

An 8-year-old, female entire Cavalier King Charles Spaniel presents with a 1-week history of a perineal swelling, 6 weeks after her last season.

The image is an intraoperative view of the cause of the perineal swelling.

1. What is the most likely diagnosis for the pathological lesion in the image? Be specific.

(Vaginal) Leiomyoma

2. List TWO additional differential diagnoses that have been reported in the veterinary literature.

- 1. Fibroepithelial polyps; Vaginal Cysts; Fibromas; Haemangiosarcoma*
- 2. Rhabdomyosarcoma; Osteosarcoma*

4. What is the name of the two surgical instruments labelled 'a'?

Doyen forceps or bowel clamps

A 6-year-old, male neutered, domestic shorthair cat is presented for right forelimb lameness of acute onset. Orthogonal radiographs of the right antebrachium are obtained and displayed in Images A and B.

1. DESCRIBE this fracture configuration. Be specific.

*Oblique proximal diaphyseal ulna fracture
with caudo-lateral radial head luxation
and humero-ulnar joint luxation (also accept elbow luxation)
open fracture*

4. What are the TWO most appropriate osteosynthesis methods of the injury in this cat?

- 1. Intramedullary ulna pin(s) (normo- or retrograde)
with caudal tension band wire (inter-fragmentary wire) on ulna*

OR

- 2. Ulna plate and screw fixation*
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A 10-year-old, female neutered Labrador presents with a 3-month history of progressive swelling of the head and neck. A photo of the dog is shown in Image A.

Computed Tomography (CT) of the head, neck and thorax is performed. Images B to E are post-contrast CT sections viewed with a soft tissue window.

1. List FOUR abnormal CT findings.

- 1. Enlarged left thyroid gland*
 - 2. Enlarged right thyroid gland*
 - 3. Sternal lymphadenopathy*
 - 4. Cranial vena cava thrombus*
- Oedema (Subcutaneous/cranial mediastinal); Enlargement OR tortuosity of cranial mediastinal blood vessels; Consolidation of ventral aspects of cranial lung lobes; Filling defects within right ventricle*

4. Considering the most likely diagnosis for this dog, list THREE specific treatments that could be offered, excluding surgery.

1. *External beam radiation therapy*
 2. *Chemotherapy with doxorubicin OR cis/carboplatin OR toceranib phosphate/palladia*
 3. *Radio-active iodine therapy OR I^{131} therapy*
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A 1-year-old female entire Labrador retriever presents with constant dripping urinary incontinence since a puppy. Urine culture is negative.

The dog is anaesthetised for diagnostic imaging. A urinary catheter is passed through the urethral opening in the floor of the vestibule and air is injected to act as negative contrast for fluoroscopic studies. Subsequently fluoroscopic excretory urography and then fluoroscopic retrograde urethrography are performed.

Video A is a loop of the fluoroscopic excretory urography.

Video B is a loop of the fluoroscopic retrograde urethrography.

1. List FOUR radiographic abnormalities.

*Intrapelvic bladder or short urethra
Right hydronephrosis or dilation of right renal pelvis
Right hydroureter or dilation of right ureter
Unilateral ectopic ureter
(Presence of air in the right ureter)*

2. What is the biggest contributor to constant dripping urinary incontinence in this dog?

Ectopic ureter

3. Describe THREE open surgical techniques that have been described to treat the biggest contributor to constant dripping urinary incontinence in this dog.

1. *Neoureterocystostomy with ligation of the distal ureteric segment*
 2. *Neoureterocystostomy with resection of the distal ureteric segment*
 3. *Neoureterocystostomy with transection of the ureter distal to the neoureterocystostomy leaving the distal ureteric segment in situ unmanipulated*
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A 10-month-old male Rottweiler is presented with progressive weakness and ataxia in the hind limbs. During locomotion the dog shows a spastic gait of the front limbs.

Image A shows a sagittal T1-weighted spin echo, Image B shows a transverse T1-weighted spin echo, Image C shows a sagittal CT and Image D shows a transverse CT.

1. Describe the abnormalities in MRI images A and B and CT images C and D.

MRI space occupying process within the spinal canal with compression and flattening of the spinal cord at the C2-C3 junction. Process filling 40 % spinal canal.
CT no bony or soft tissue abnormalities

2. What is your diagnosis?

Spinal Arachnoid Diverticula/Cyst (Arachnoid pseudocyst, meningeal or leptomeningeal cyst) VCNA 2016: 277-293

An 8-year-old, female neutered English Bulldog is presented with a few-week history of weight loss, regurgitation, increasing stertor and difficulty breathing. The dog is not anaemic but nucleated red blood cells are found on haematology. Oral examination under general anaesthesia reveals the presence of a submucosal mass in the dorsal wall of the nasopharynx. A CT-scan is performed (videos A and B, post-contrast studies), showing the presence of a mass, which is then sampled by fine-needle aspirations. Cytology is suggestive of a neuroendocrine tumour. The mass is surgically resected through a ventral approach to the neck (Image C).

1. List THREE differentials.

1. *Carotid body tumour*
2. *Ectopic thyroid tumour*
3. *Metastatic lymph node*

2. Given the presence of nucleated red blood cells in the absence of anaemia, what is the most likely diagnosis?

Carotid body tumour

5. The dog is severely dyspnoeic and stridorous on extubation. List THREE plausible causes for this?

1. *Pharyngeal swelling*
2. *Laryngeal paralysis from damage to the recurrent laryngeal nerve*
3. *Laryngeal collapse (pre-existing)*

1. Which are the THREE main components of the instrument depicted in the image?

1. Neurological drill with 2. irrigation tip and 3. round burr

2. What is the working speed range of the instrument in the image?

Highspeed 0-20.000 rpm and more

5. Which instrument is depicted in the image?

Craniotome with duraguard