Case #: S16-2519
Presentation # 58

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13 year old, spayed female mixed breed dog

- **HISTORY:**
  - Incidental finding of 3 x 2 cm adrenal mass during ultrasound, August 2011
  - No clinical signs or biochemical changes at time of diagnosis
  - Presented on emergency December 2016 with pallor and abdominal distension
    - Hepatic and renal enzyme elevations
    - > 12 cm mineralized, cavitated mass identified within retroperitoneal space with compression of the caudal vena cava and right kidney
  - Exploratory laparotomy performed

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Gross Findings

- 14 x 8.5 x 8.5 cm multilobular, soft and friable mass
  - Multifocal hard regions palpable along the capsular and subcapsular surface

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Photo courtesy of Owen Skinner, BVSc, Dipl.ECVS MRCVS
Histologic Findings

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Morphologic Diagnosis

• Extra-skeletal Osteosarcoma, Right Adrenal Gland

  • Malignant osteoid producing mesenchymal tumor arising from soft tissues and visceral organs without periosteal or bone involvement

  • Rare, but most common in dogs, less so in cats, guinea pigs, nonhuman primates

  • Locations: mammary glands, eye, thyroid gland, gastrointestinal tract, urogenital system, adrenal gland, spleen or liver

  • 5 subgroups based on the prominent cell type and amount of osteoid produced

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Not Your Mother’s Osteosarcoma...

Based on two studies\(^1\)\(^2\)....

**Skeletal Osteosarcoma**
- Large breed, appendicular and axial skeleton
- Rate of metastasis: 20-50%
  - Pulmonary metastasis
  - Common cause of death
- Mean survival time: 132-154 days

**Extra-skeletal Osteosarcoma**
- No breed predilection
- Distant metastasis 64%
  - Pulmonary rare
- Local recurrence most common cause of death
- Mean survival time: 25 days

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Thank you

• References:


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