Neurology

Dr. Ed Neufeld B.A. M.Div. D.V.M.

Chief Complaint

Meg is a 5 year old female spayed Miniature Schnauzer who during vigorous exercise cried out in pain and became suddely weak, ataxic and semi paralyzed

Meg

History

- Up to date on all vaccinations (DA2PP) including Rabies.
- After running in the park all morning Meg suddeny collapsed and became paralyzed in her hind legs.
- Prior to this morning Meg was normal and showed no clinical abnormalities

Physical Examination

- Lethargic
- Temperature 38.5 degrees
- Heart Rate – 110/minute
- Seems very weak
- Proprioception defecits worse on the right hind leg. Negative placing reflex.
- Drags the right hind leg when walking
- Cried in pain at the onset but now the pain has subsided.

Video Links

- Dog with FCE
- https://www.youtube.com/watch?v=QJ9lSXl2RD8
- Proprioception deficits
- https://www.youtube.com/watch?v=IXpGX6xhJdM&t=9s

Video of Meg

Proprioception Deficits

Problem List

- Weak and lethargic
- Proprioception deficits. right hind leg
- Drags the right hind leg when walking
- Posterior paresis/paralysis right hind leg

Rule Outs

- List all the Possible Diagnoses
- *This list is your Rule Out list*

Rule Outs

- Trauma
- Neoplasia
- Rabies
- Fibrocartilaginous Embolic Myelopathy (FEM)
- Degenerative Myelopathy
- Discospondylitis
- Intervertebral Disk Disease – Herniated Disk
- Lumbosacral Stenosis
- Botulism
- Exercise Induced Weakeness/Collapse Labradors
- Wobbler (Cervical Spondylomyelopathy)

The Plan

- What is your PLAN ?

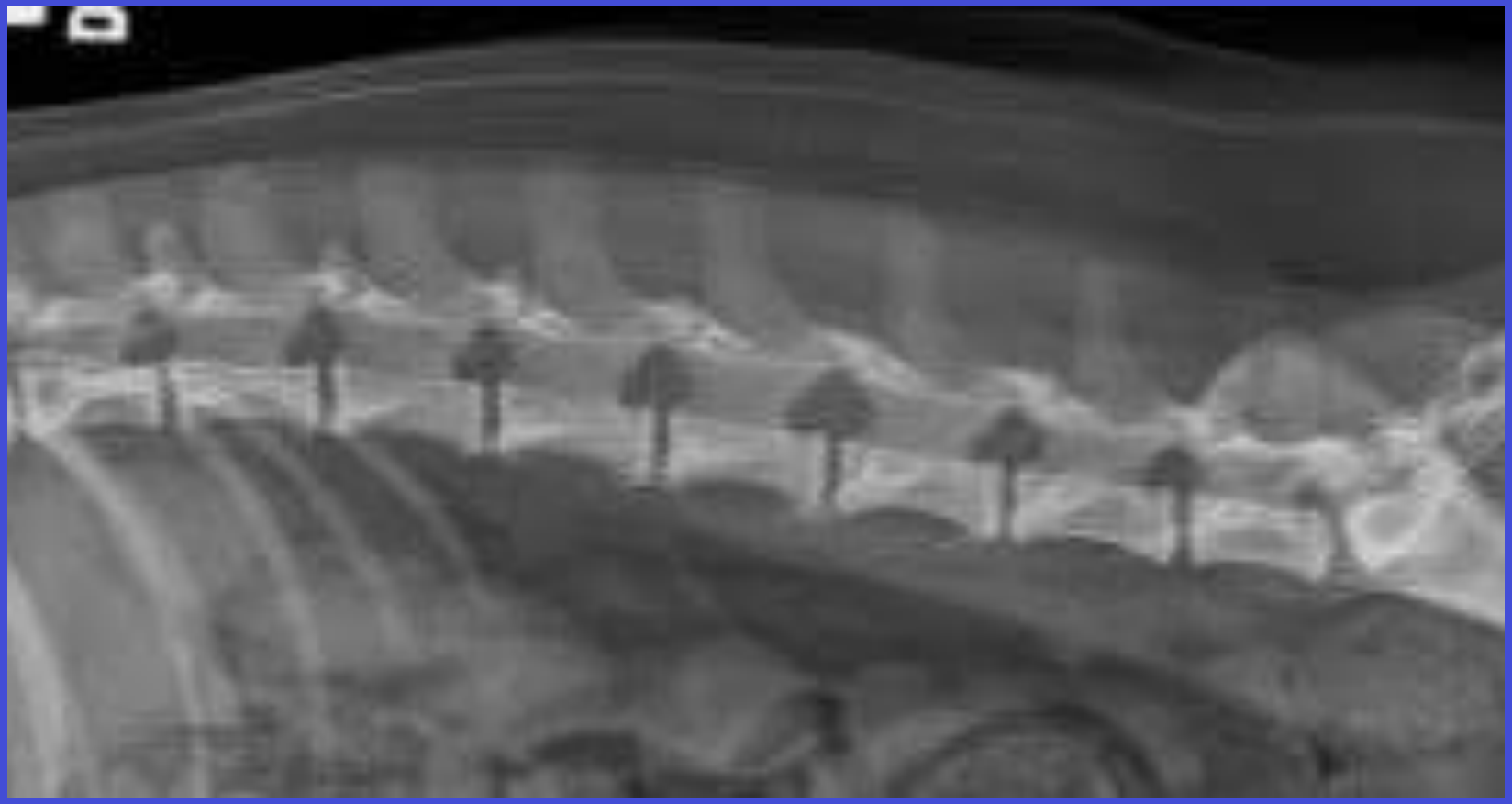
Plan

Radiograph – Spine

- Lateral view - T/L Junction
- Lateral view - Lumbar Vertebrae

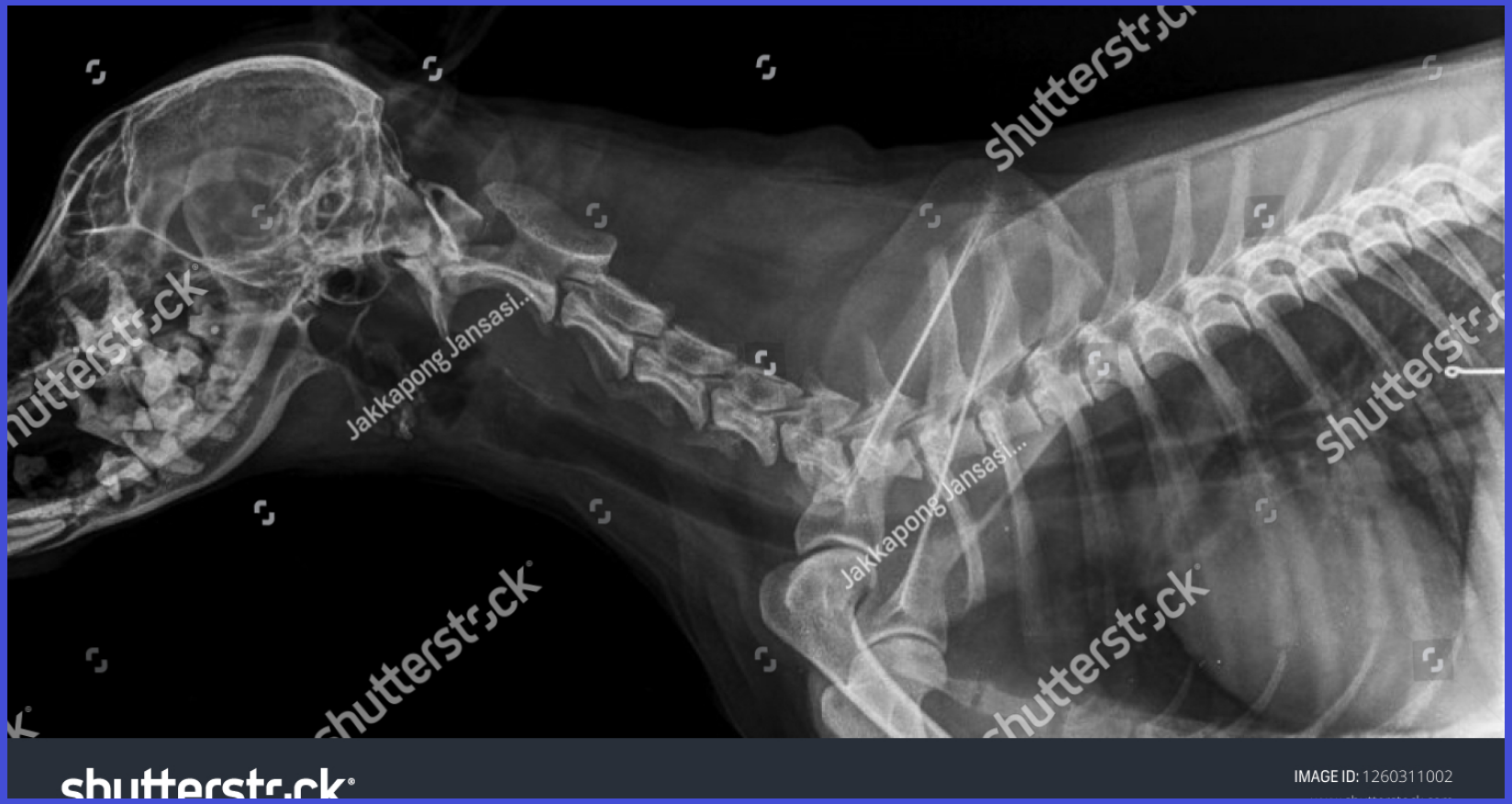
V/D of the entire spine – from T10 to L7

Lateral Spine



V/D Spine

Cervical lateral view



Radiograph Evaluation

- List the radiographic lesions that you see on the previous radiographs.

Radiographic Lesions

- The radiographs are normal. There are no visible abnormal lesions.

What is your Diagnosis?

- What is the most likely diagnosis ? Give reasons.

Rule Outs likely or unlikely Give Reasons

- Trauma
- Neoplasia
- Rabies
- Fibrocartilaginous Embolic Myelopathy (FEM)
- Degenerative Myelopathy
- Discospondylitis
- Intervertebral Disk Disease – Herniated Disk
- Lumbosacral Stenosis
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- Exercise Induced Weakeness/Collapse Labradors
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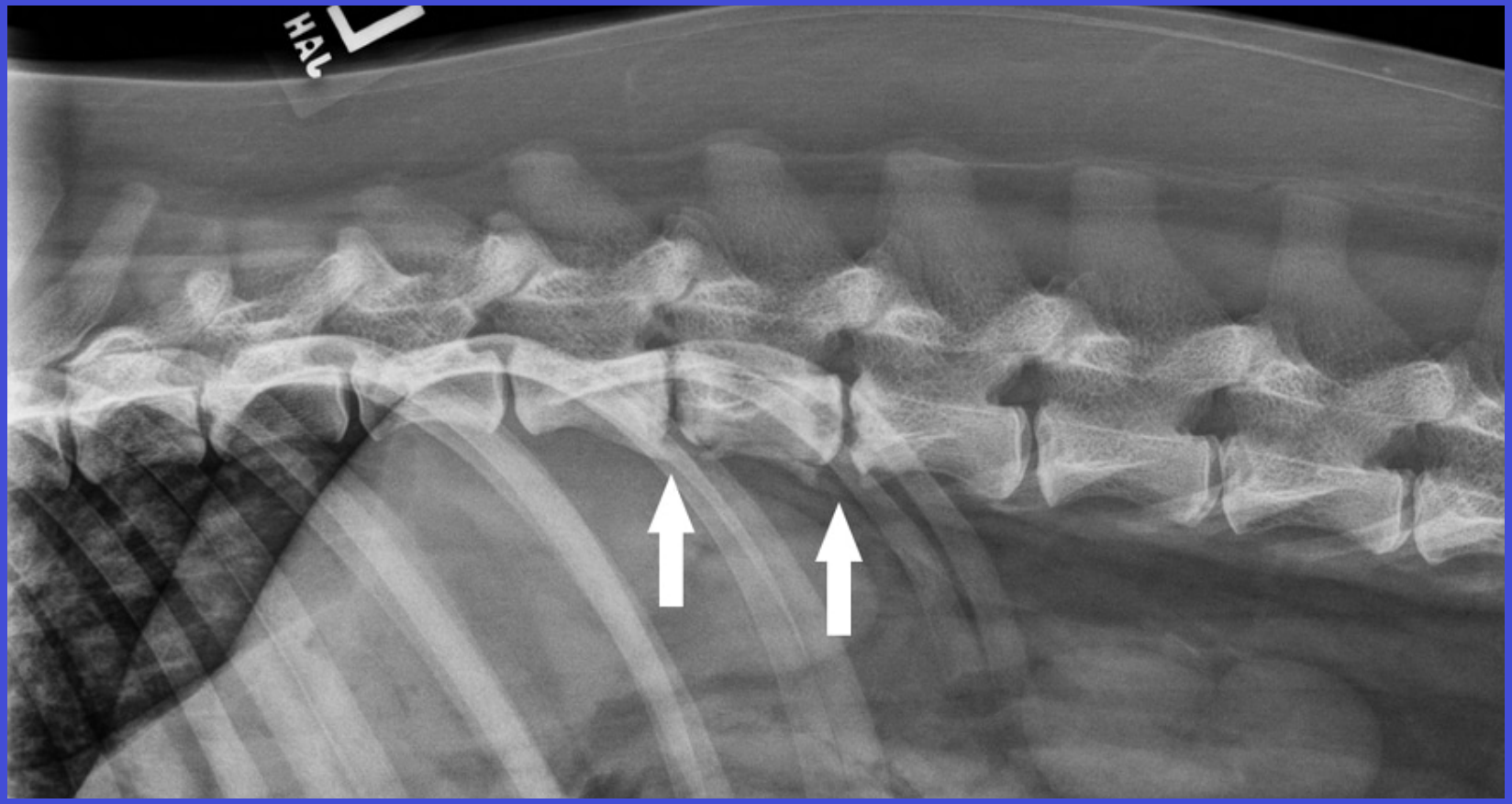
Rule Outs Likely or Unlikely

- Trauma- unlikley no history of trauma
- Neoplasia –unlikely none seen on radiograph
- Rabies – unlikely - ascending bilateral posterior paralysis
- Fibrocartilaginous Embolic Myelopathy (FEM) – likely – fits the clnical signs
- Degenerative Myelopathy unlikely – progressive ataxia – German Shepherds

Rule Outs Likely or Unlikely

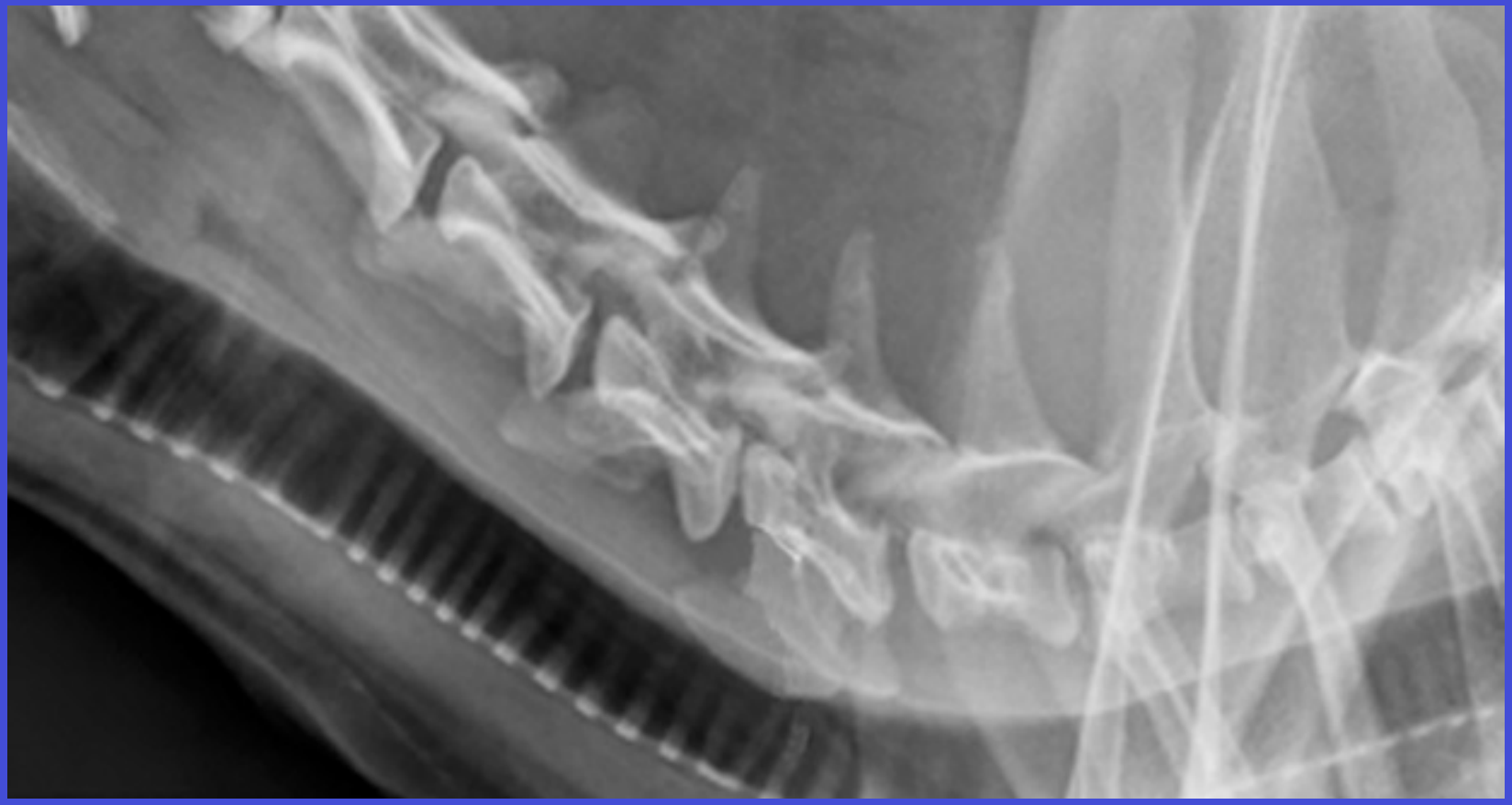
- Discospondylitis – unlikely no osteolysis of the discs.
- Intervertebral Disc Disease – unlikely for a herniated disc – no narrowing of disc spaces on radiograph
- Lumbosacral Stenosis – unlikely – usually large breed dogs. pain on lifting the tail
- Botulism – unlikely- flaccid paralysis
- Exercise Induced Weakeness/Collapse Labradors – unlikely – recovers quickly on rest
- Wobbler (Cervical Spondylomyelopathy) unlikely – neck pain, progressive incoordination hind legs, progressing to the forelimbs, no radiographic lesions

Discospondylitis – lytic disc lesions

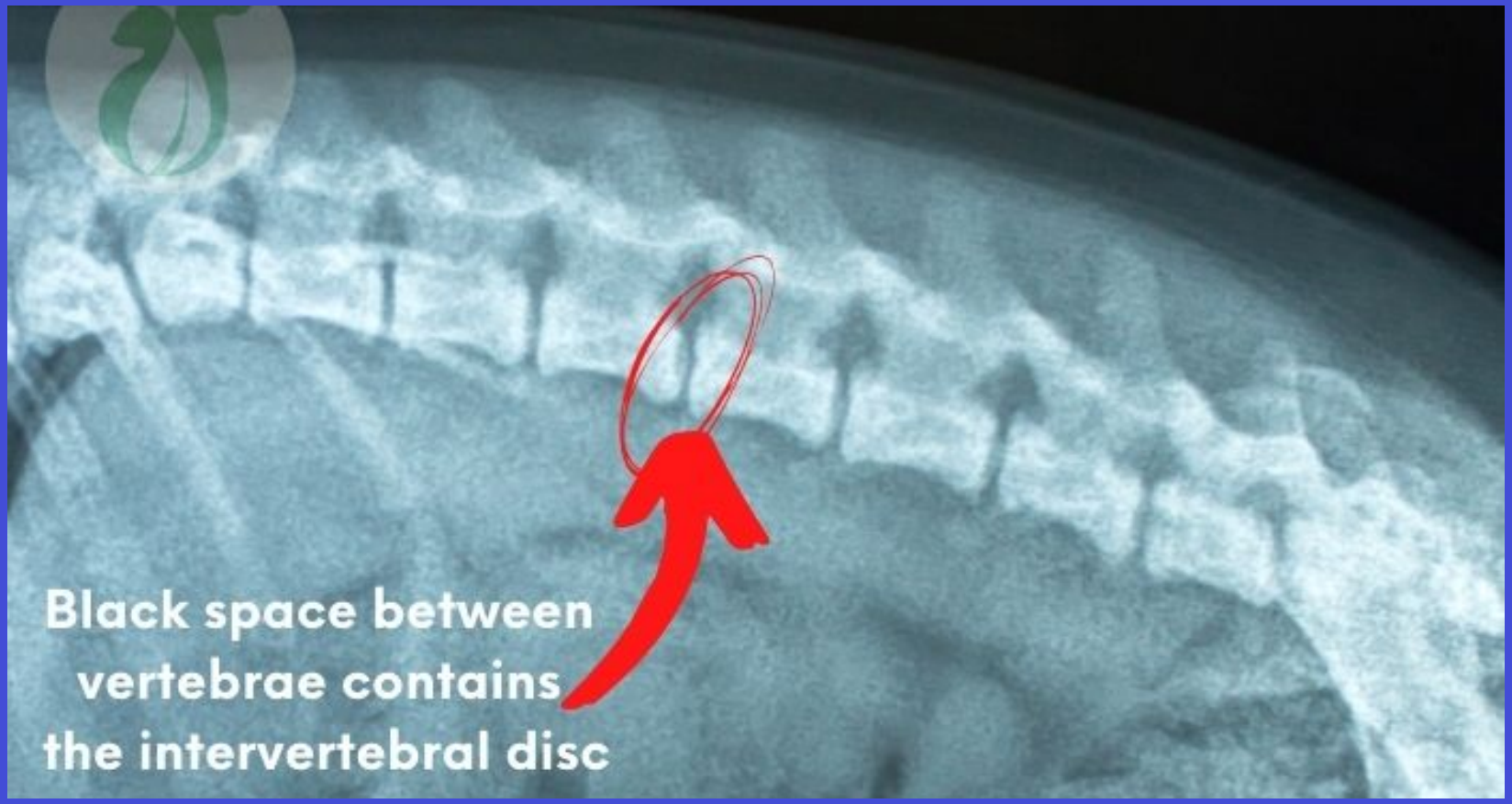


Spondylomyelopathy (Wobbler)

Disc herniation and narrowing C5C6



Intervertebral Disc Disease



Diagnosis

- Most likely diagnosis

Diagnosis

- Fibrocartilaginous Embolic Myelopathy

Treatment Plan

- There is no specific treatment of FEM
- Steroid injection : Methyprednisolone sodium succinate or use an NSAID – Meloxicam
- NSIAD - BUT NEVER give a steroid and NSAID together.
- Supportive Treatment: padded bed, frequent turning, assisted walking with sling
- Assisted exercises, treadmill etc.

Prognosis

- Deep pain perception: fair to good prognosis
- Loss of deep pain – poor prognosis
- Upper motor neuron sign – good prognosis
- Clinical signs progress from the onset – poor prognosis
- Dogs make a slow recovery over 3-4 months
- Poor prognois if recovery more than 4 months

Upper and Lower Motor Neurons

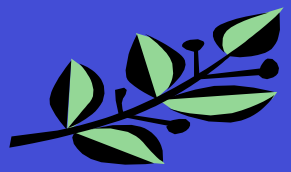
LMN : Flaccid, negative crossed extensor, Decreased tone

UMN : Increased tone, increased reflex, positive crossed extensor, rigidity

Positive Crossed Extensor Reflex

- https://www.youtube.com/watch?v=415SZNrPoRI

Positive crossed extensor reflex



The End