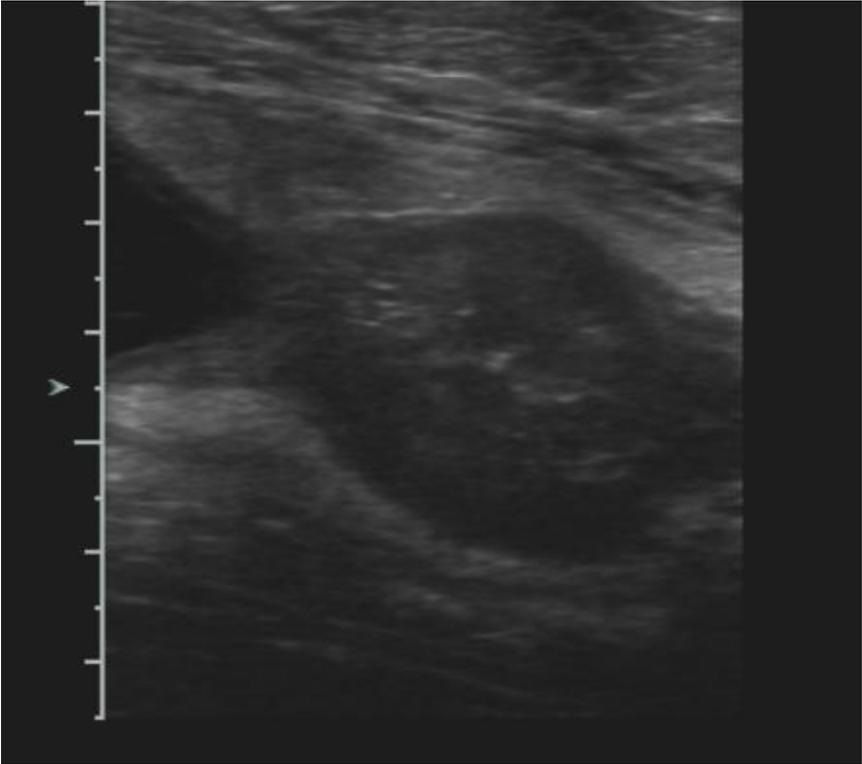


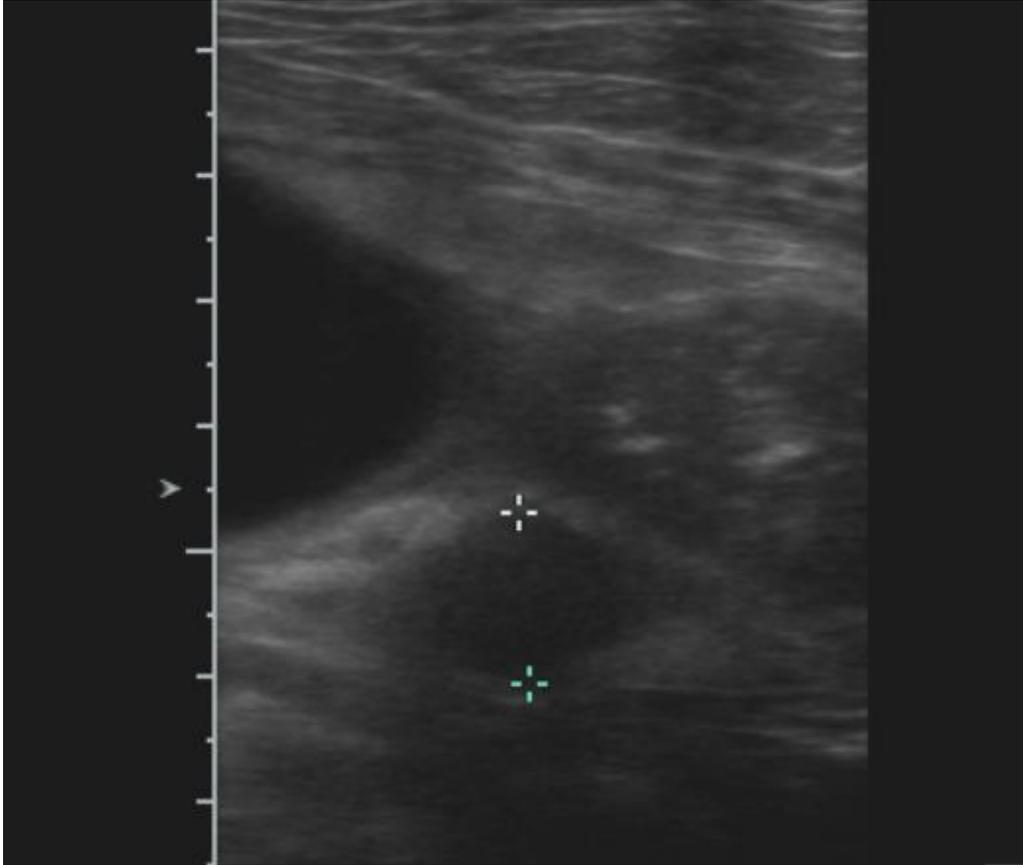
**Right Lateral Caudal Abdomen**



**VD Caudal Abdomen**

**Prostate ultrasound images:**





### **Radiographic Findings:**

There is smooth ventral bridging new bone arising from the endplates of the lumbosacral junction. There is pallasading periosteal proliferation of the left ilial body and acetabulum. There is ill-defined permeative lysis of bone at these sites and an indistinct transition between normal and abnormal bone. There is smooth periarticular new bone at the cranial acetabular rims bilaterally. There is thickening and remodeling of the femoral necks bilaterally. There is a rounded osseous fragment lateral to the left cranial acetabular rim that measures 9 mm in size. There is less than 50% coverage of the femoral heads by the dorsal acetabular rims bilaterally. The prostate is enlarged with its craniocaudal dimension encompassing the entire pelvic inlet dimension. There is ill-defined granular mineral opacity within the ventral aspect of the prostate. The urinary bladder is moderately distended.

### **Radiographic Impressions:**

The appearance of the prostate is most consistent with prostatic neoplasia giving lesser consideration to benign prostatic hypertrophy, prostatitis or prostatic abscess, and prostatic cysts. The iliac changes are most consistent with metastatic neoplasia from the prostate with lesser consideration given to primary bone neoplasia and fungal osteomyelitis. Recommend abdominal ultrasound. The size of the bladder may be due to urethral obstruction by nonradiopaque material or may be due to conscious urine retention. Bilateral hip dysplasia and coxofemoral osteoarthritis are present. Lumbosacral spondylosis deformans is present. The osseous fragment may be a fragmented osteophyte or may be a synovial osteochondroma.

### **Ultrasonographic Findings:**

The liver was increased in size and had a rounded caudoventral margin. Numerous, variably sized hypoechoic nodules were present throughout its parenchyma. The urinary bladder was moderately distended and contained suspended hyperechoic material. The urinary bladder wall was increased in thickness at its apex, measuring 8 mm. The prostate was hypoechoic and heterogenous in echogenicity. It was increased in size, measuring 3 cm in diameter. A 7 mm in diameter hypoechoic structure was present extending craniodorsally from the prostatic mass. Numerous hyperechoic foci with distal shadowing were present within the prostate, most likely mineralization. The right and left medial iliac lymph nodes were hypoechoic, enlarged (7-9 mm width), and exhibited disorganized vascular architecture.

### **Ultrasonographic Impressions:**

Prostatomegaly, dystrophic mineralization of the prostate, medial iliac lymphadenopathy, and hepatic nodules are most consistent with metastatic prostatic neoplasia. Alternatively, hepatic nodules may be due to nodular regeneration. If clinically indicated, thoracic radiographs are recommended.

### **Problems to Consider:**

1. Prostatic mass
2. Pelvic boney changes
3. Lymphadenopathy
4. Liver nodules
5. Urinary obstruction

### **Cytology of Urine Sample: (obtained via traumatic catheterization)**

Proplastic and normal epithelial cells were present: cause of proplastic changes was not determined. The majority of the cells looked like mildly dysplastic lower urinary or genital tract epithelial cells. Rare clusters of cells had changes that were proplastic and thus could represent hyperplastic or neoplastic cells. The cells did not have prominent features of malignancy.

### **Therapeutic Conclusions:**

Diagnostic options were discussed with the owner:

1. Prostatic biopsy to confirm prostatic neoplasia (suspected adenocarcinoma)
2. Chest radiographs to rule out pulmonary metastases
3. Cystostomy tube to relieve urethral obstruction

Owner declined further diagnostics. Dog was sent home with oral Piroxicam to be given once daily as a mild chemotherapeutic agent and also to decrease inflammation surrounding urethra to possibly relieve obstruction. Misoprostol was also prescribed as a gastric protective agent.