

Chronic right front limb lameness in a mongrel

CASE DISCUSSION

Giliola Spattini
DVM, GP Cardio, CCRT, PhD, DECVDI



Diagnostic Mindset



Thank to www.imaios.com

Lady, Mongrel, FI, 10 years

- Right front limb lameness after running since three months
- Recurrent episodes, now worsening



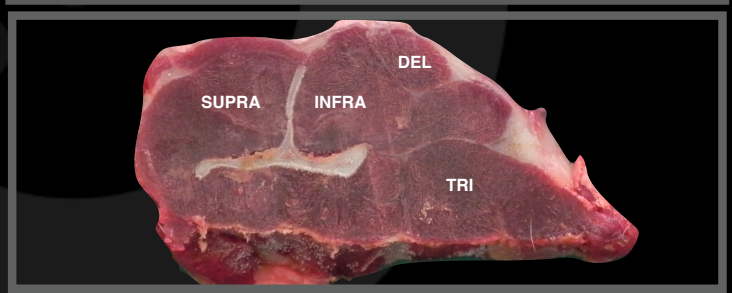
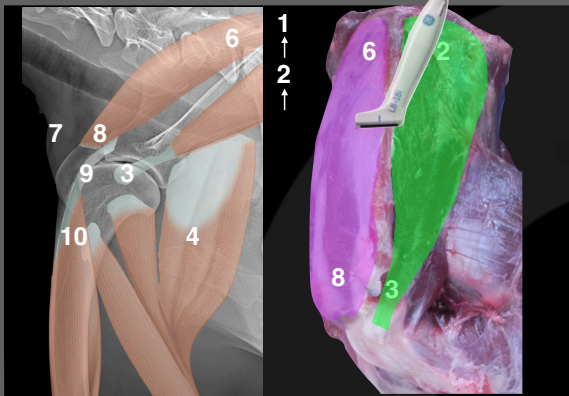
Lady, FI, 10 years

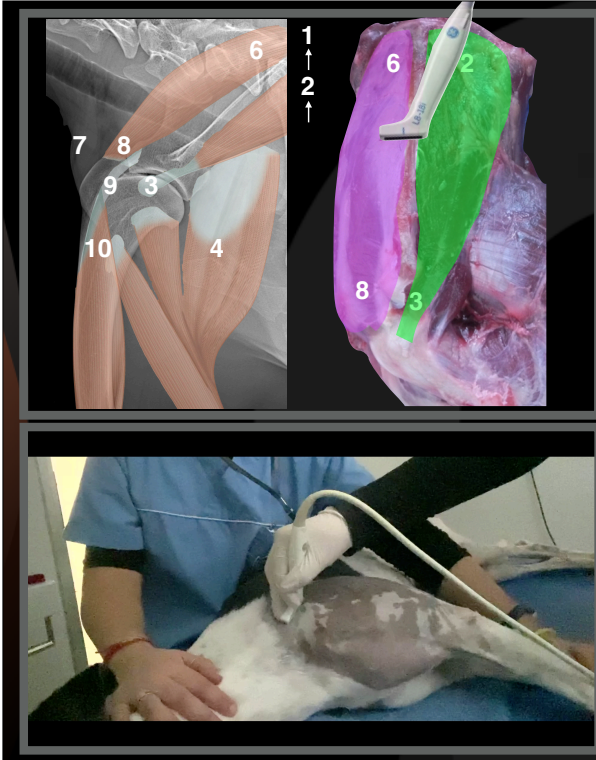


Lady, FI, 10 years

Left shoulder

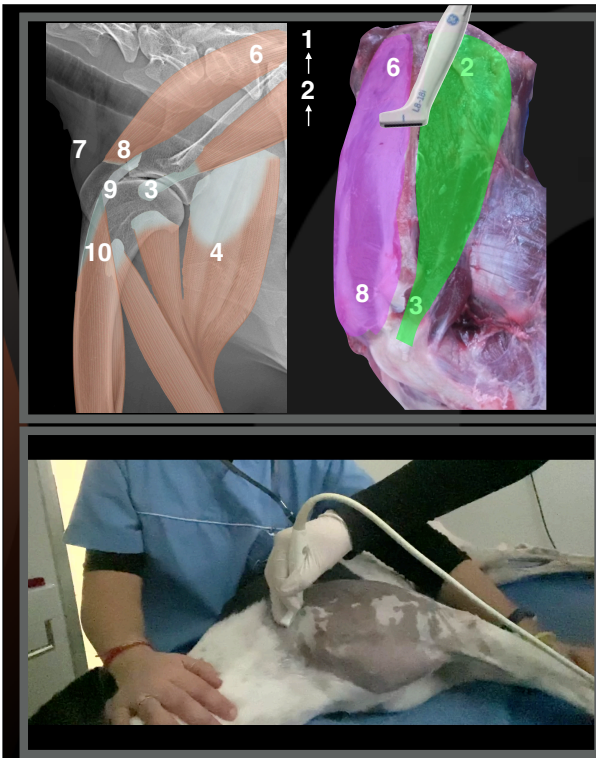
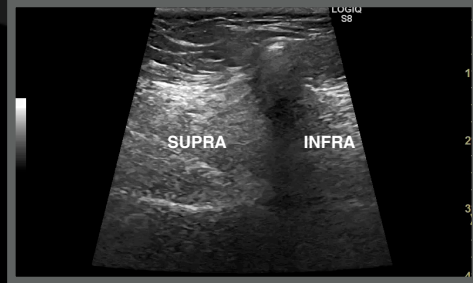
Supraspinatus and infraspinatus muscle transverse scan





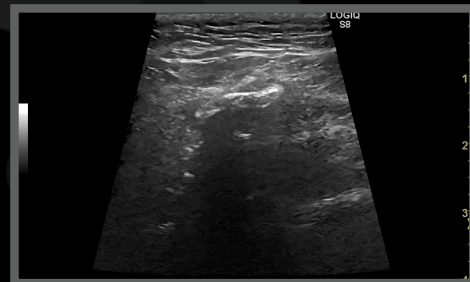
Lady, FI, 10 years
 Right shoulder

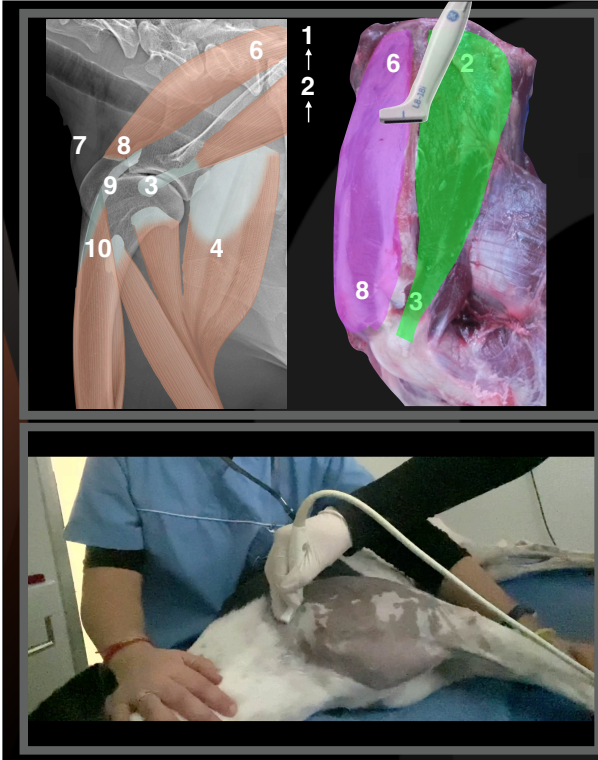
Supraspinatus and infraspinatus muscle transverse scan



Lady, FI, 10 years
 Right shoulder

Supraspinatus and infraspinatus muscle transverse scan

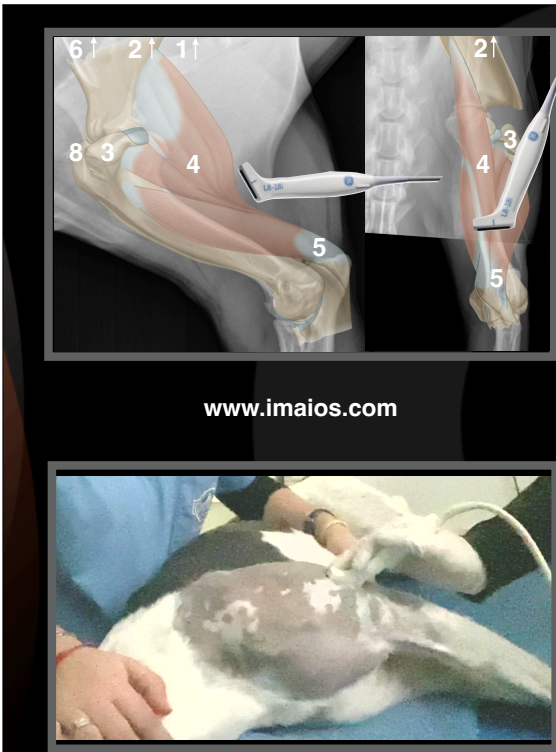




Lady, FI, 10 years

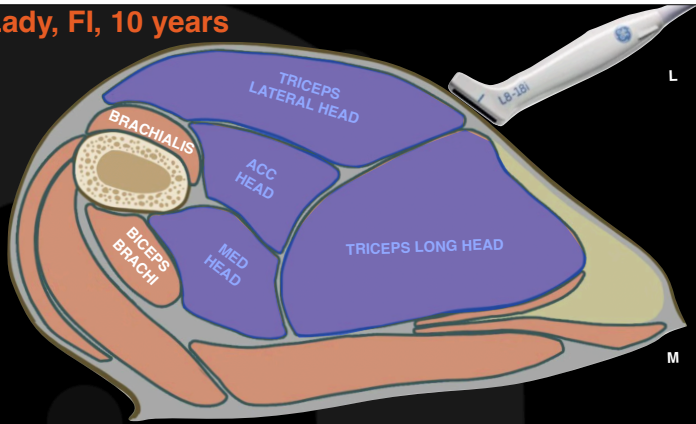
Right shoulder

Supraspinatus and infraspinatus muscle transverse scan

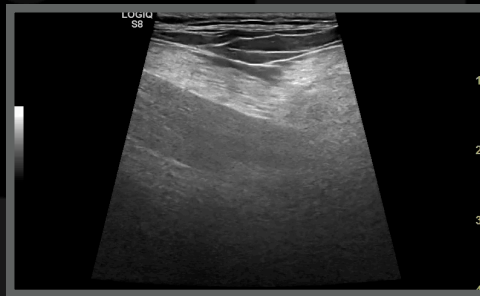


Lady, FI, 10 years

www.imaios.com



4-5



Your evaluation

- Is there a muscle contracture?
- Is there a muscle rupture?
- What are the lesions in the triceps muscle?

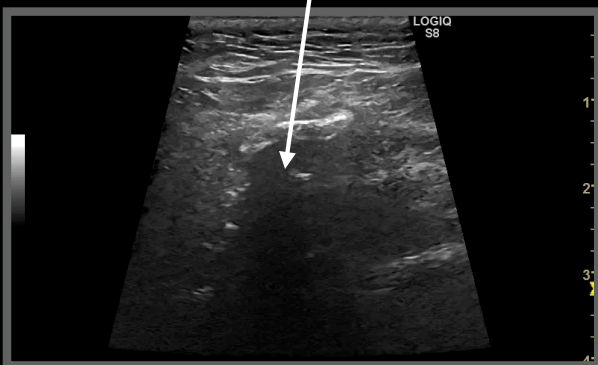


Lady, FI, 10 years



Lytic changes and soft tissue "mass"

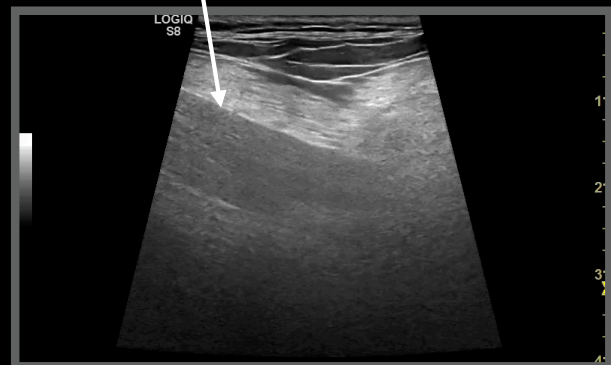
Right shoulder



Scattering artefact

Right shoulder

Hypochoic lesions



Lady, Mongrel, FI, 10 years

Ultrasonographic diagnoses:

- Partially destroyed dorsal portion of the spine of the right shoulder
- Multiple hypoechoic lesions in the muscles
- Scattering artefact



What next?

Lady, FI, 10 years

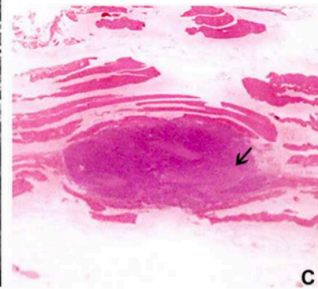
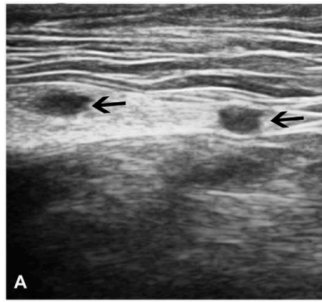
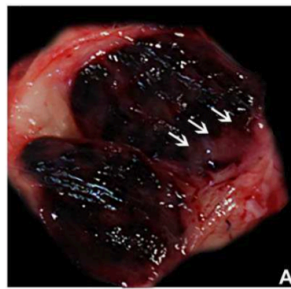


IMAGING DIAGNOSIS—ULTRASONOGRAPHIC APPEARANCE OF SKELETAL MUSCLE METASTASES IN A DOG WITH HEMANGIOSARCOMA

MARTINA FABBI, STEFANO DI PALMA, SABRINA MANFREDI, GIACOMO GNUDI, FRANCESCA MIDURI, ELEONORA DAGA, GABRIELE COSTANTINO MELIS, EZIO BIANCHI, SIMONE VOCCIA, ANTONELLA VOLTA

A 13-year-old spayed female German shepherd dog was presented for acute onset of lethargy, anorexia, and disseminated erythematous skin lesions. Thoracic radiographs and abdominal ultrasonographic findings were consistent with metastatic hemangiosarcoma. Multiple, ill-defined, irregularly shaped hypoechoic nodules were also detected within the thoracic and abdominal wall. Hemangiosarcoma metastases to the skeletal muscle were confirmed based on histopathological examination. Multivisceral involvement was also confirmed by necropsy. Metastatic neoplasia should be considered as a differential diagnosis for dogs with ill-defined, irregular, hypoechoic, intramuscular nodules. © 2016 American College of Veterinary Radiology.

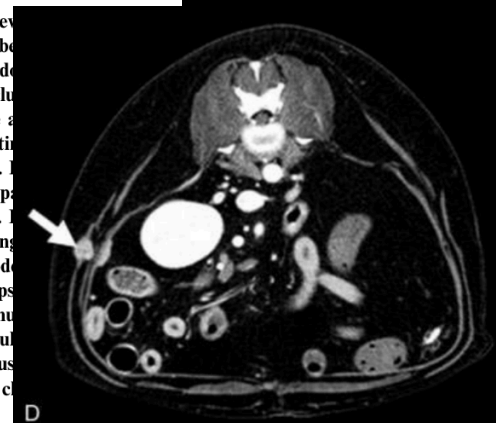
Vet Radiol Ultrasound. 2016 Oct 4.
PMID: 27699974



WHOLE BODY COMPUTED TOMOGRAPHIC CHARACTERISTICS OF SKELETAL AND CARDIAC MUSCULAR METASTATIC NEOPLASIA IN DOGS AND CATS

MASSIMO VIGNOLI, ROSSELLA TERRAGNI, FEDERICA ROSSI, LUKAS FRÜHAUF, BARBARA BACCI, LORENZO RESSEL, OMBRETTA CAPITANI, LAURA MARCONATO

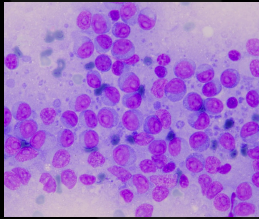
Muscular metastatic neoplasia has been reported to be rare in domestic animals, however previous studies were based primarily on necropsy findings. The purpose of this retrospective study was to describe the computed tomography (CT) characteristics of confirmed muscular metastases in a cohort of dogs and cats presented for oncology evaluation. Medical records of 1201 oncology patients were reviewed. Inclusion criteria included patients who underwent pre and postcontrast whole body CT, and CT-guided tru-cut biopsy or fine needle aspiration of one or more metastatic lesions. Twenty-one dogs and six cats met inclusion criteria, representing 1.7% of all canine oncology patients and 3.1% of all feline oncology patients. Mean age was 9.6 years. The CT characteristics included well-demarcated, oval-to-round lesions with varying enhancement patterns: non-enhancing ($n = 16$), heterogeneously enhancing ($n = 8$), or homogeneously enhancing ($n = 5$). Lesions showed concurrent and varying nodular patterns. In seven cases (five dogs and two cats), one single nodule was observed. In 20 cases, two or more lesions were observed. In two cases, cardiac hypodensities were observed in the postcontrast CT, while appearing isodense in the precontrast study. Necropsy confirmed neoplasia in both of them. Locations of muscular metastases included epaxial/paraspinal muscles of the cervical, thoracic, and lumbar spine ($n = 18$), superficial muscles of the thoracic wall ($n = 13$), scapular region ($n = 3$), hind limb ($n = 3$), and abdominal wall muscles ($n = 1$). Findings supported the use of postcontrast whole body CT for oncologic staging in dogs and cats, especially for primary tumors characterized by a high metastatic rate. © 2013 *Veterinary Radiology & Ultrasound*.



Lady, Mongrel, FI, 10 years

Final diagnosis

- Chondrosarcoma with muscular metastasis



Survived three months

Thank you



Diagnostic Mindset

www.diagnosticmindset.com

Decreased performance in an agility dog

CASE DISCUSSION

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DVM, GP Cardio, CCRT, PhD, DECVDI



Diagnostic Mindset

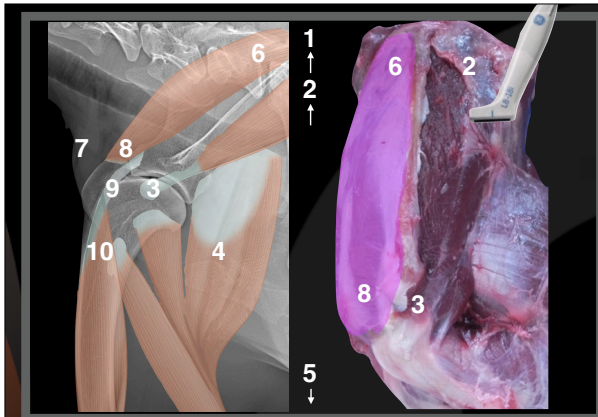


Thank to www.imaios.com

Scar, Border Collie, MI, 3 years

- Minimal hesitation on jumping documented in slow motion movies of the last two races
- Resistance in right shoulder extension
- Reduced performance (+2 second)
- Unremarkable radiographic examination



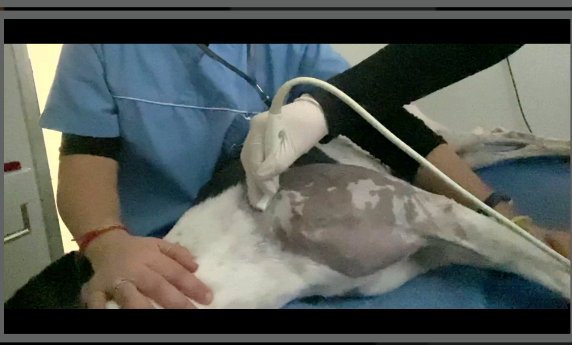
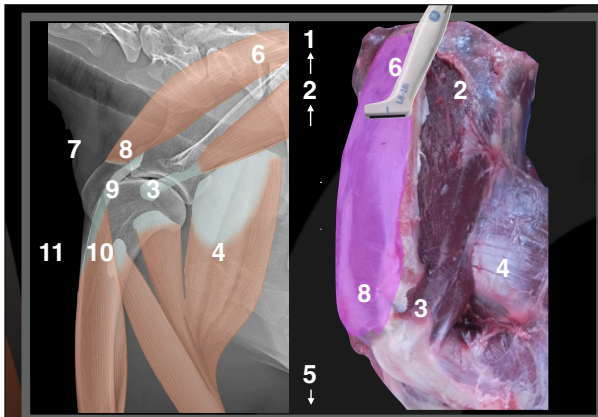
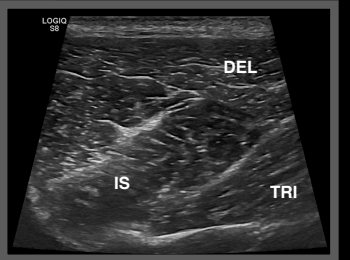
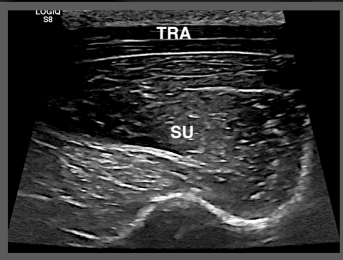


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Star, MI, 3 years
Right shoulder

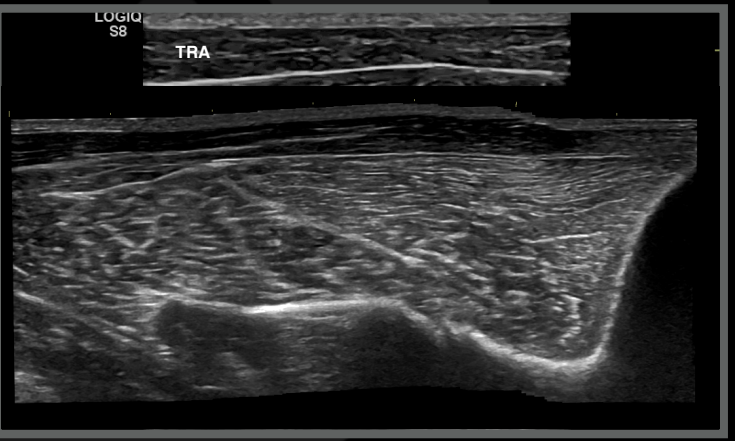
6-8  2-3 

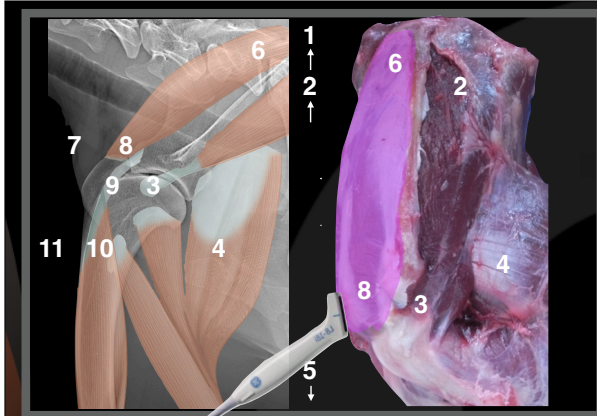


Star, MI, 3 years
Right shoulder
 Affected



Supraspinatus muscle transverse scan 6-7

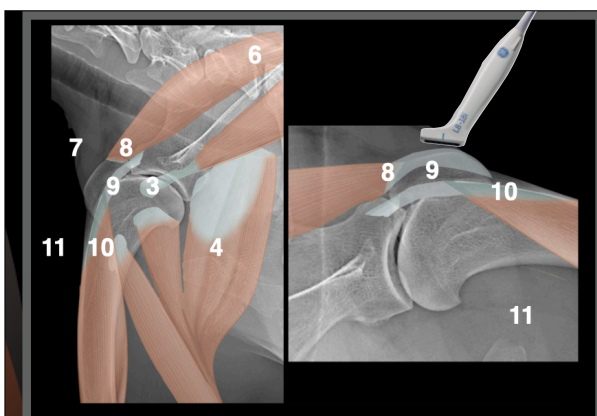
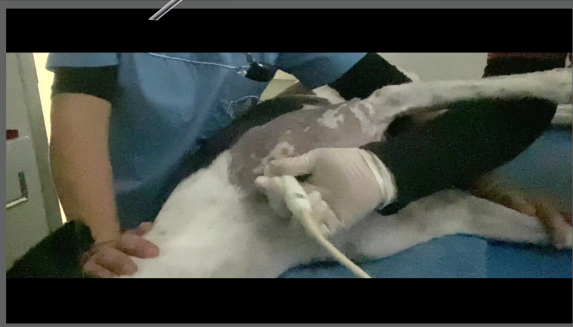




Star, MI, 3 years
Right shoulder

Affected
 Supraspinatus muscle and tendon, longitudinal scan

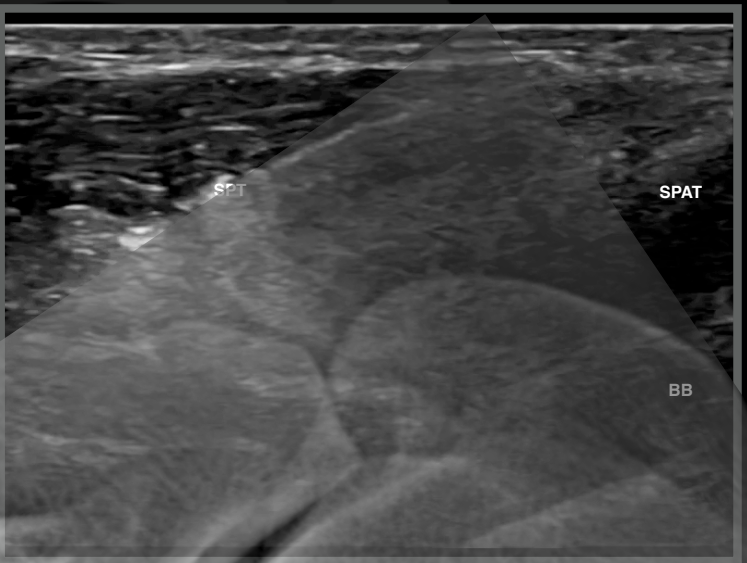
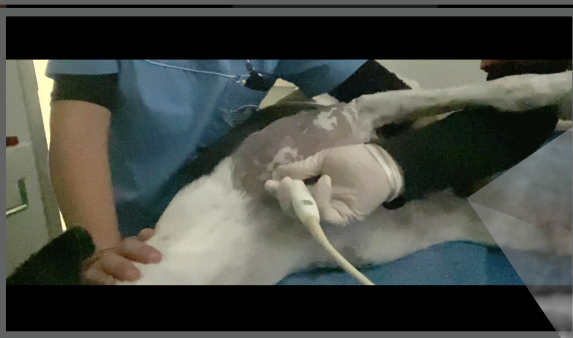
6-8

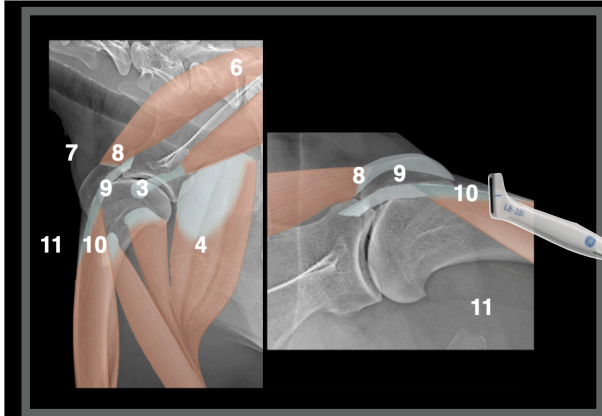


Star, MI, 3 years
Right shoulder

Supraspinatus tendon - BB longitudinal scan

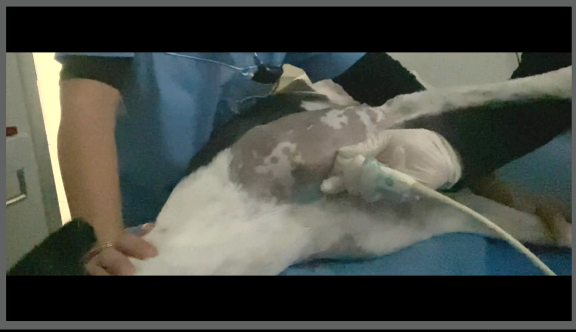
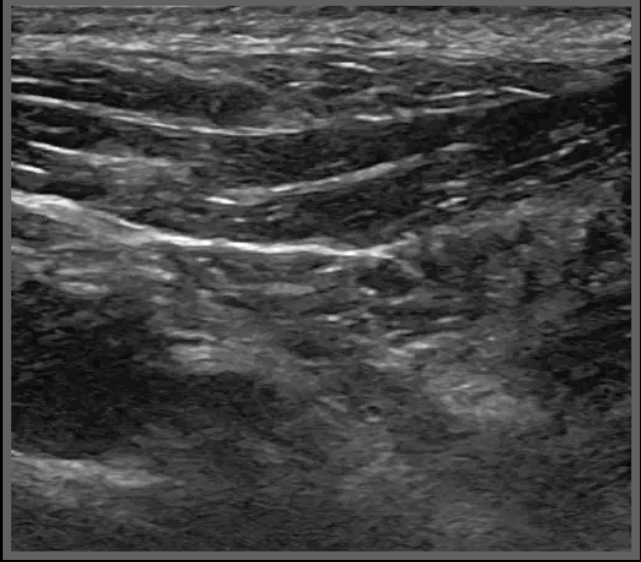
9





Star, MI, 3 years
Right shoulder

Supraspinatus tendon - BB transverse scan 9-10



Scar, Border Collie, MI, 3 years

Ultrasonographic diagnoses:

Second degree supraspinatus tendinopathy

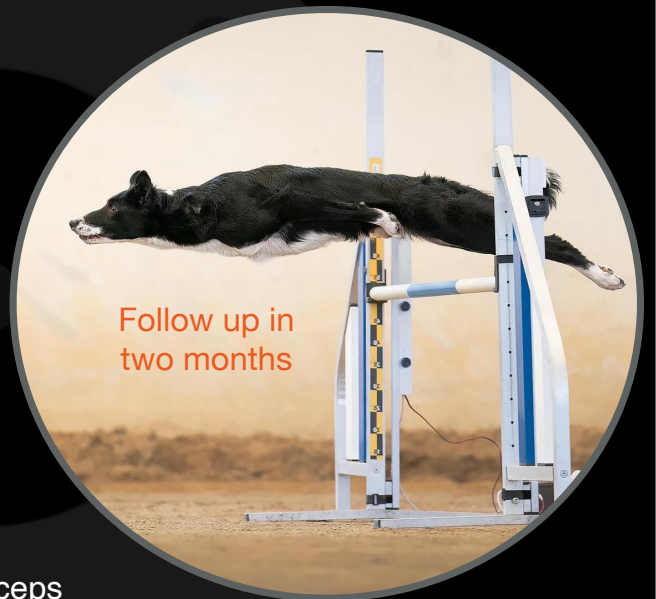
Possible impingement syndrome

Conclusions

Consider rehabilitation to reduce the supraspinatus diameter

Consider to change the training exercises

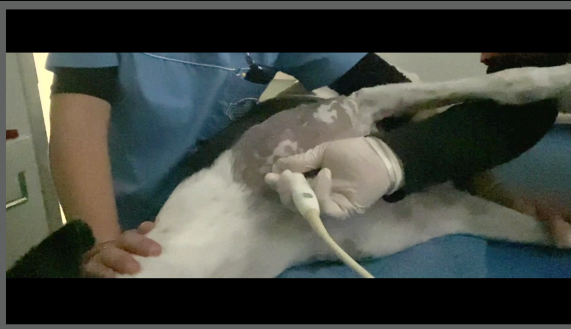
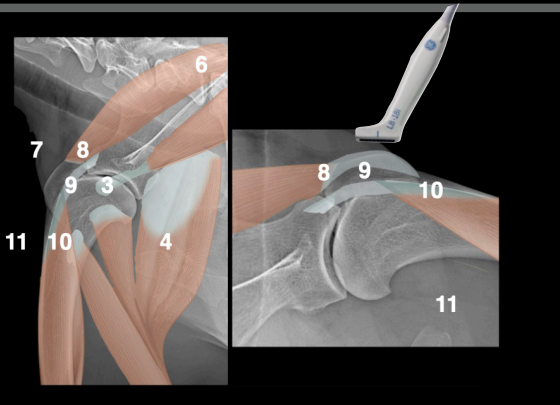
Consider to increase the muscle tone of the triceps



Scar, Border Collie, MI, 3 years

Two months later

- Doing great but not back to sport
- On physical examination good extension of the right shoulder
- Increased triceps tone



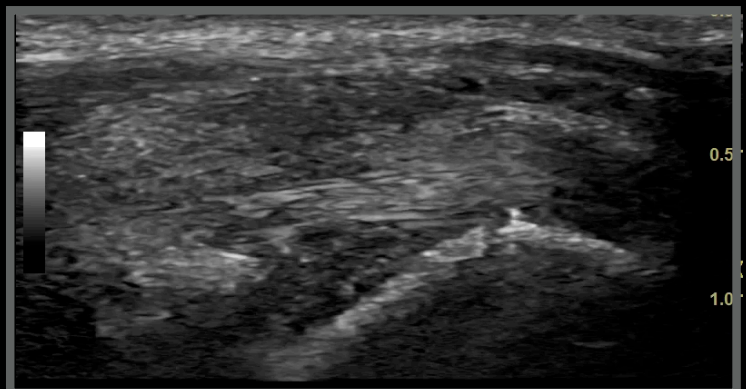
Star, MI, 3 years

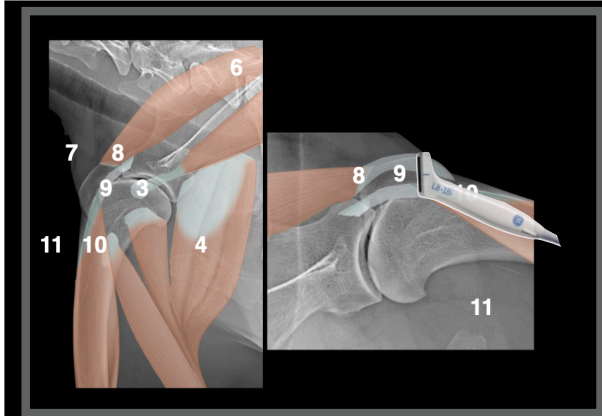
Right shoulder

Two months later

Supraspinatus tendon - BB longitudinal scan

9

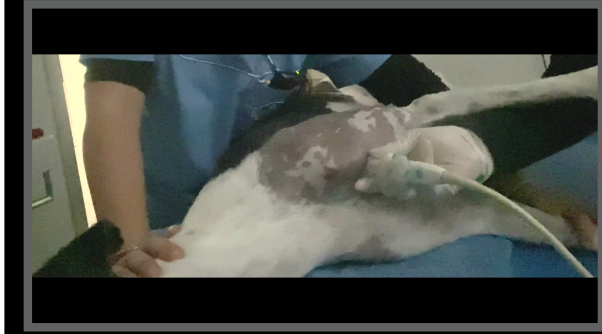
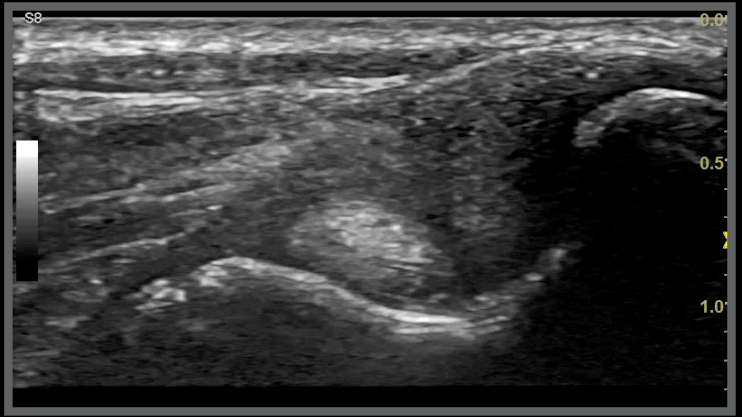




Star, MI, 3 years
 Right shoulder
 Two months later

Supraspinatus tendon - BB transverse scan

9

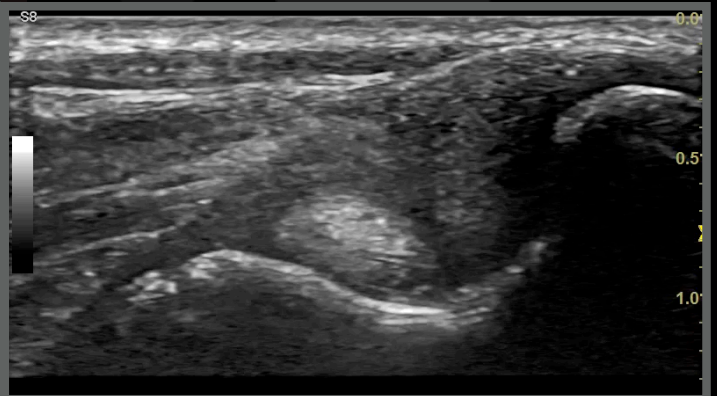
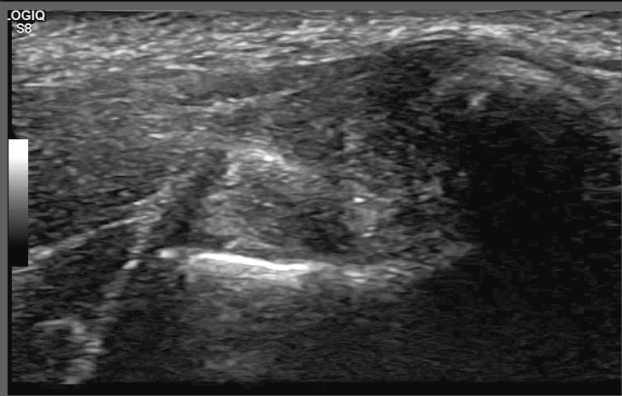


Scar, MI, 3 years

Supraspinatus-biceps tendon interface, transverse

Right shoulder Time zero

Right shoulder Two months later



Key points to diagnose chronic supraspinatus tendinopathy

- Check the supraspinatus and BB sliding on both views (long and transverse)
- Check the joint capsule
- Check the triceps tone
- Follow up in two months



Scar, Border Collie, MI, 3 years

Two months later

Ultrasonographic diagnoses:

Improved second degree
supraspinatus tendinopathy

No signs of impingement syndrome now

Conclusions

He went back to sport - He is winning

Recheck with the physiotherapist every three months



Thank you



Diagnostic Mindset

www.diagnosticmindset.com

Persistent lameness in a aged Labrador

Giliola Spattini
DVM, GP Cardio, CCRT, PhD, DECVDI



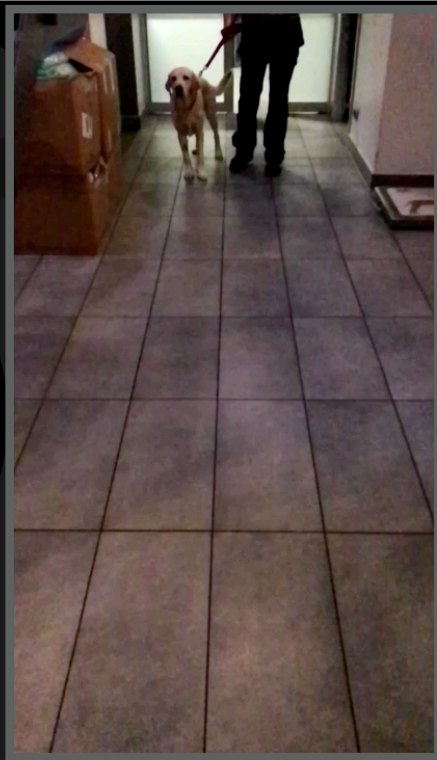
Diagnostic Mindset



Thank to www.imaos.com

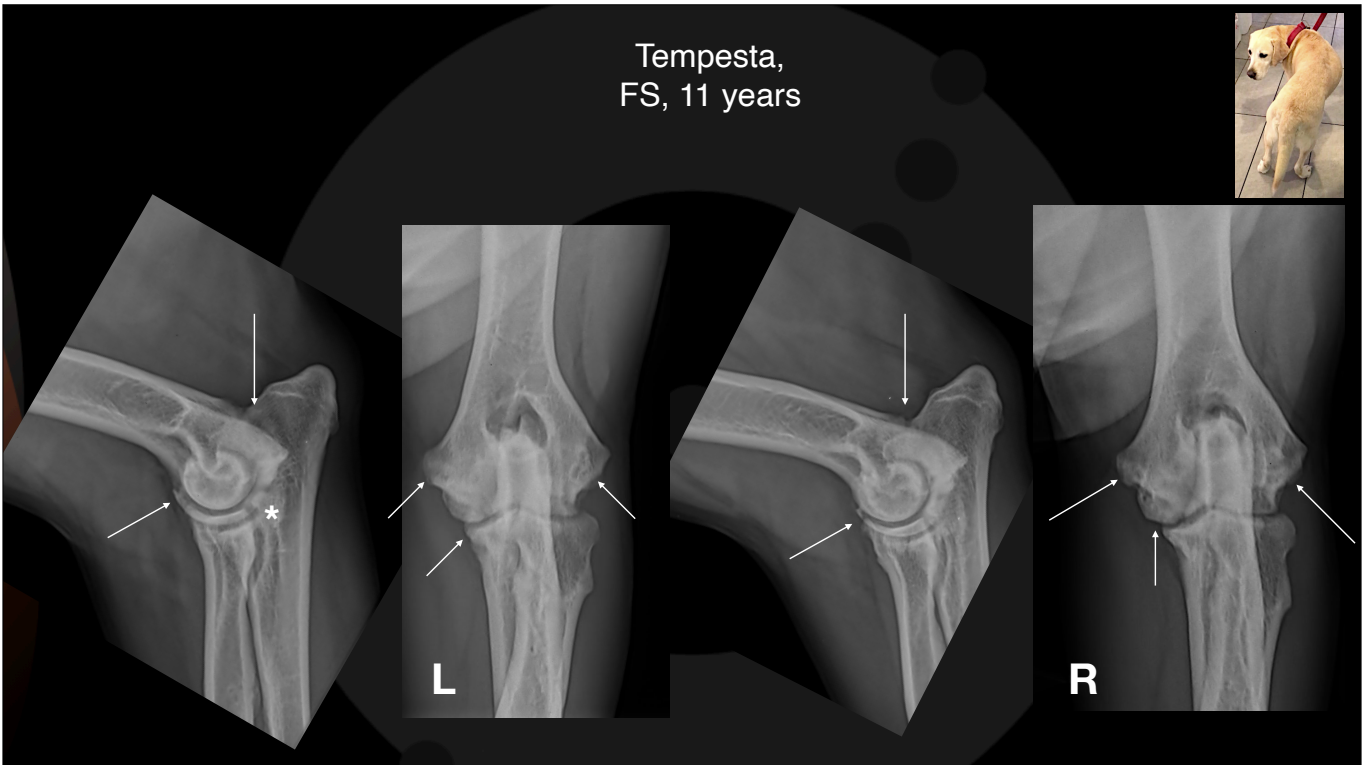
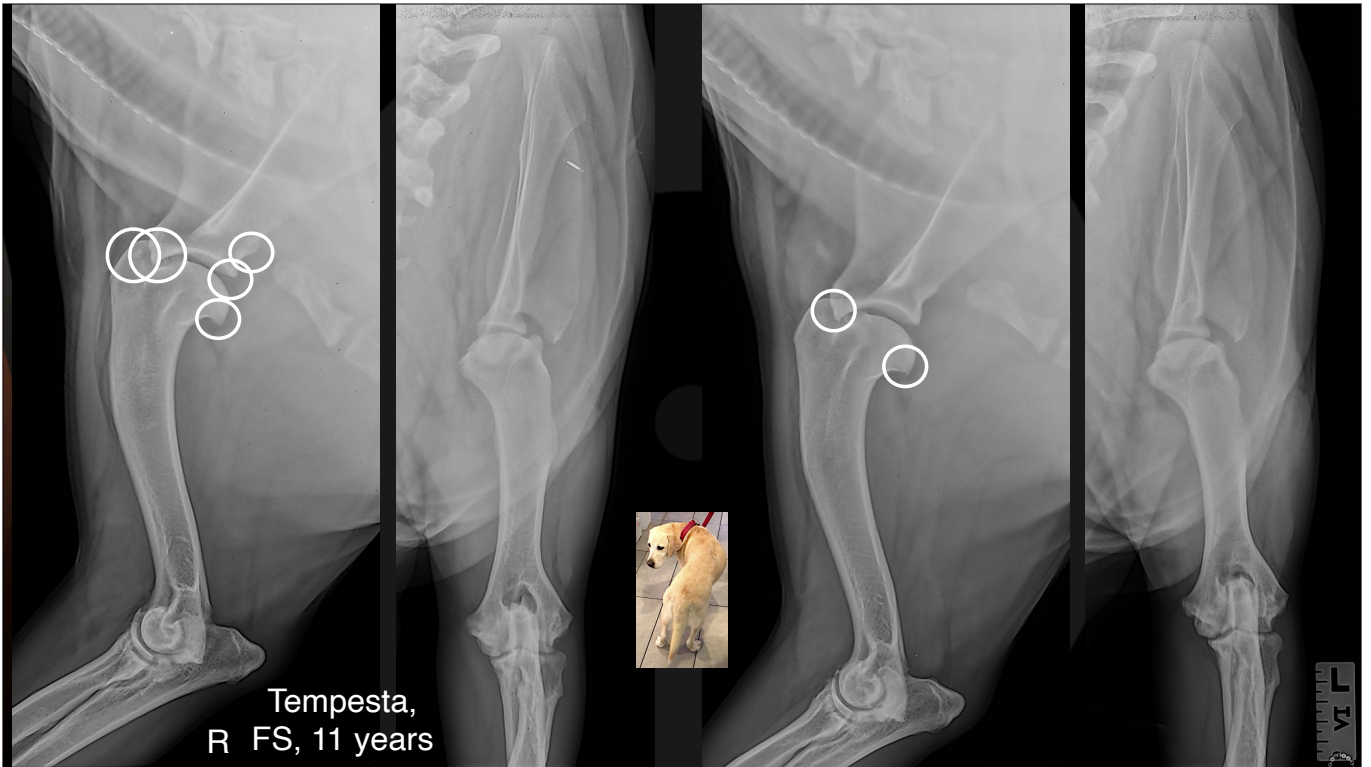
Tempesta, Labrador, FS, 11 years

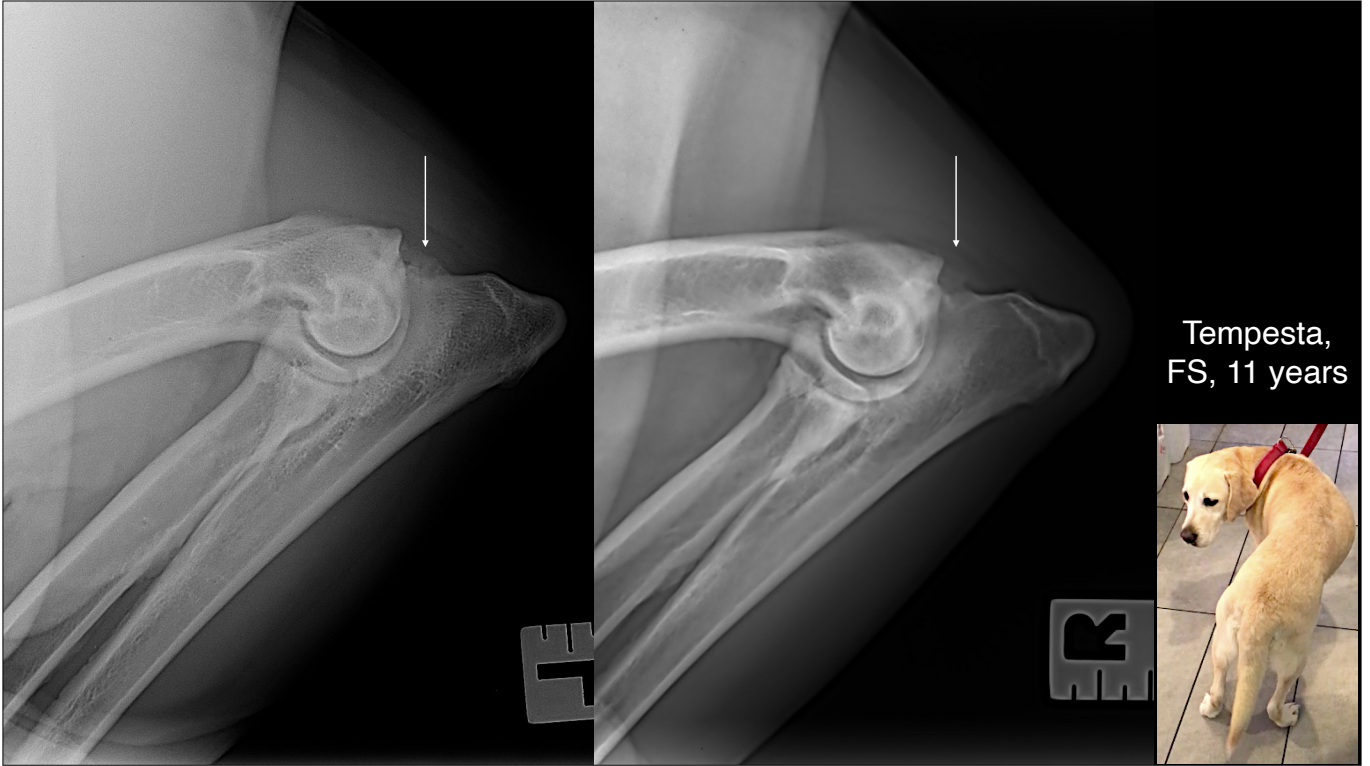
- Intermittent left front limb lameness for eight months
- Initially responding to NSAID
- Radiographs obtained six months ago



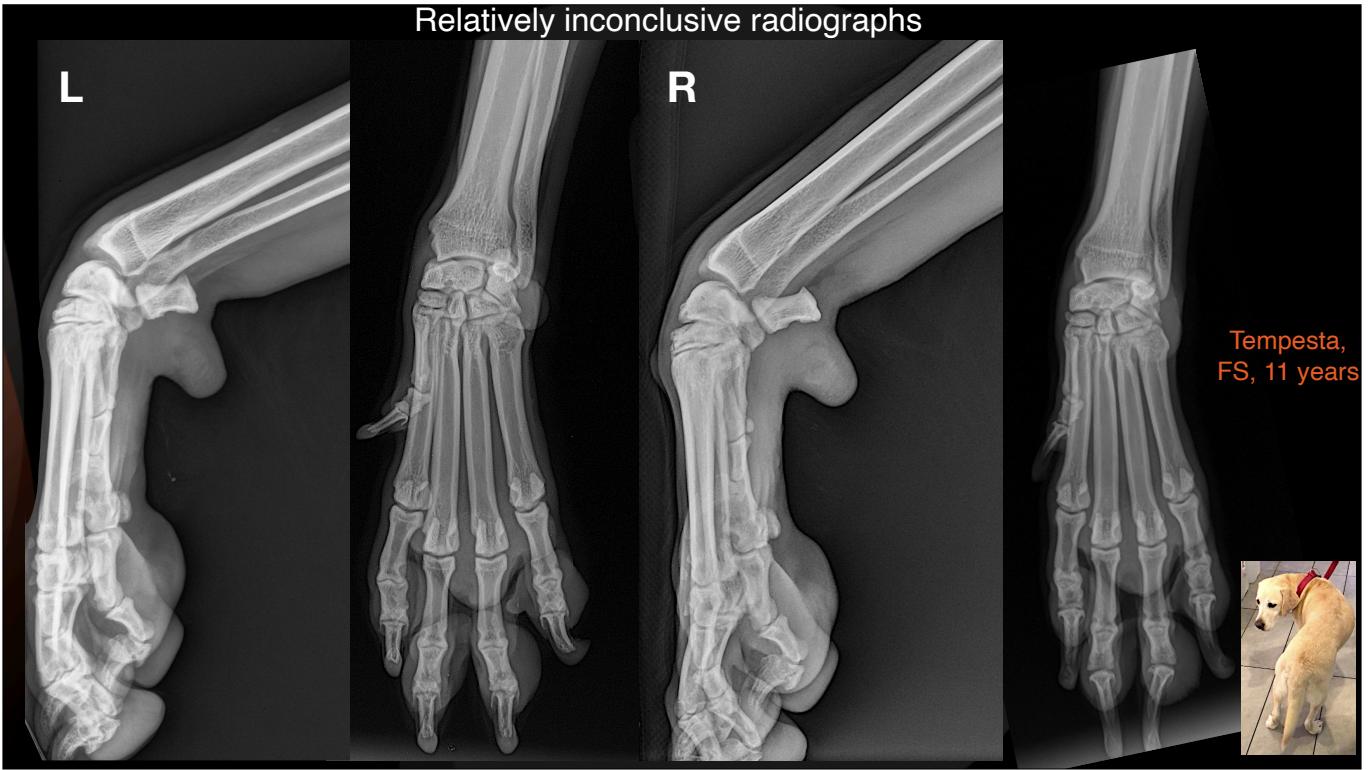
Tempesta, FS, 11 years







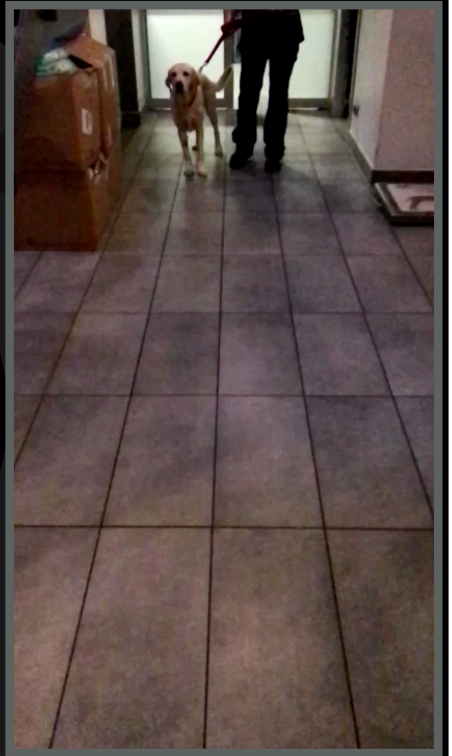
Tempesta,
FS, 11 years



Tempesta,
FS, 11 years

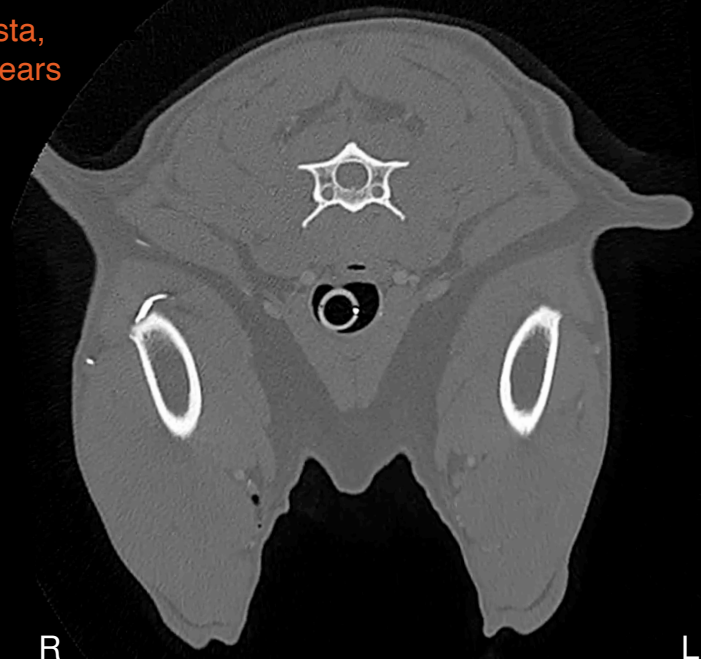
Tempesta, Labrador, FS, 11 years

- Not completely responding to NSAID
- Partially responding to physical therapy
- Tried Alternative medicine
- CT obtained two months ago



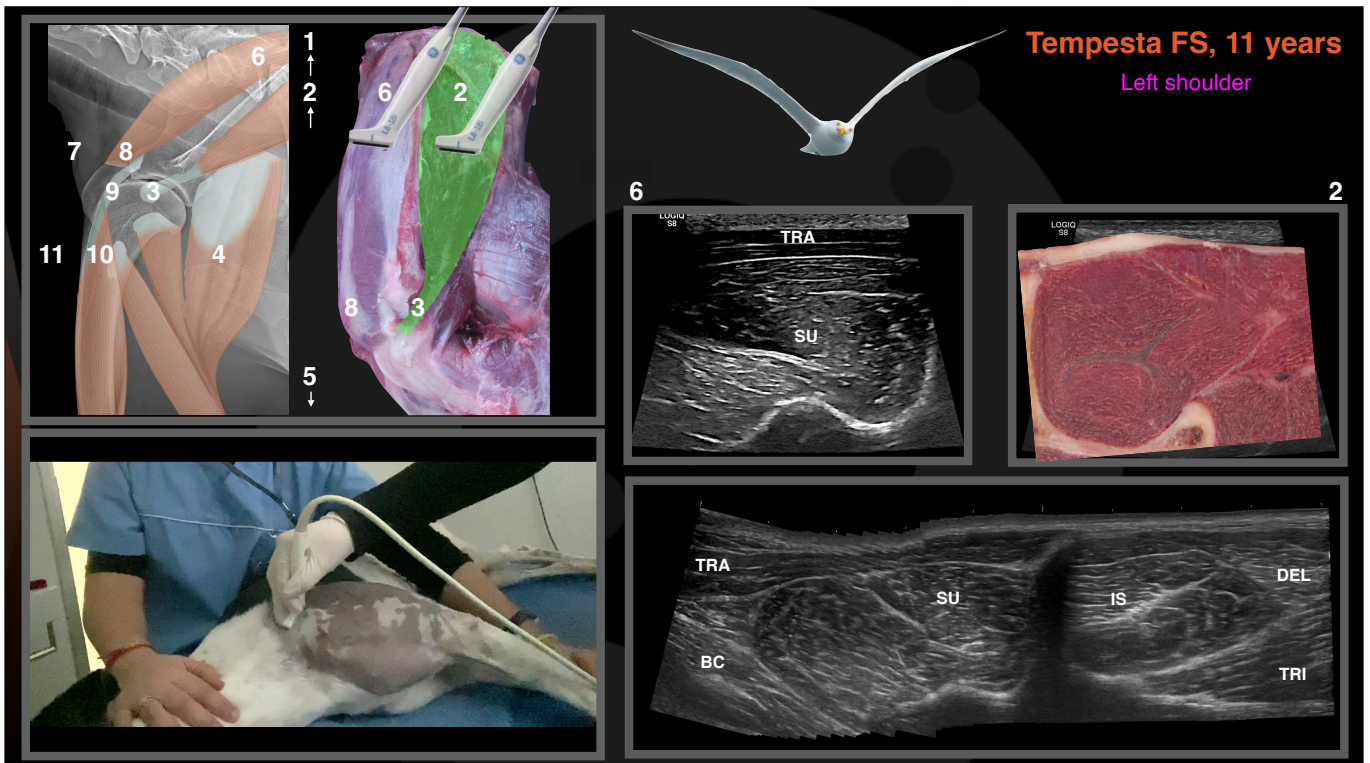
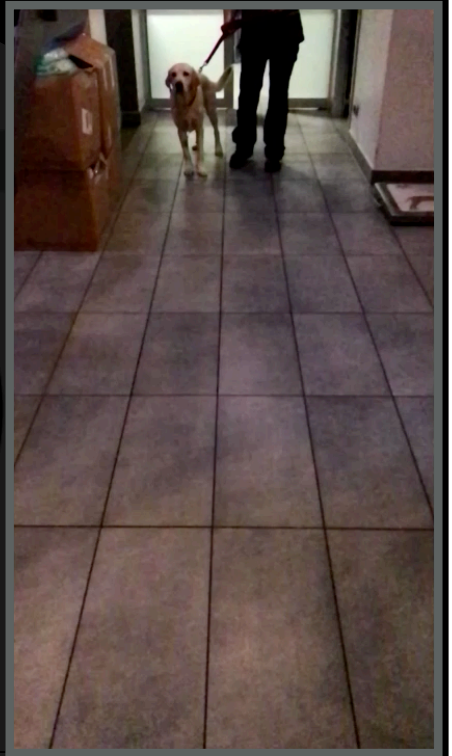
Tempesta, FS, 11 years

- Mild remodelling of the shoulder joints
- Moderate bone proliferation at the bicipital grooves
- Mild left-sided muscle atrophy
- Conclusion: suspected chronic left biceps brachii tendonitis



Tempesta, Labrador, FS, 11 years

- Not responding to physiotherapy and pain management
- Ultrasound of the shoulder requested:
 - To check treatment progression
 - Consider ultrasound-guided local treatment

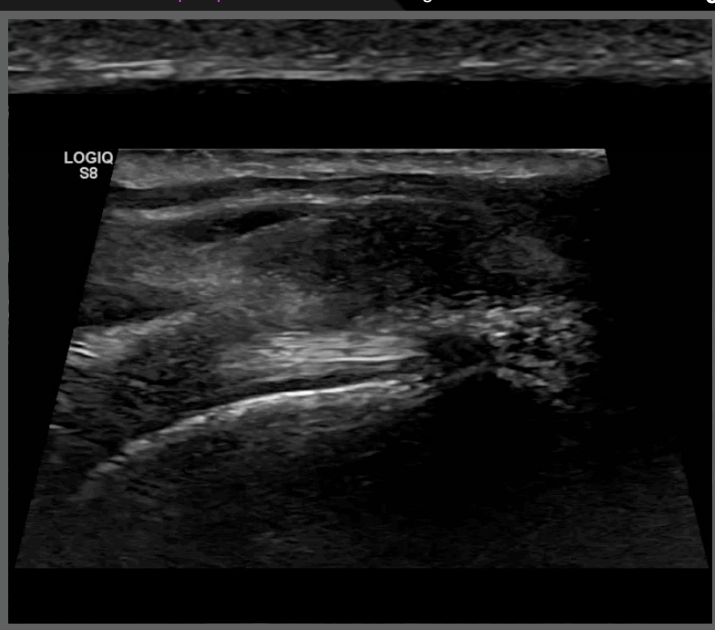
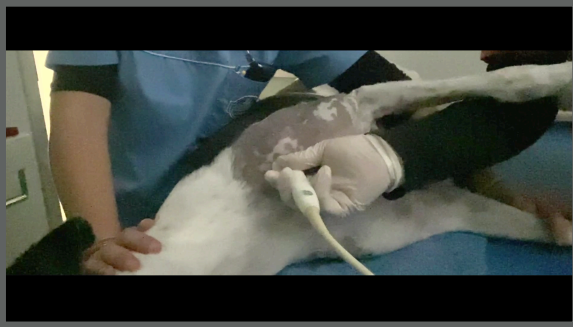
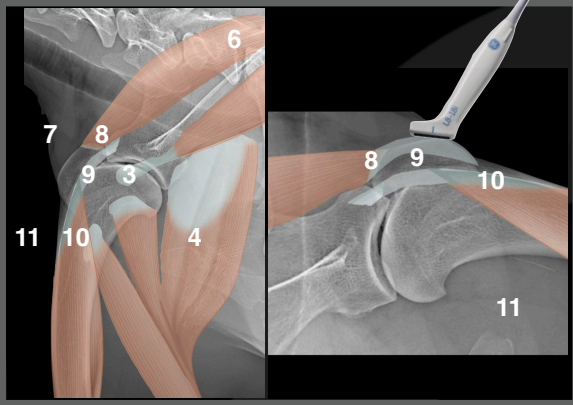


Tempesta, FS, 11 years

Left shoulder

Supraspinatus tendon - BB longitudinal scan

9

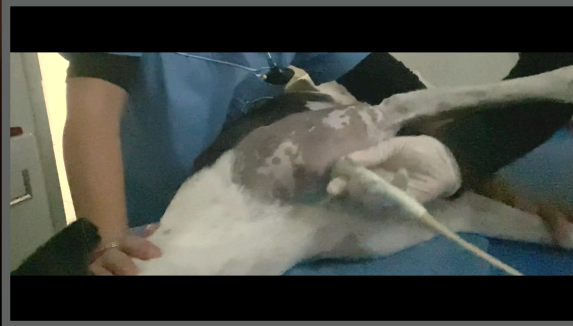
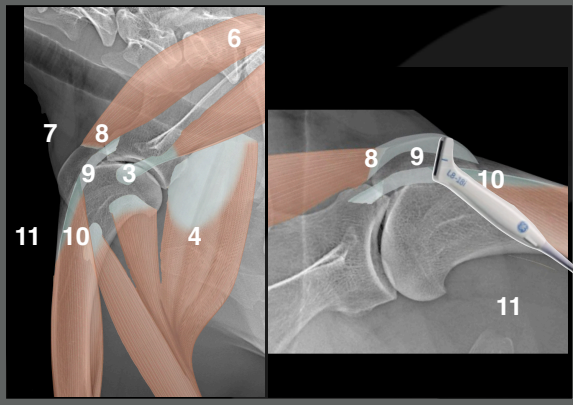


Tempesta, FS, 11 years

Left shoulder

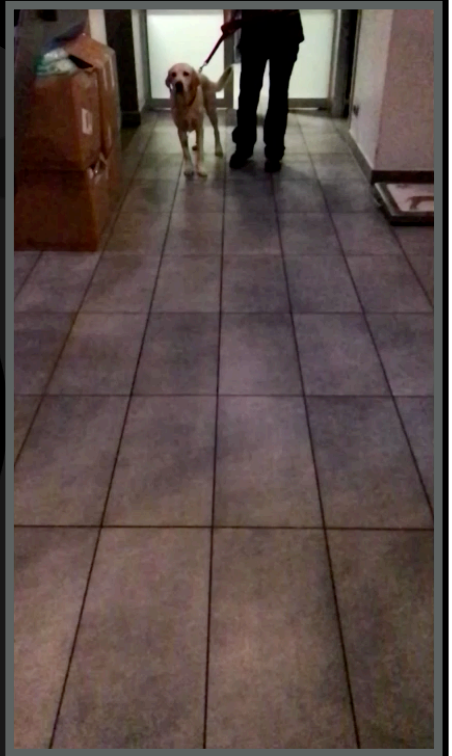
Bicep Brachii transverse scan

9



Tempesta, Labrador, FS, 11 years

- Ultrasound of the shoulders unremarkable apart from muscle atrophy on the left side



Tempesta, Labrador, FS, 11 years

Progressive left front limb lameness

Radiographs within normal limits for the age of the patient, apart from elbow OA

Severe left shoulder muscles atrophy

CT reported as negative

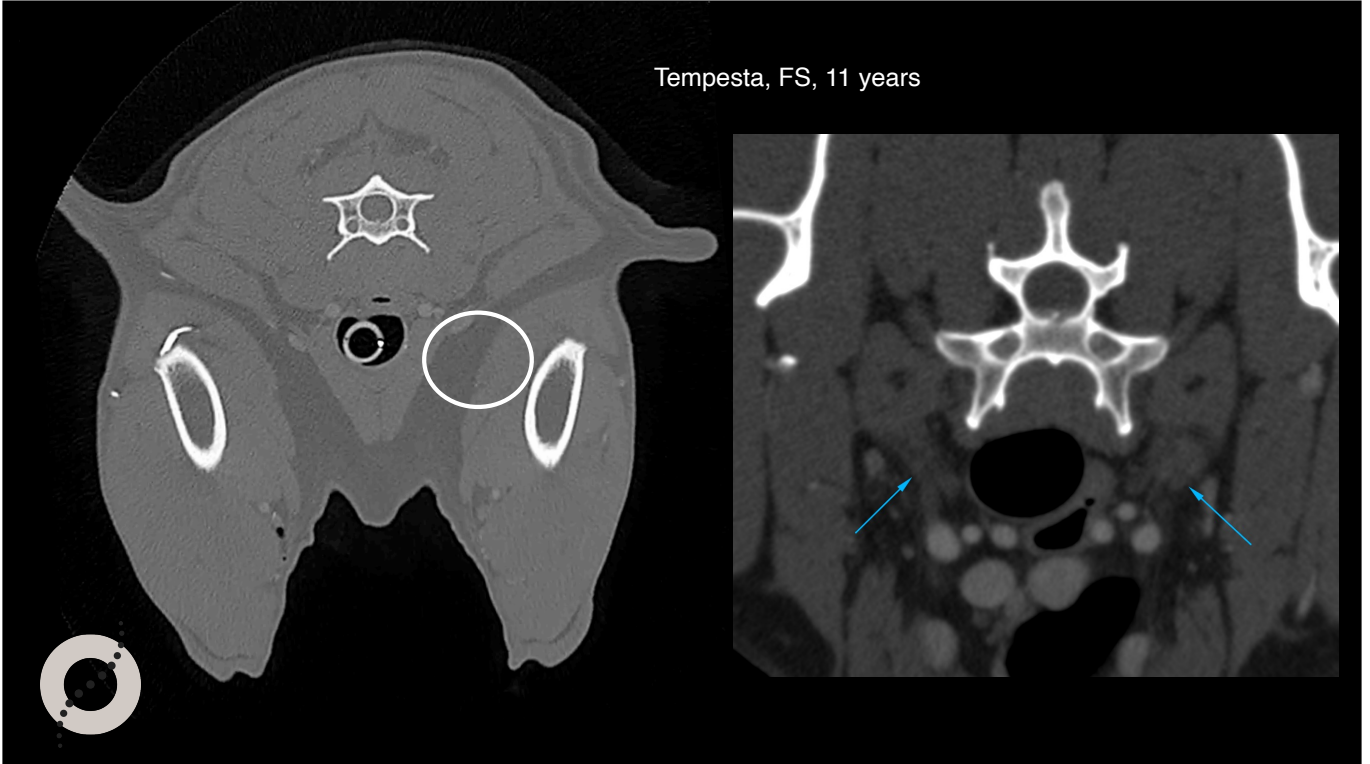
Ultrasound of the shoulders negative

Severe disuse

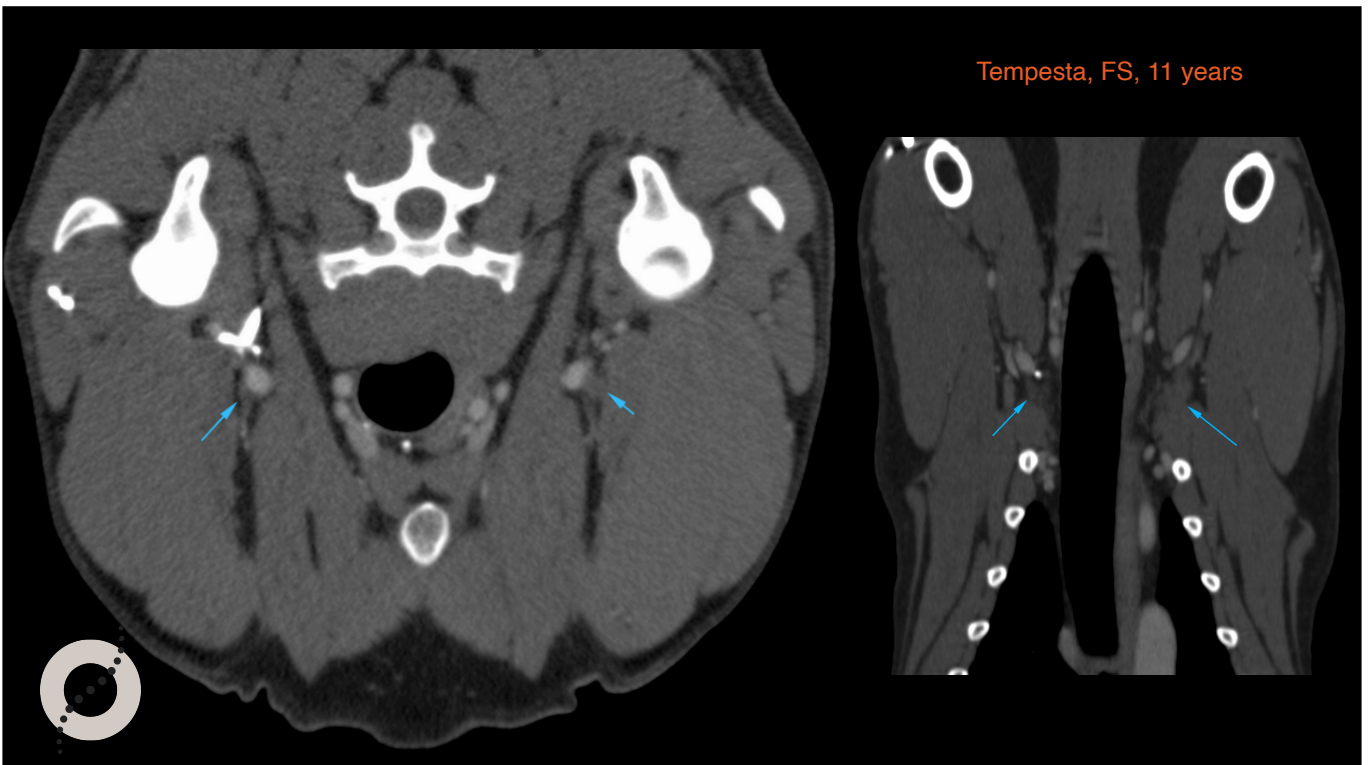
Nerve condition



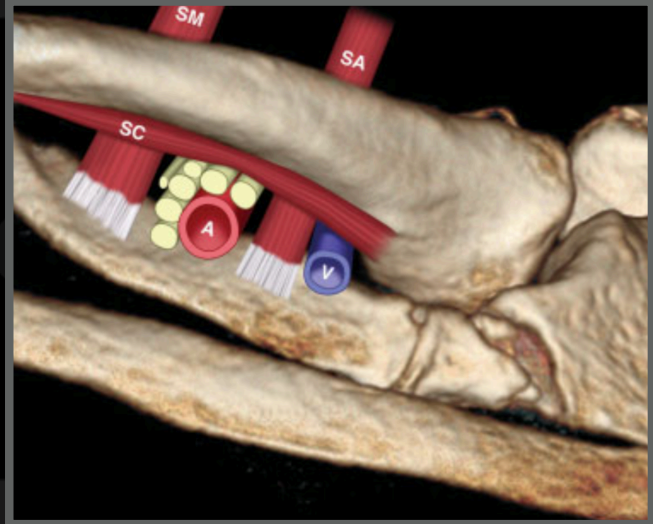
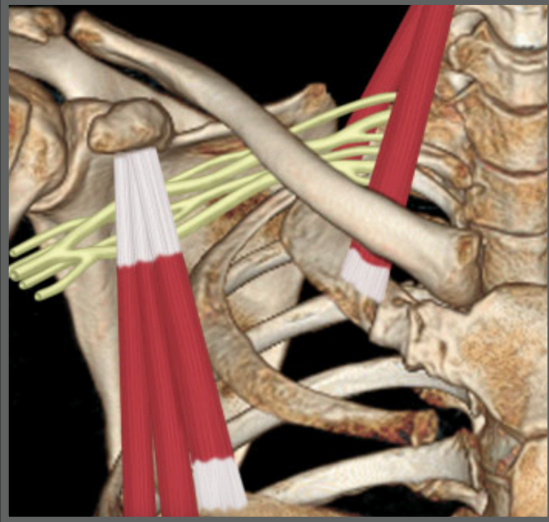
Tempesta, FS, 11 years



Tempesta, FS, 11 years



Axillary nerve, human's anatomy



Axillary nerve, human's anatomy



Axillary nerve, canine's anatomy

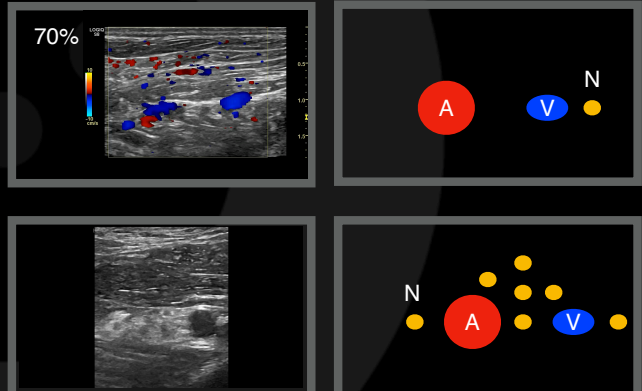
Veterinary Anaesthesia and Analgesia 2020, 47, 82–87

<https://doi.org/10.1016/j.vaa.2019.07.002>

RESEARCH PAPER

Ultrasonographic study of a modified axillary approach to block the major branches of the brachial plexus in dogs

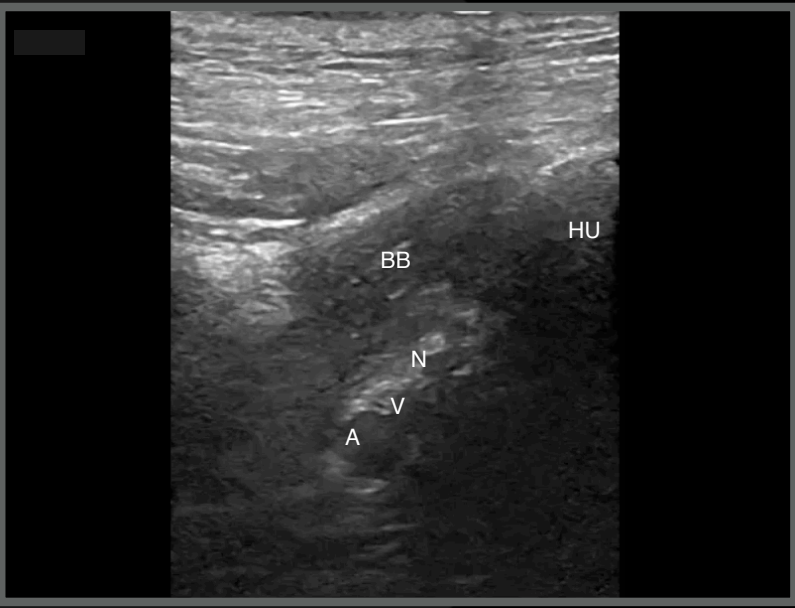
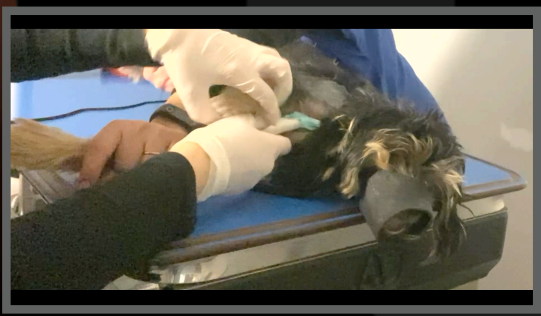
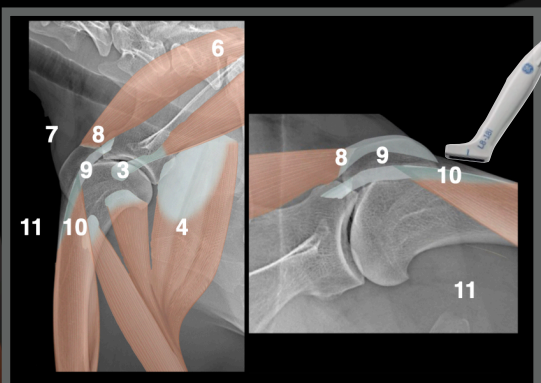
Luciano CBA da Silva^{a,b}, Fábio Futema^c & Silvia RG Cortopassi^b



Tempesta, FS, 11 years

Right shoulder

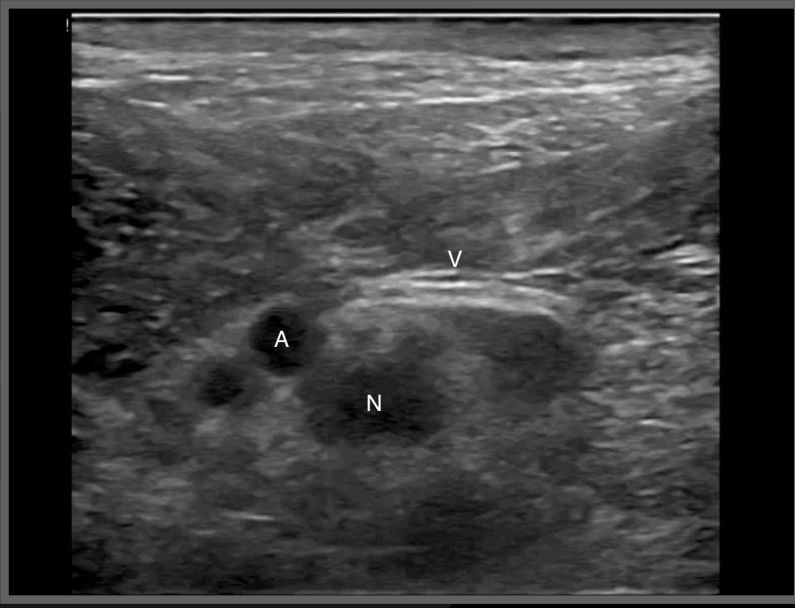
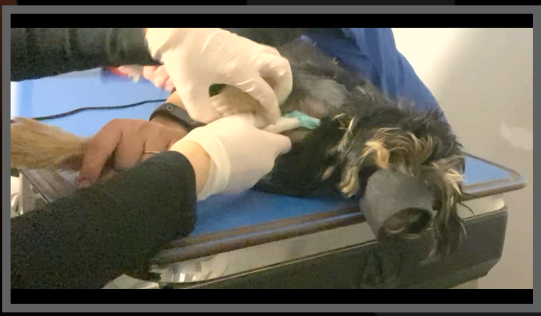
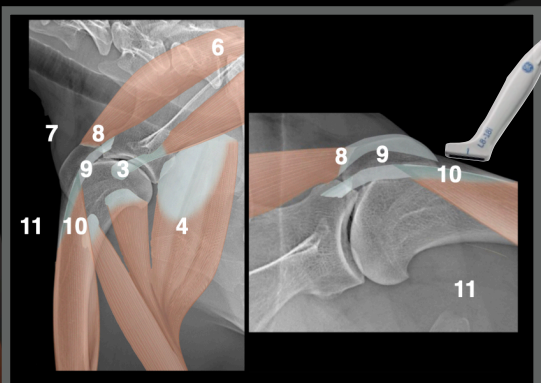
11



Tempesta, FS, 11 years

Left shoulder

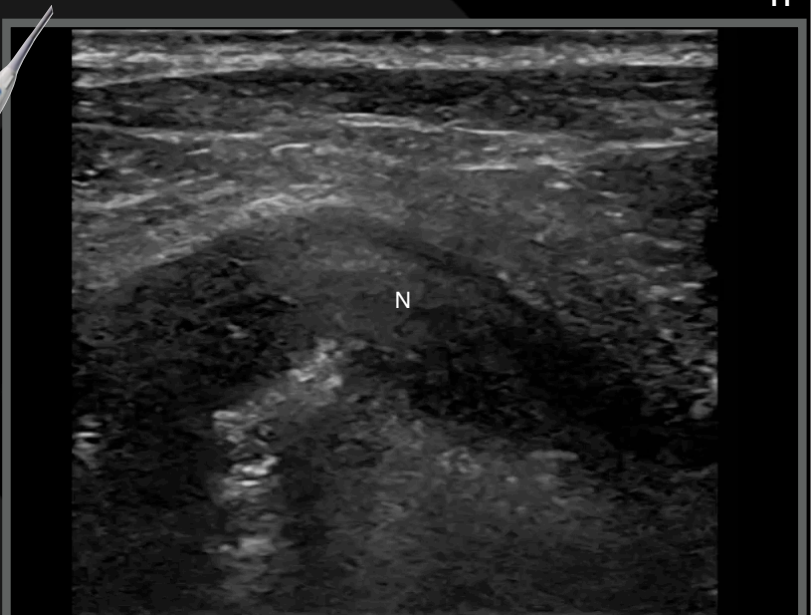
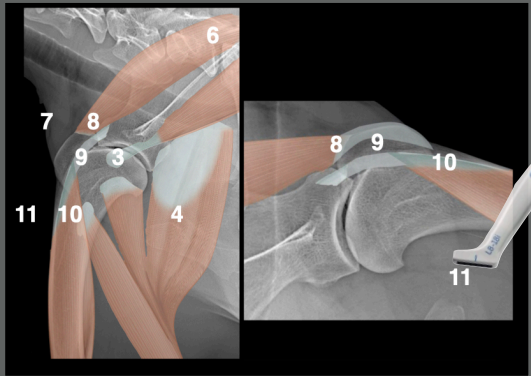
11



Tempesta, FS, 11 years

Left shoulder

11

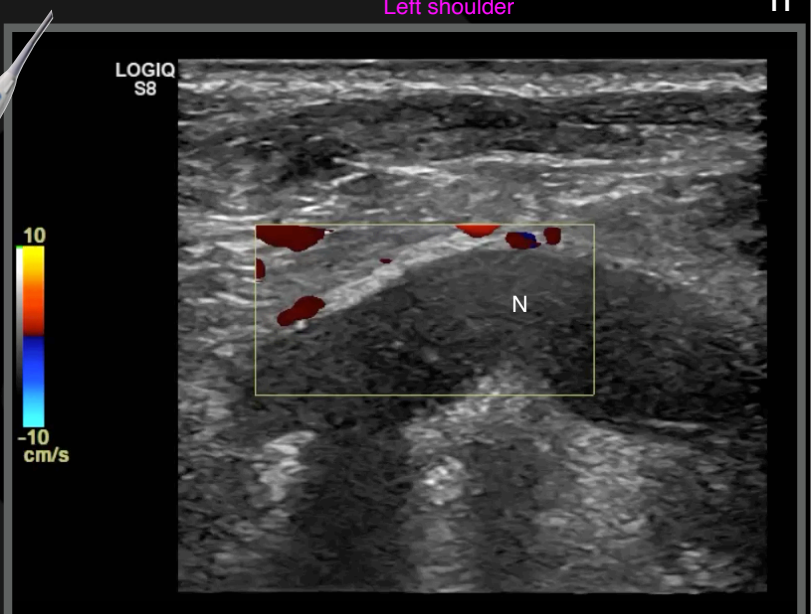
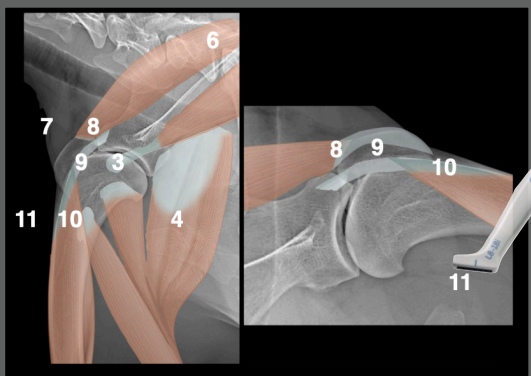


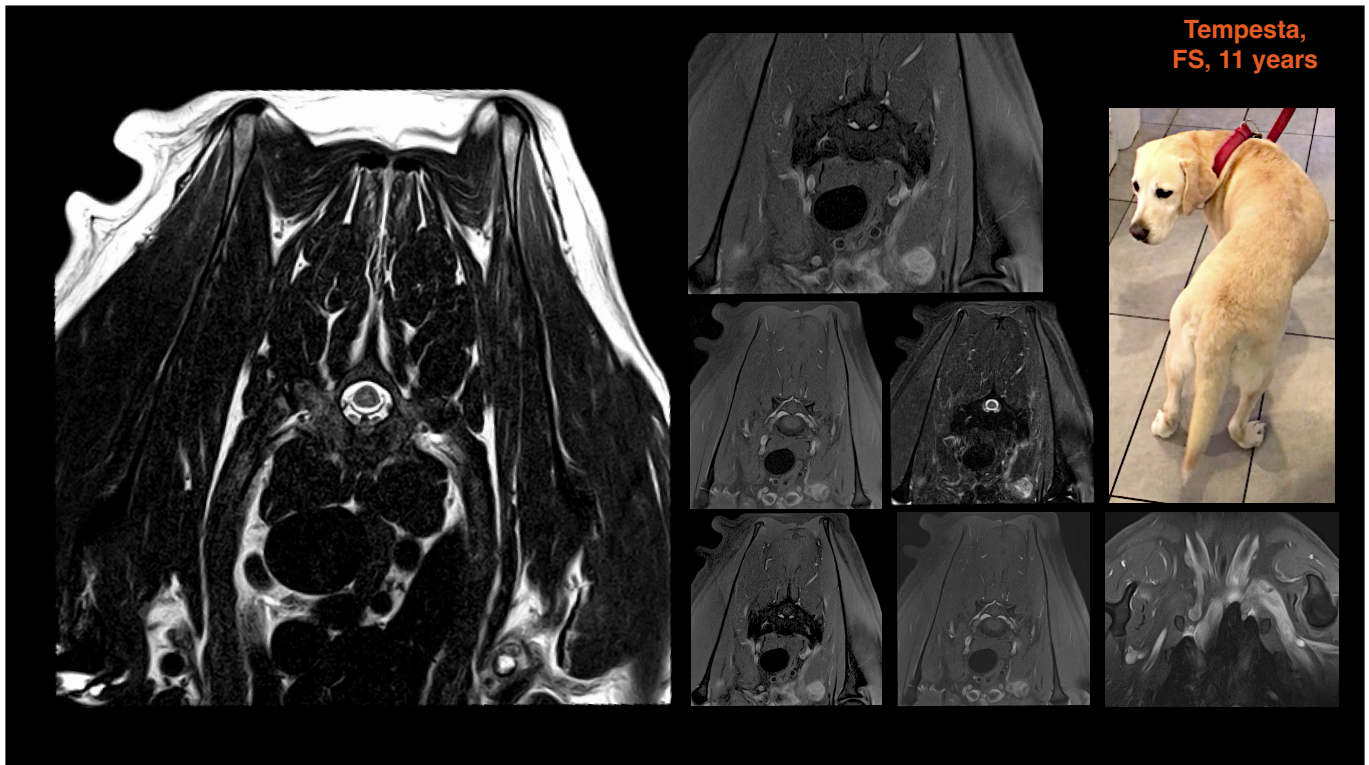
Tempesta, FS, 11 years

Final diagnosis: US-guided cytology: compatible with nerve tumour

Left shoulder

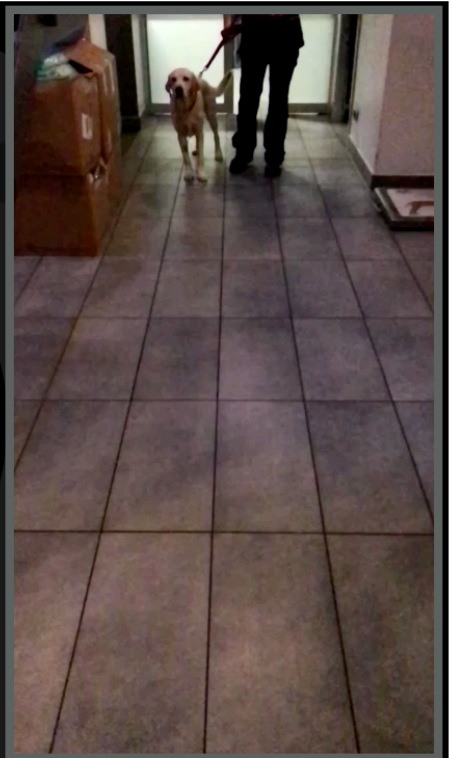
11





Tempesta, Labrador, FS, 11 years

- Schwannoma extending toward the spinal canal
- Surgery + radiation
- She did fine on three legs for nearly two years
- She died of acute renal failure (toxicity?)



Thank you



Diagnostic Mindset

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