

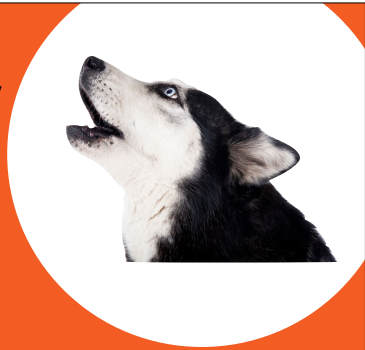
Ultrasound of the hindlimb in a shaking Siberian Husky

CASE DISCUSSION

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DVM, GP Cardio, CCRT, PhD, DECVI



Diagnostic Mindset



Thank to www.imaios.com

Akira, Siberian Husky, FS, 4 years

- Since two years of age, immediately after spaying, progressive and worsening shivering of the hind limbs when sitting and standing



Akira, Siberian Husky, FS, 4 years

- The orthopaedic examination was unremarkable, and a radiographic study was requested and performed

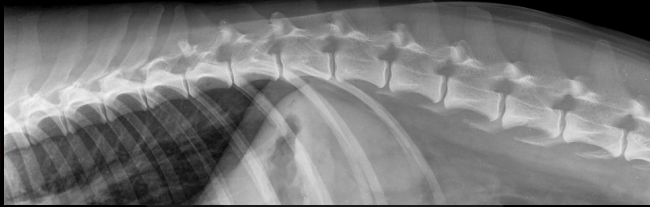








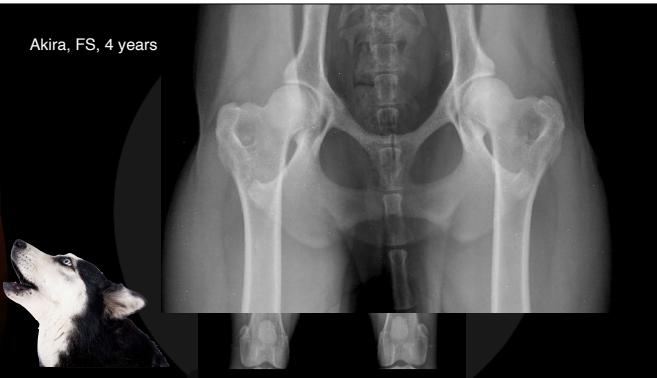
Akira, FS, 4 years



Akira, FS, 4 years



Akira, FS, 4 years





Akira, Siberian Husky, FS, 4 years

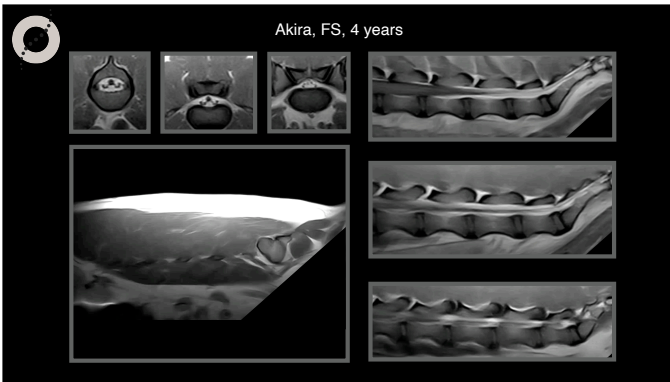
- Orthopaedic and radiographic evaluation were unremarkable
- Requested a neurologic evaluation

A photograph of a Siberian Husky dog standing in a clinical setting. The dog is wearing purple booties on its front paws. A person's legs and feet in purple booties are visible next to the dog.

Akira, Siberian Husky, FS, 4 years

- No proprioceptive deficits
- Unremarkable cranial and spinal reflexes
- Repetitive pain L5-7 - MRI

A photograph of a Siberian Husky dog standing in a clinical setting. The dog is wearing purple booties on its front paws. A person's legs and feet in purple booties are visible next to the dog.



Akira, Siberian Husky, FS, 4 years

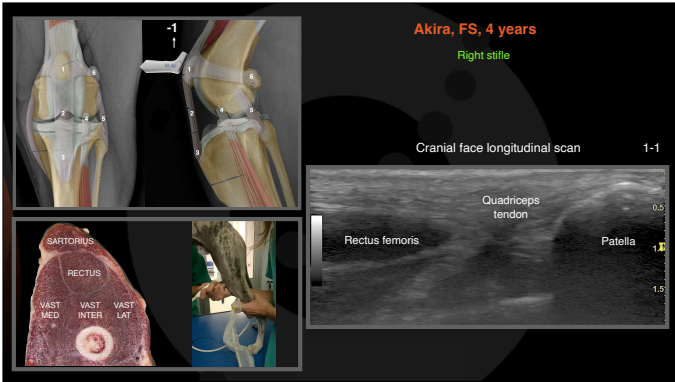
- No pathologies detected at LS spine and nerve roots at this level
- No evidence of cauda equina syndrome
- Suggested physical rehabilitation

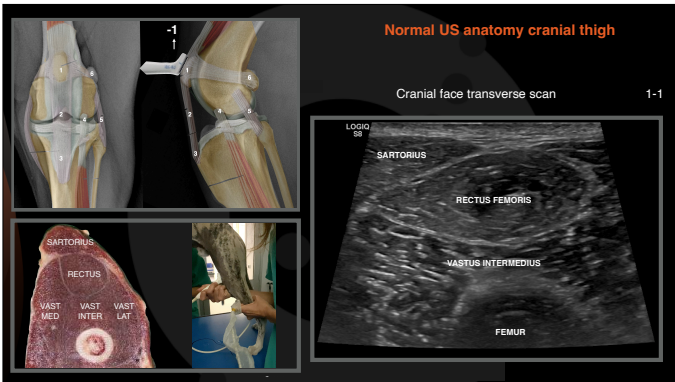
A photograph of Akira, a Siberian Husky, standing in a clinical or hospital setting. The dog is wearing a red harness and purple booties on its front paws. It is looking towards the left of the frame.

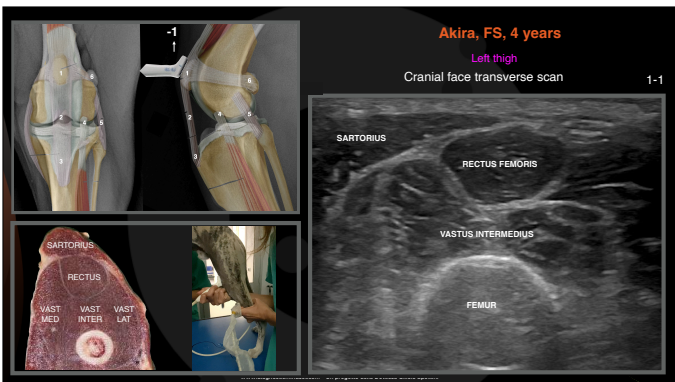
Akira, Siberian Husky, FS, 4 years

- Three months after physical rehabilitation treatment, improved but not resolved shaking
- Requested an ultrasound

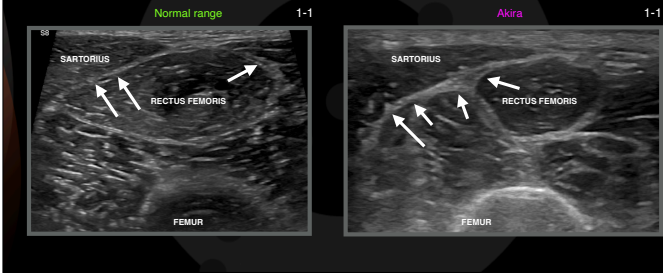
A photograph of Akira, a Siberian Husky, standing in a clinical or hospital setting. The dog is wearing a red harness and purple booties on its front paws. It is looking towards the left of the frame.







NorMal VS Akira



Akira, FS, 4 years



Akira, FS, 4 years



Akira, FS, 4 years

Right stifle

Lateral face longitudinal scan 4

Akira, FS, 4 years

Right stifle

Medial face longitudinal scan 7

Akira, FS, 4 years

Right thigh

Medial face transverse scan -8

Akira, FS, 4 years
Right thigh

Caudal face transverse scan -9-9

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Gracilis, Normal VS Akira

Left thigh

Right thigh

Akira, FS, 4 years
Right stifle

Caudal face transverse scan 9

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Akira, Siberian Husky, FS, 4 years

Ultrasonographic diagnoses:

- Thickened fascia sartorius-quadriceps
- Chronically altered iliopsoas
- Thickened gracilis-adductor fascia

Conclusions:


- Secondary changes are not considered the cause of the condition of the patient
- Advised electromyography



Akira, Siberian Husky, FS, 4 years

Six months later

- Better but not perfect
- Worst when sitting



Akira, Siberian Husky, FS, 5 years

Eight months later

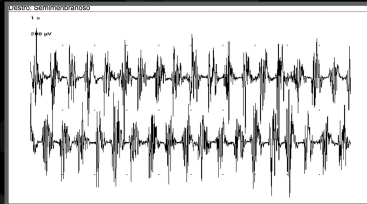
- Three weeks without physiotherapy for Summer break



Akira, Siberian Husky, FS, 5 years

Eight months later

- Electromyography consistent with primary orthostatic tremor



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STANDARD ARTICLE

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Primary orthostatic tremor and orthostatic tremor-plus in dogs: 60 cases (2003-2020)

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Georgina Harris⁸ | Lisa Alves⁸ | Clare Rusbridge^{9,10} | John H. Rossmeisl¹¹

Semiology of orthostatic tremor in dogs

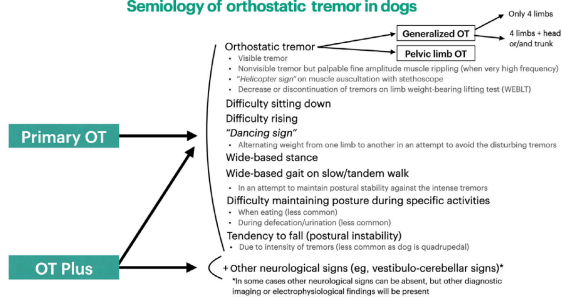


FIGURE 1 Flowchart of semiology of orthostatic tremor in dogs

Primary orthostatic tremors

- 83% large to giant breed
- 79% tremors before 2 years, Goldens after 3,5 years
- 85% limbs tremor when standing, 45% when sitting
- They do better but not back to normal with gabapentin 20 mg/kg BID, phenobarbital, clonazepam



On ultrasound control, all the changes are back to normal

Makarena, Bernese Mountain Dog, FS, 9 years

- Two days ago yelped and collapsed on the floor
- Refuse to stand

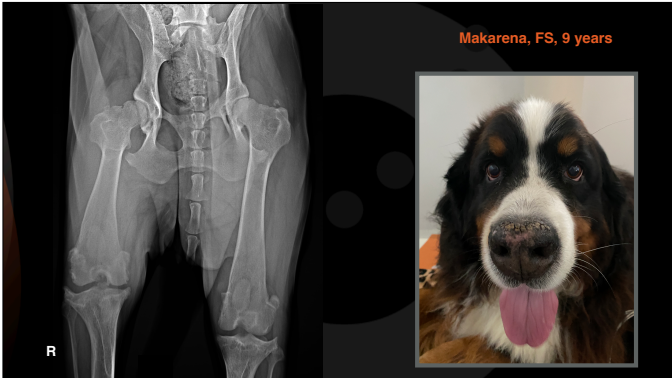


Makarena, Bernese Mountain Dog, FS, 9 years

- PE mild lumbar-sacral pain
- Pain hip joint extension
- Swollen left stifle reduced ROM
- Medial buttress right stifle

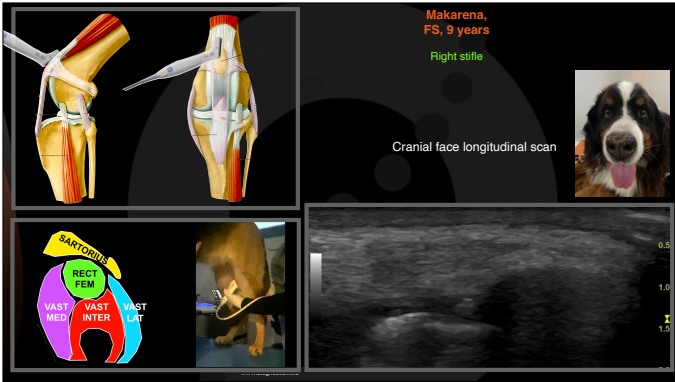


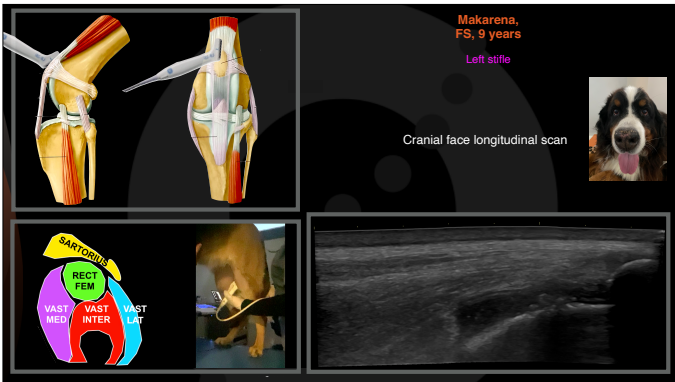
Makarena, FS, 9 years

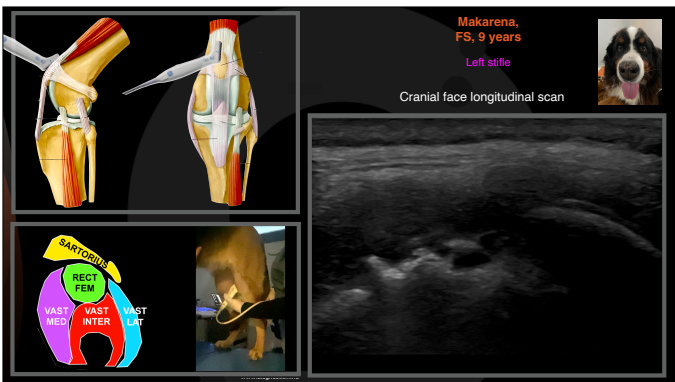


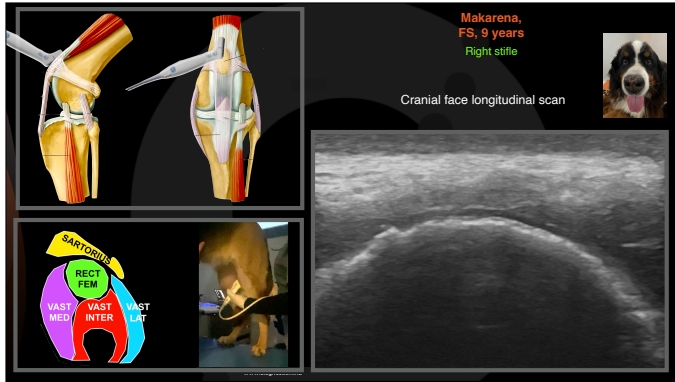
Makarena, FS, 9 years

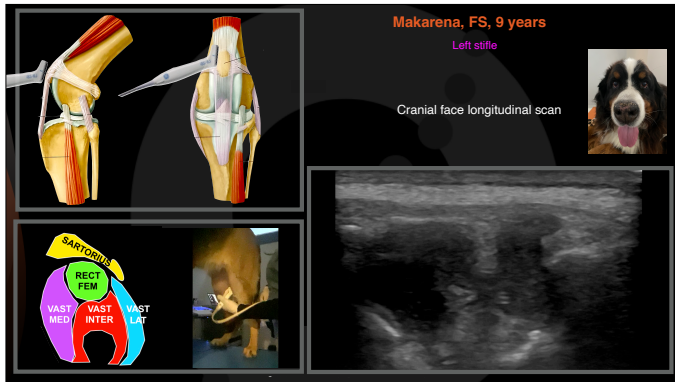


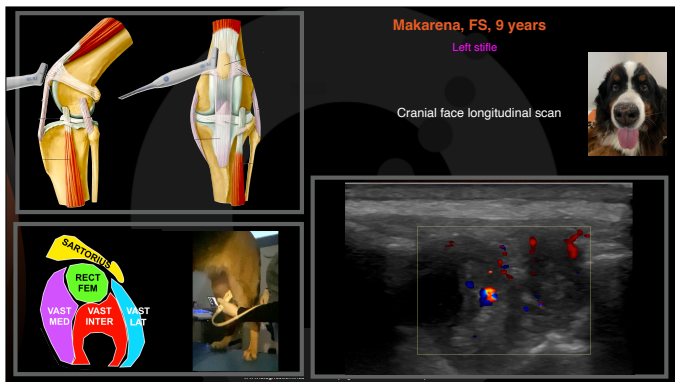


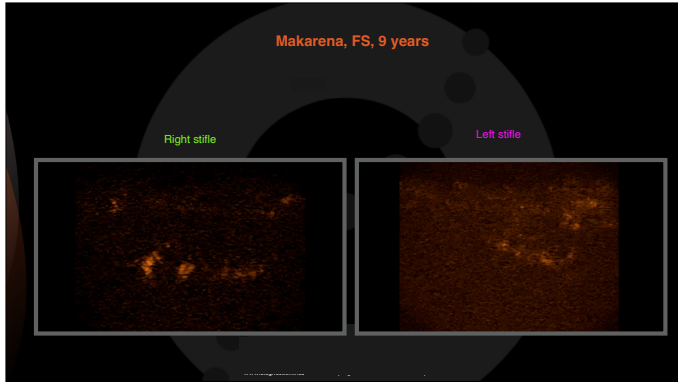


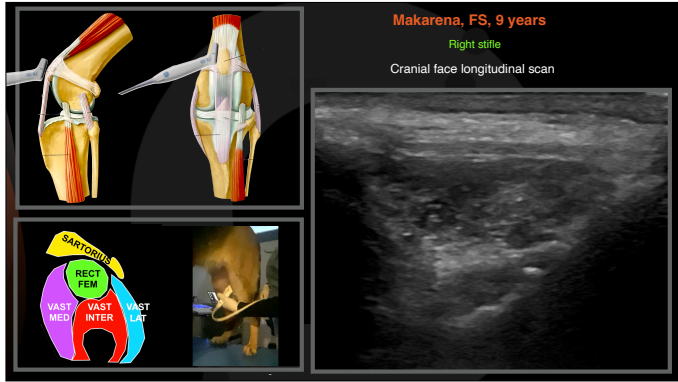


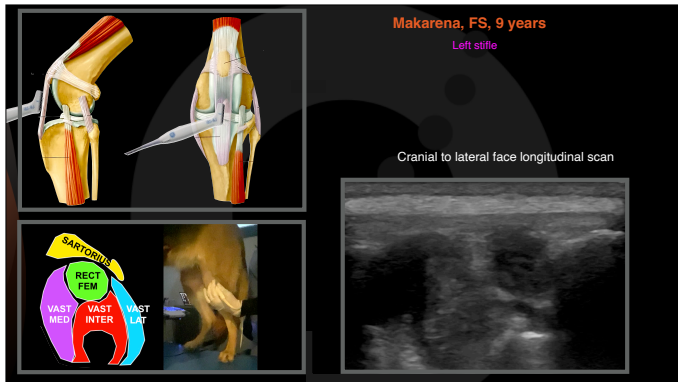


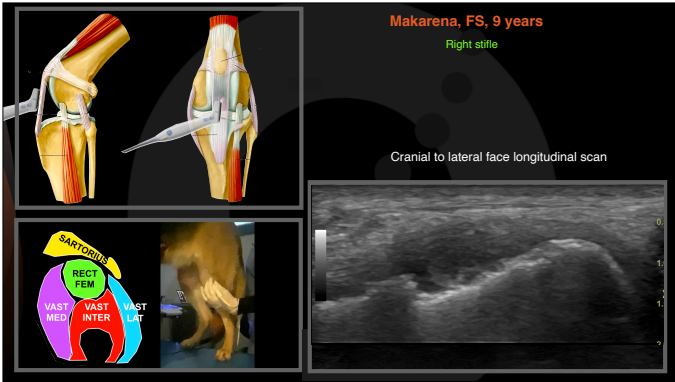


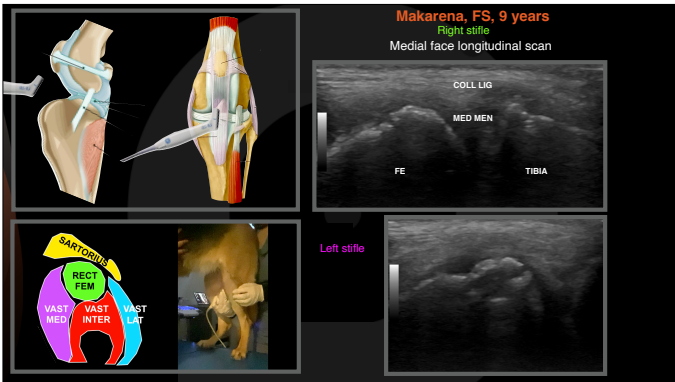


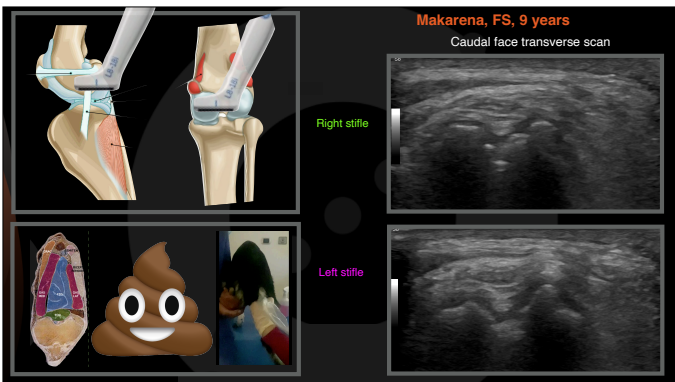


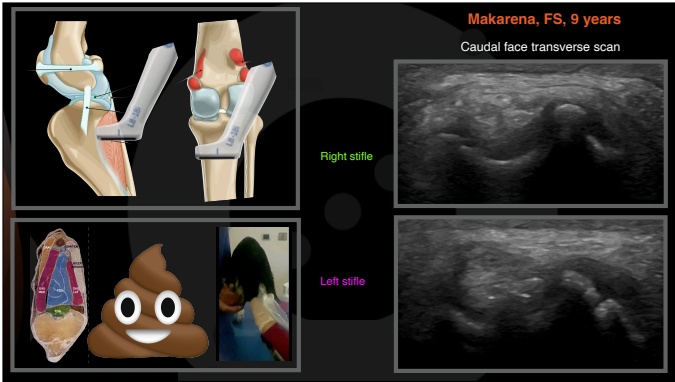


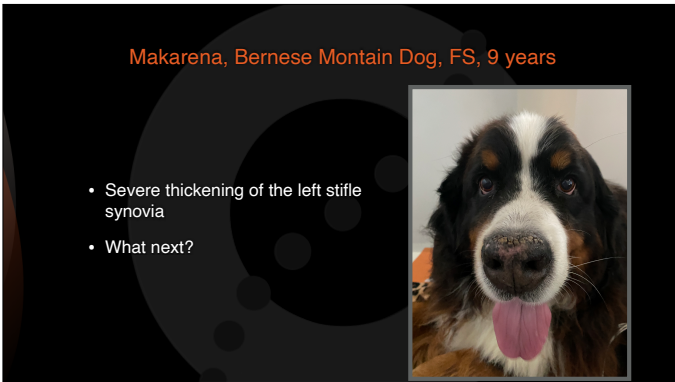


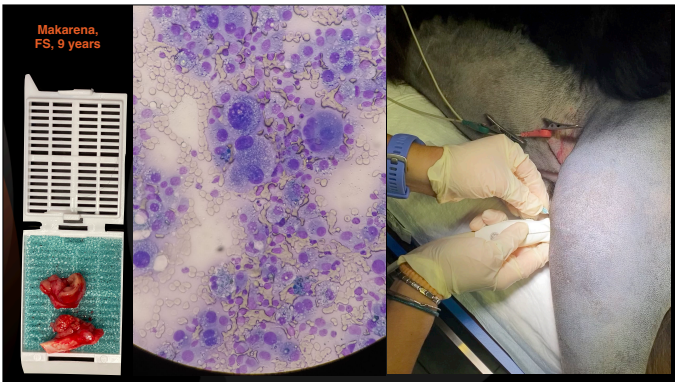












Descrizione microscopica

Il tessuto fibroadiposo periarteriale nelle sezioni esaminate appare espanso e sostituito da una proliferazione neoplastica densamente cellulare, infiltrante, non capsulata, che raggiunge i margini di escissione esaminati. Le cellule sono disposte in aree solide con scarso stroma fibrovascolare. Le cellule neoplastiche hanno forma rotonda o vagamente globosa-poliédrica, margini non ben distinti, rapporto nucleocitoplasmatico elevato ed una moderata quantità di citoplasma eosinofilo. Il nucleo è rotondo, con cromatina finemente granulata o marginata ed 1-3 nuclei prominenti. Anisocariosi ed anisocitosi sono gravi con macrocariosi, macrocitosi e cellule giganti multinucleate. Sono presenti fino ad 8 mitosi per campo a 400X. La neoplasia è multifocalmente infiltrata da linfociti e plasmacellule.

Diagnosi

Il quadro istomorfologico è indicativo per la diagnosi di neoplasia maligna di alto grado.

Commento: in diagnosi differenziale, per la morfologia cellulare prevalente e la presenza di cellule multinucleate, si pone in prima istanza un sarcoma istiocitario. In diagnosi differenziale, anche se meno probabile, un sarcoma di altro tipo. È possibile eseguire sul campione già inviato al laboratorio un'indagine immunohistochimica (IBA1, CD118) per confermare la natura **istiocitaria** della neoplasia. In caso di negatività sarà possibile ampliare il pannello.

Thank you



Diagnostic Mindset

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