

Lo spazio retroperitoneale,  
ma lo conosciamo  
davvero? Comparazione  
tra radiologia ed ecografia



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## Objectives

Retroperitoneal space is often neglected

Often a change is very relevant for the health  
of the patient

Some normal structures can be mistaken for  
pathologies



## Retroperitoneal organs

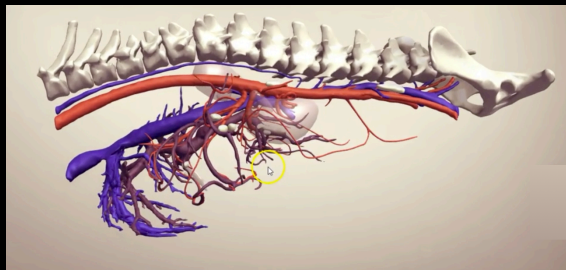
Big vessels

Iliac lymph nodes

Adrenal glands

Kidneys

Ureters

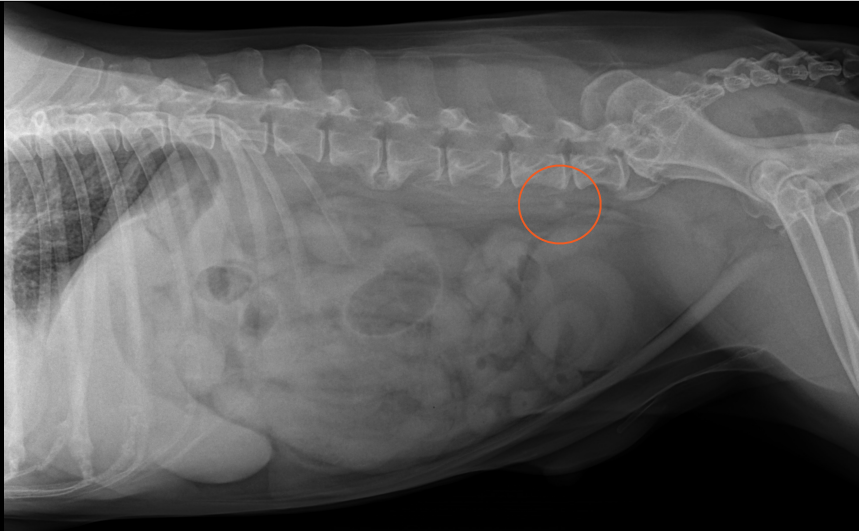


## Frazier, Mongrel, MN, 12 years

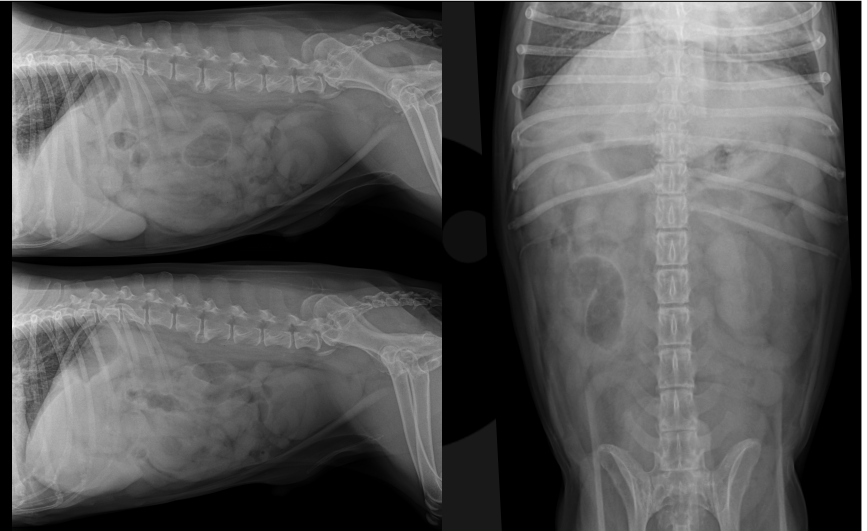
- Vomiting blood
- Abdominal pain
- History of cardiomegaly
- Medicines: gabapentin, furosemide, pimobendan



Frazier, MN, 12 years

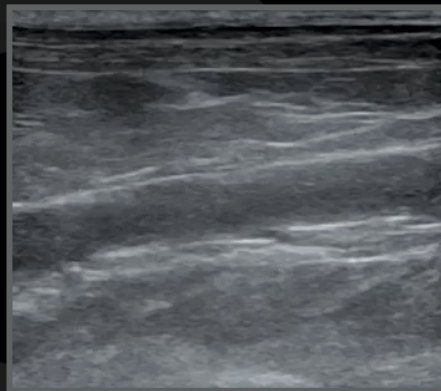
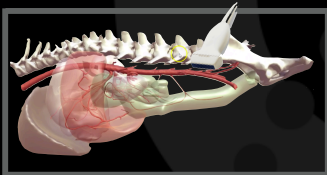


Frazier, MN, 12 years

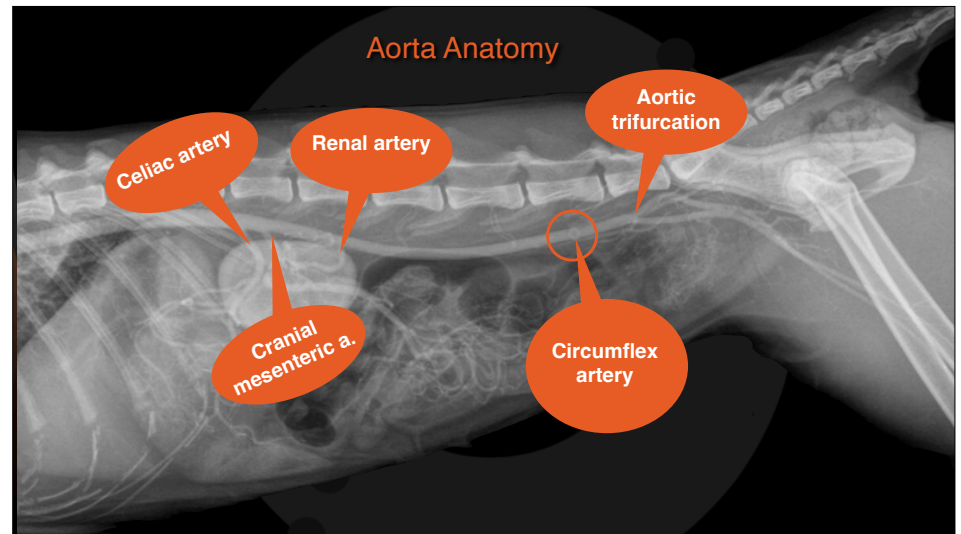


Frazier, MN, 12 years

Another patient, to show the position of the probe

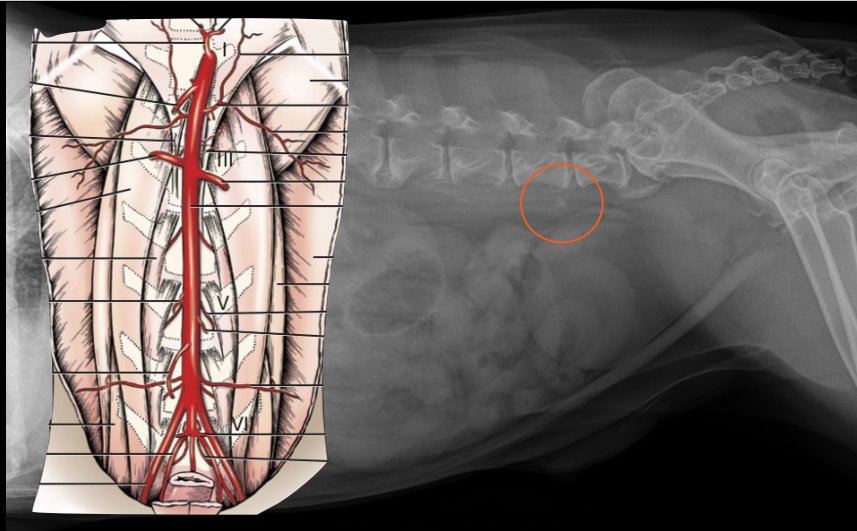


## Aorta Anatomy





Frazier, MN, 12 years

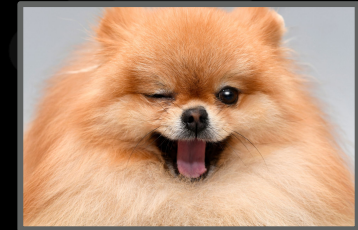


Pandy, Pomeranian, FS, 6 years

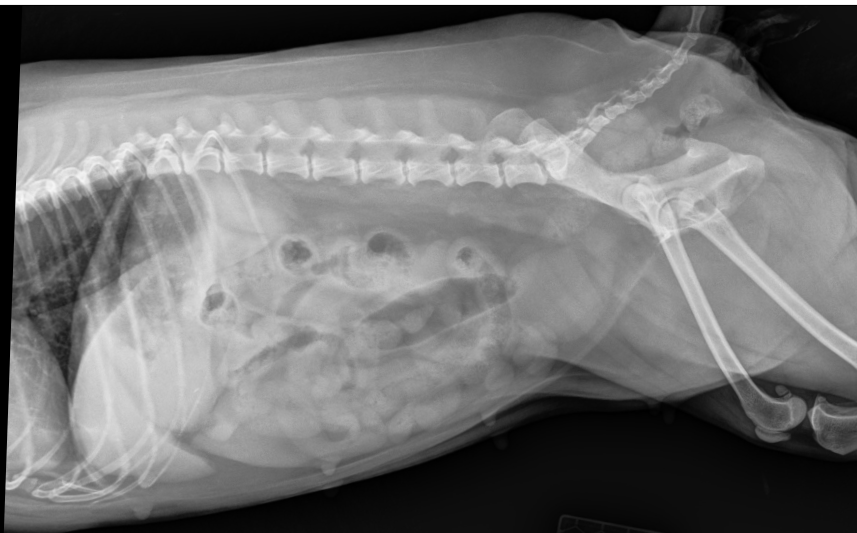
Visited by the referring veterinarian  
the day before for anxiety

Now circling and whining

Eaten very little since yesterday



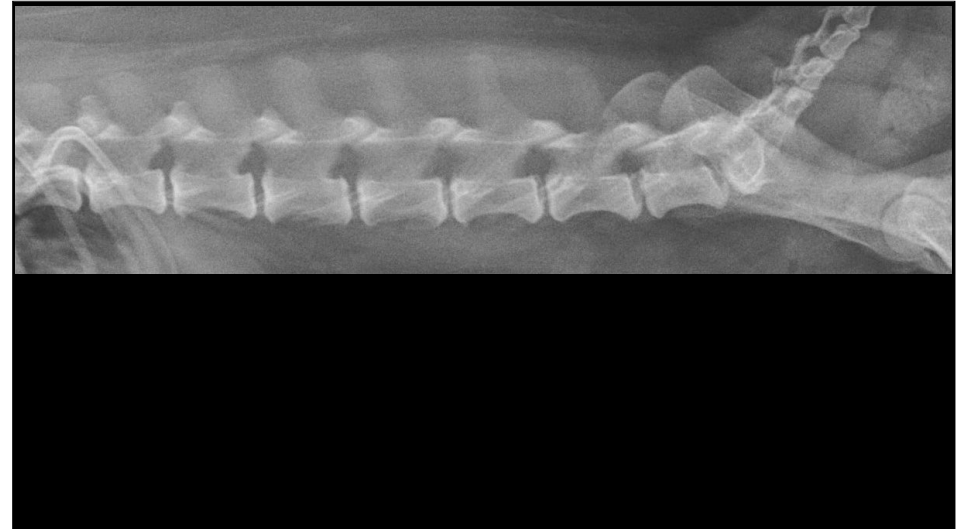
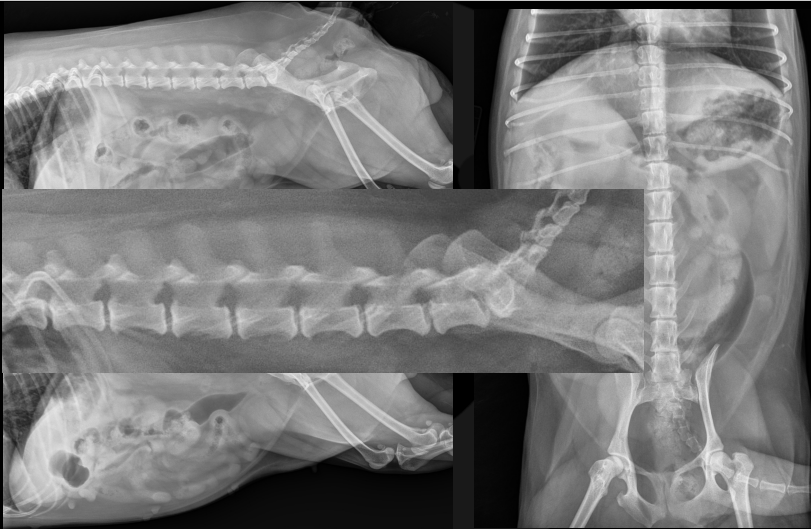
Pandy, FS, 6 years



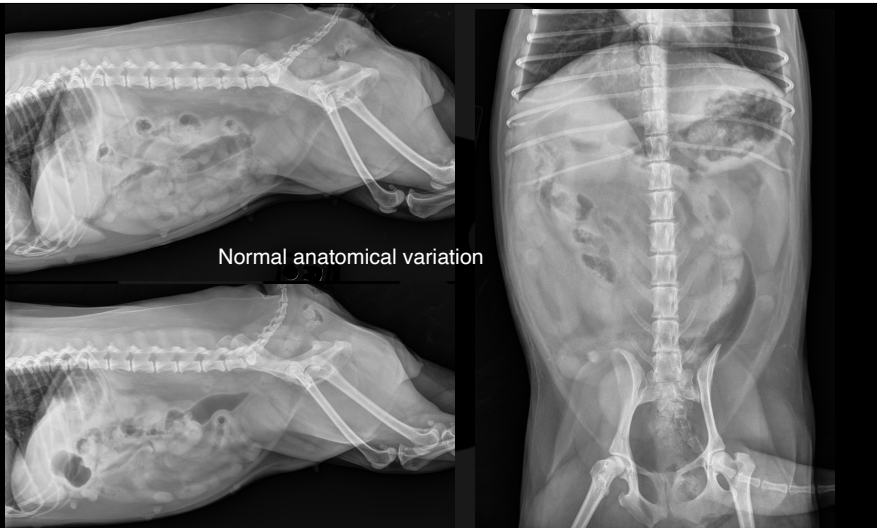
Pandy, FS, 6 years



Pandy, FS, 6 years

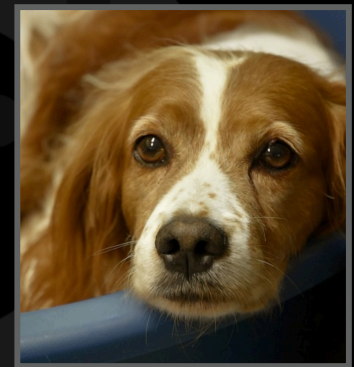


Pandy, FS, 6 years

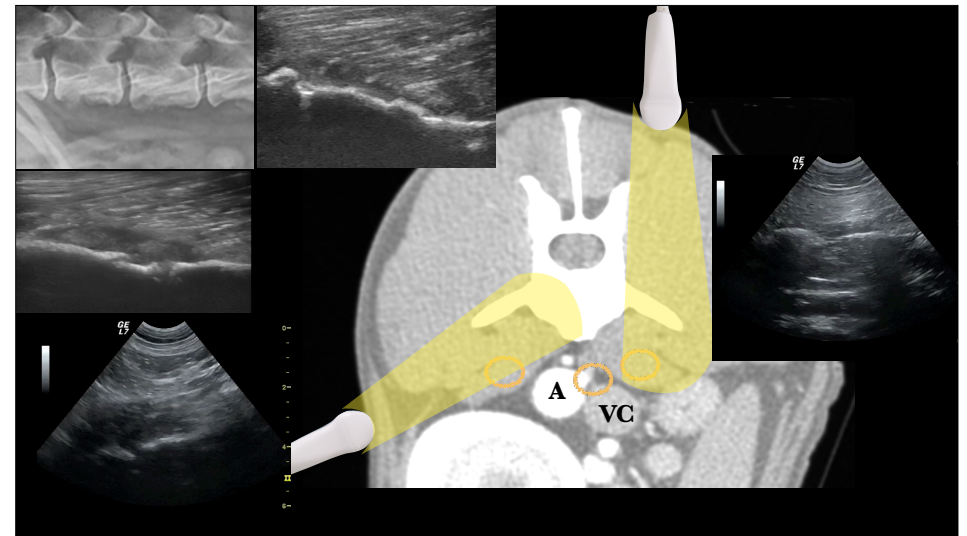
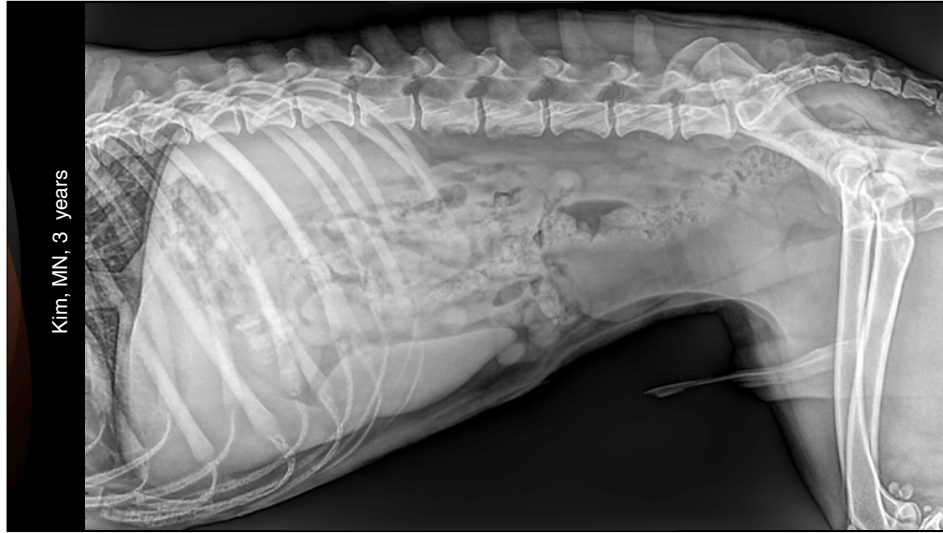


Kim, Breton, MI, 3 years

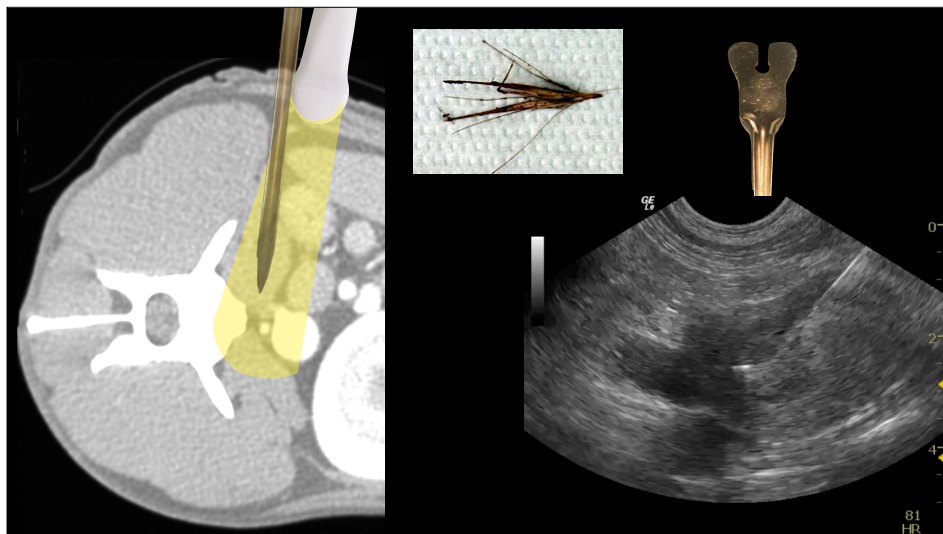
- Not jumping
- Seems sad
- He tries to bite when touched





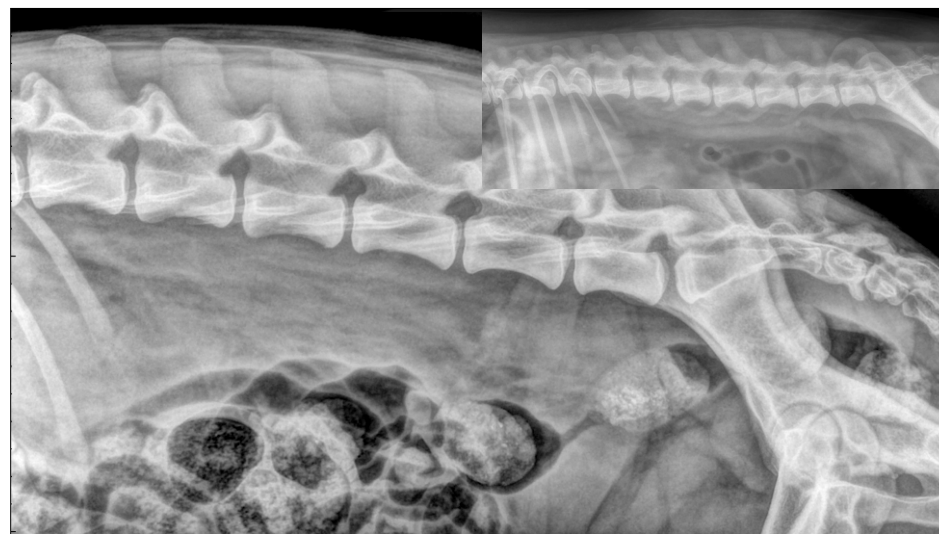
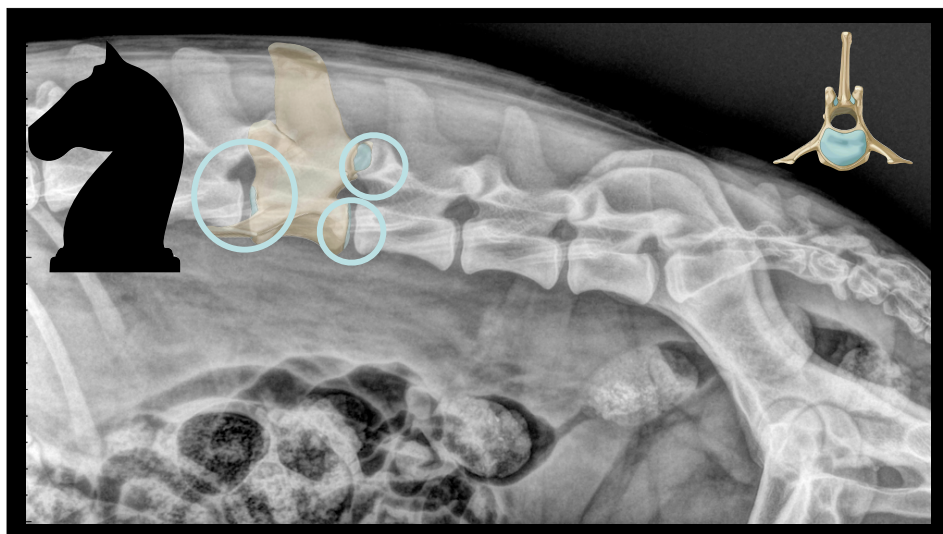


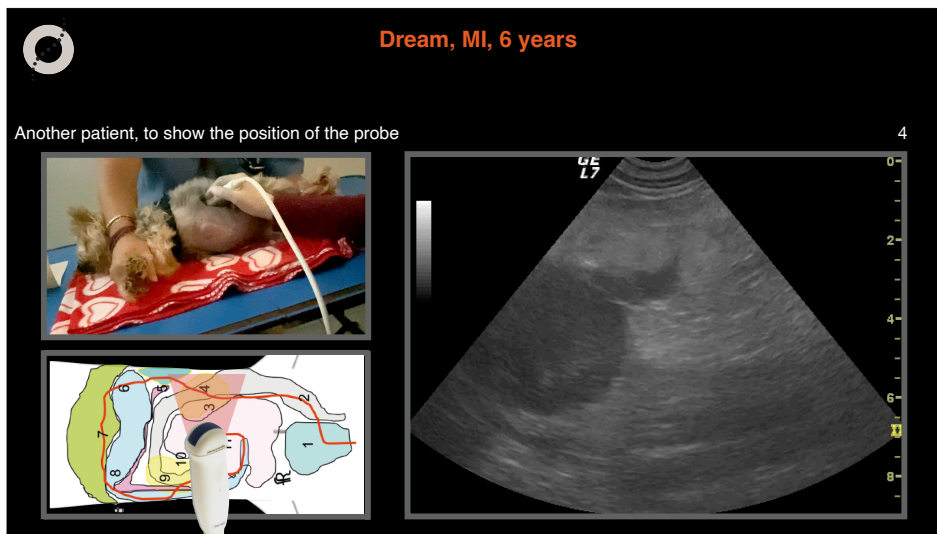
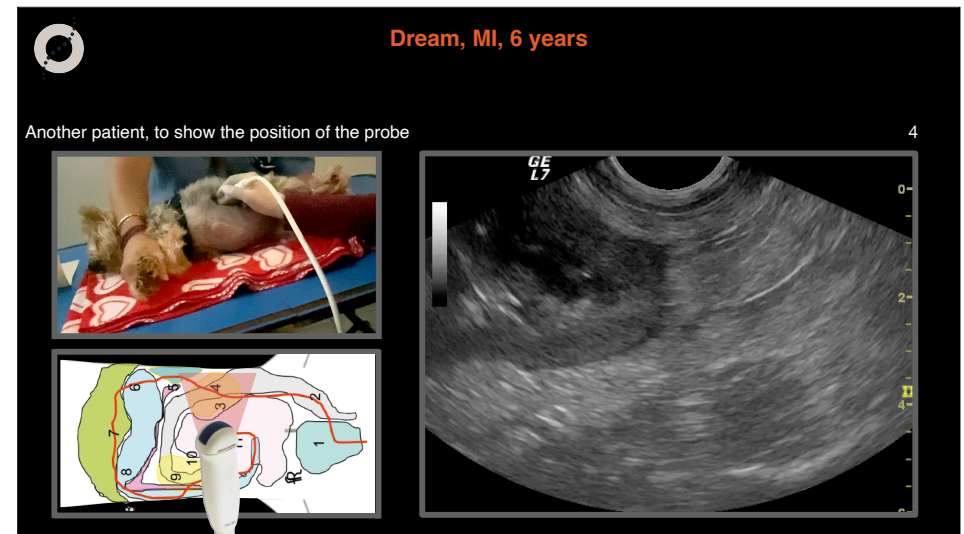
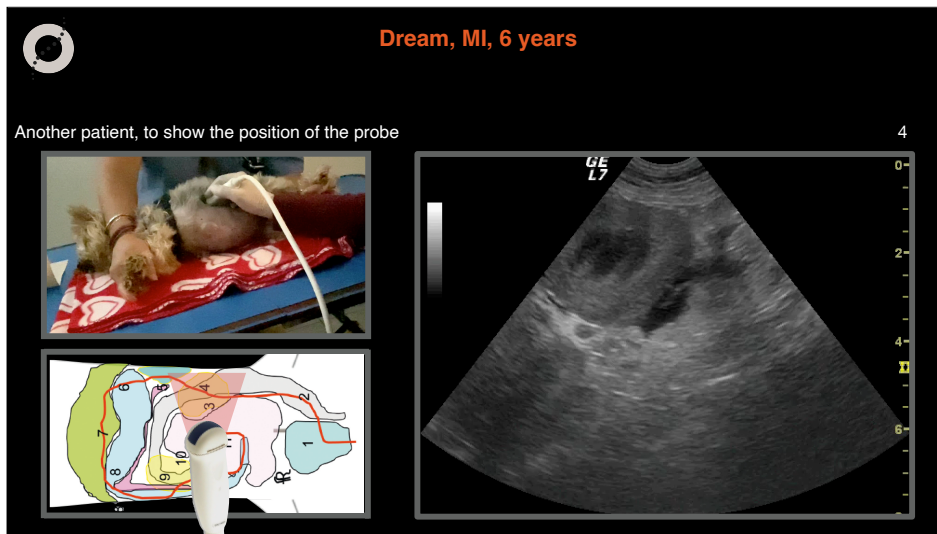




Dream, Golden Retriever, MI, 6 years

- Walking on egg shells
- Seems painful
- Stoic on palpation





**Dream, Golden Retriever, MI, 6 years**

**Ultrasonographic diagnoses:**

- Focal detachment of the left renal capsule
- Retroperitoneal effusion

**Conclusions:**

- Possible left renal rupture

**What next?**

- Systemic pressure measurement: 240/180

### Differential diagnoses for retroperitoneal effusion

#### Haemorrhage

- Trauma
- Coagulation

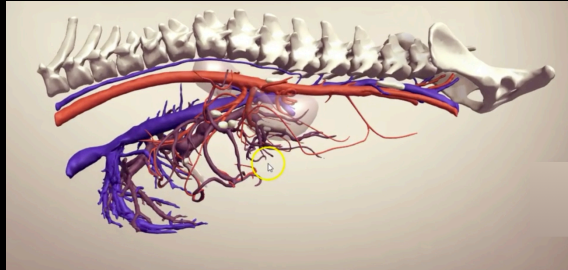
#### Ruptured ureter

#### Ruptured kidney

#### Ruptured adrenal mass

#### Migrating FB

#### Acute renal failure

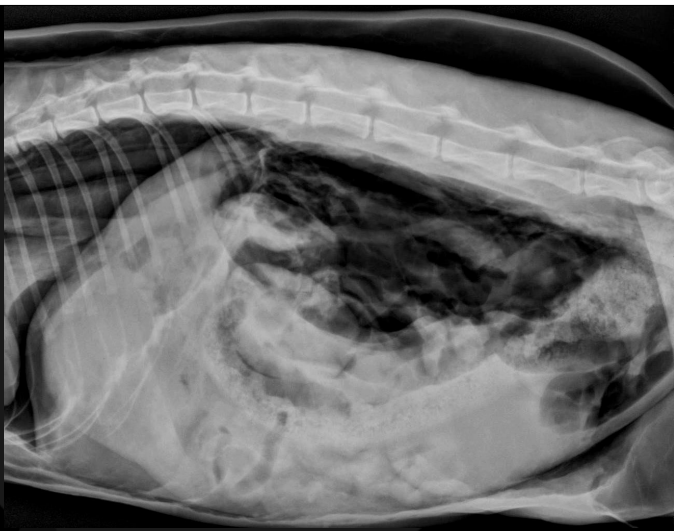


### Luna, DSH, FI, 9 months

- Spaying scheduled
- Aborted due to unstable anaesthesia
- Check for post anaesthetic abdominal pain



Luna, FI, 9 months

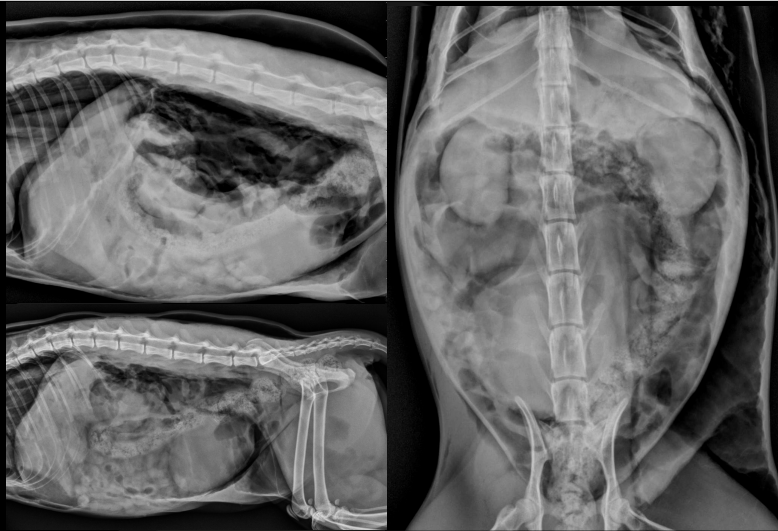


Luna, FI, 9 months





Luna, FI, 9 months



Luna, DSH, FI, 9 months

#### Radiographic diagnoses:

- Pneumoretroperitoneum
- Pneumoderma
- Pneumothorax
- Pneumomediastinum
- Gas in the ventro-caudal aspect of the abdominal wall

#### Conclusions:

- Suspected ruptured trachea

#### What next?

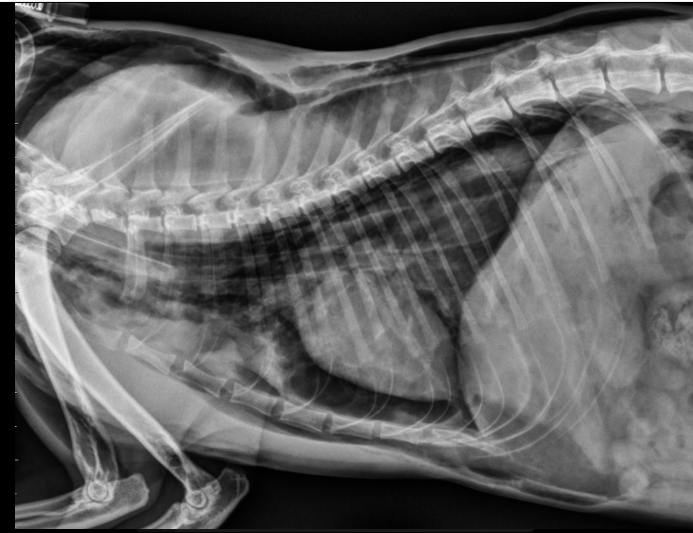
- Follow up



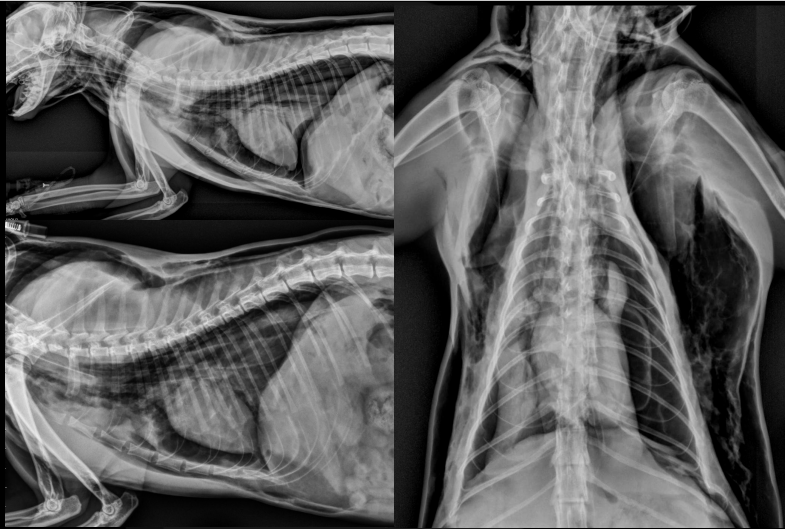
Luna, FI, 9 months



Luna, FI, 9 months

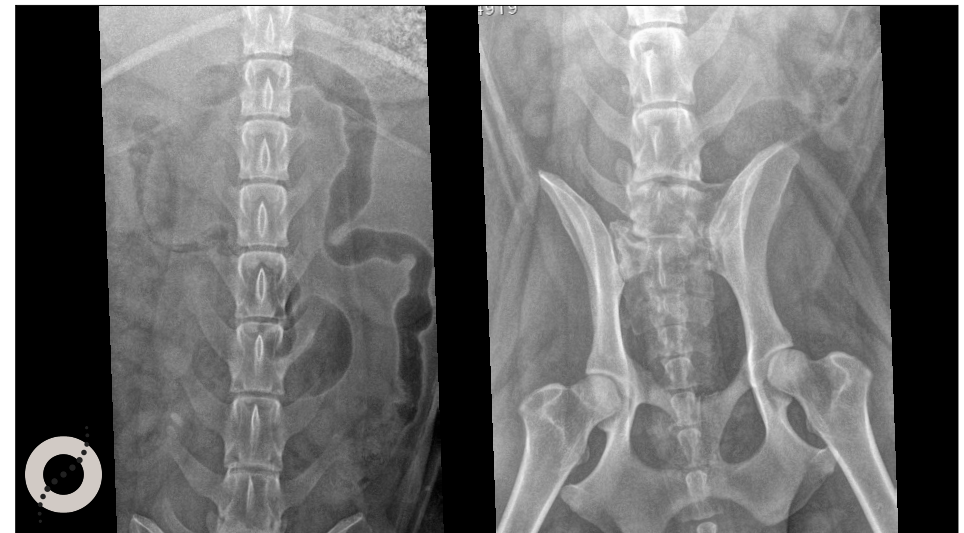
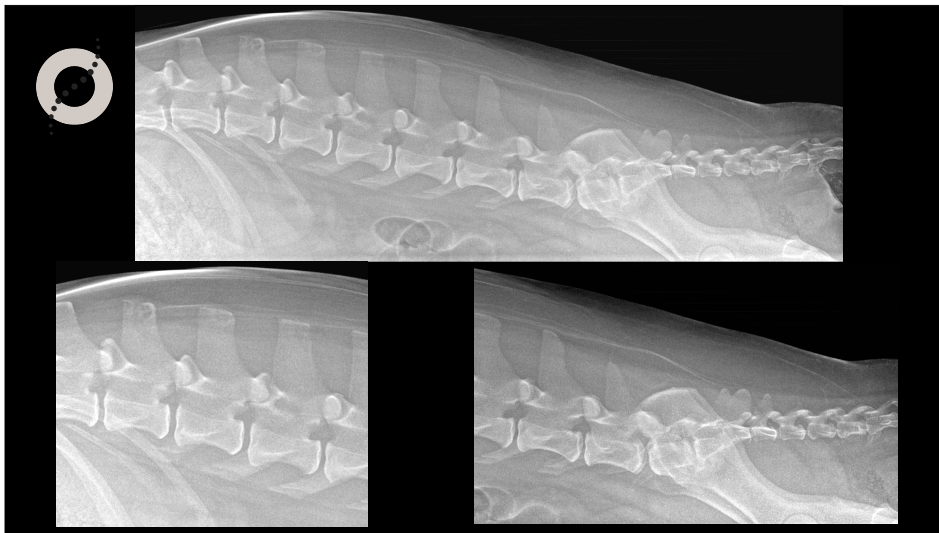
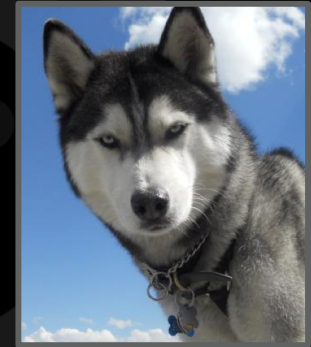


Luna, FI, 9 months



Dewdrop, Siberian Husky FS, 5 years

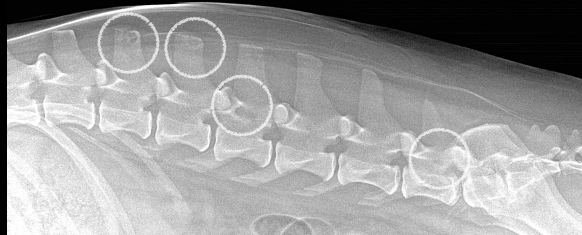
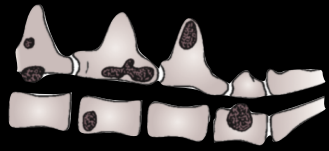
- Acute paraparesis
- Under AB for the last week for a suspected pneumonia
- Yesterday She was fine







Final diagnosis:



Chicco, Beagle, MI, 6 years

- Not jumping on the couch for one week
- Progressively anorexic
- Difficulty in standing this morning



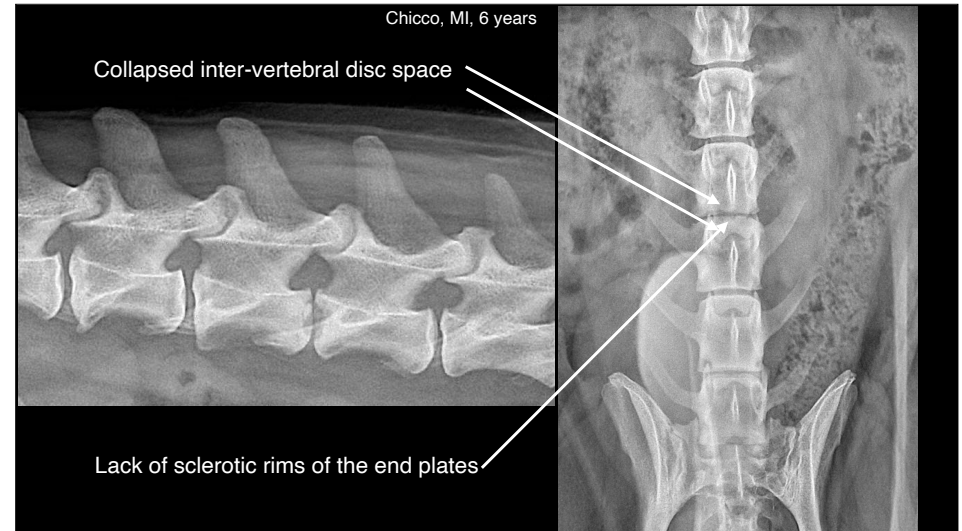
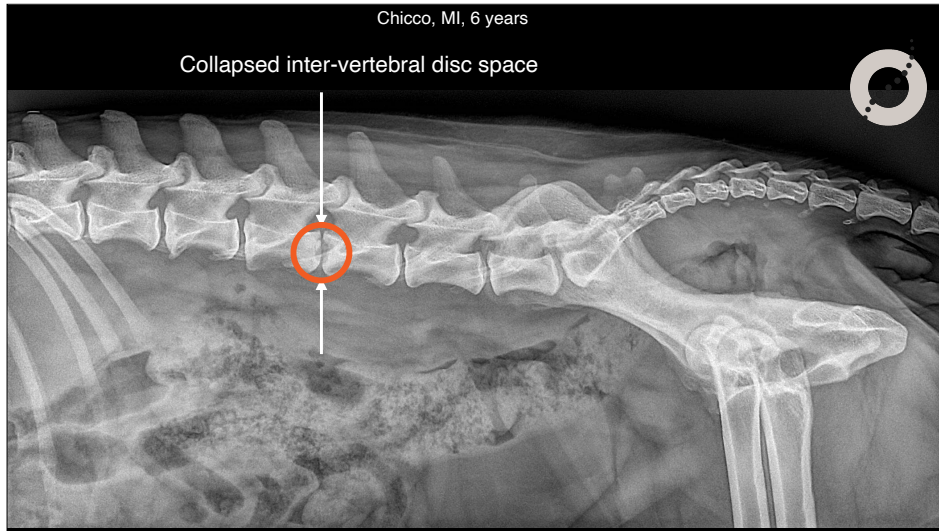




### Your evaluation

- Is the spine of the patient radiographically within normal limits?
- Are there signs of disc herniation?
- Are there signs of neoplasia?





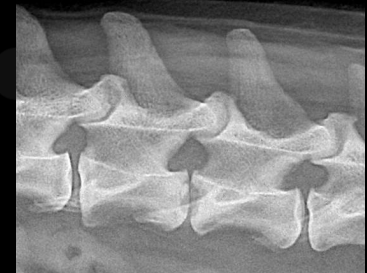
### Your evaluation

- How would you managed this patient?
- How often will you check this patient?
- When the patient will be healed?



### Chicco, Beagle, MI, 6 years

- A healed discospondylitis will show uniformly opaque bone proliferations
- No lytic changes





Chicco, Beagle, MI, 7 years

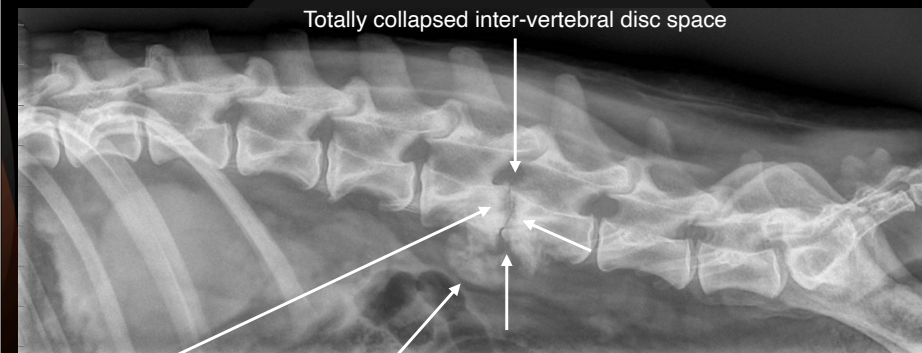
- The referring veterinarian treated Chicco for three months
- Now doing fine
- Recheck after one year



Chicco, MI, 7 years  
One year later



Chicco, MI, 7 years  
One year later



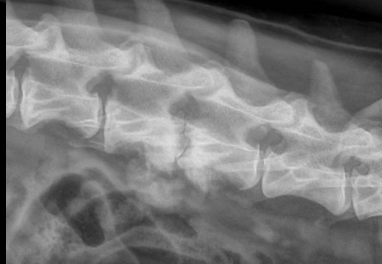
Chicco, MI, 7 years  
Two years later





## Key points

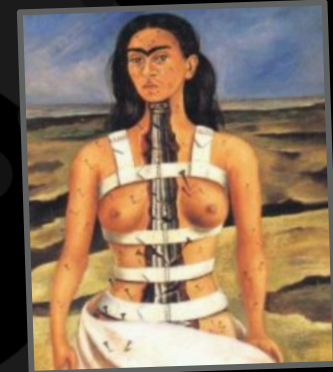
- Bridging spondylosis stabilizes the affected IVDS
- No lytic changes
- Chronic well-defined osseous margins
- Sclerosis surrounding the affected end plates



## Conclusions

The anatomy and peculiarity of the retroperitoneal space allow us to increase our diagnostic capacity

Basic knowledge of bone pathology will help our clinical skills



Frida Kahlo, spina bifida and fibromyalgia testimonial

# Thank you



Diagnostic Mindset

[www.diagnosticmindset.com](http://www.diagnosticmindset.com)

## Quiz time!

1. Spondylosis A, B, C, D
2. Acute spondylitis B
3. Chronic discospondylitis A, C
4. Multiple lytic osseous lesions D
5. Acute discospondylitis 0

