Neoplastic and Inflammatory Myelopathies

Etiology	Neoplasia	Infectious/Non-Infectious	Autoimmune / Inflammatory
Signalment	Often old but 30% young Any breed especially large breed dogs Chronic signs (+/- acute decline) Most common localization: C1-C5 and T3-L3	GME: young to middle aged small breed SRMA: Large breed dogs (boxers, BMD, Golden Retriever, Beagles) Young <2 years old	Discospondylitis Young to middle-aged larger breed dogs Acute or chronic Fever and weight loss 30% Spinal pain +/- neurologic signs
Location	<u>Primary Tumors</u> Vertebral body Spinal Cord Intramedullary, intradural-extramedullary (meningioma), extradural <u>Secondary Tumors</u> Metastatic: Vertebral Body, Spinal Cord Lymphoma	Disseminated GME (signs referrable to at least two of the following) Optic nerve, Forebrain, Cerebellum, Spinal Cord, Meninges SRMA: Leptomeninges and arterioles, most often affecting the cervical spinal cord	Disko: Infection of disc end plates IgA deficiency in certain breeds (Airedales and GSD) Penetrating wound, trauma, migrating grass awns, dental disease Bacterial (Brucella canis) Fungal (Aspergillus, Coccidioides)
Types	<u>Meningioma</u> Common in old dogs C1-C5 Often Surgical <u>Nephroblastoma</u> T3-L3 in young dogs Often surgical Cats: Often lymphoma or glioma Peripheral Nerve Sheath Tumors Large breeds C6-T2	<u>Myelitis</u> Viral (distemper, rabies) Bacterial (migrating grass awns, penetrating wounds) Fungal (Aspergillus, cryptococcus) Protozoal (rare: toxoplasmosis, neosporosis) <u>Noninfectious Meningomyelitis</u> Meningoencephalomyelitis of unknown origin (MUO) Steroid Responsive Meningitis Arteritis (SRMA)	<u>Spine</u> Diskospondylitis Vertebral physitis Empyema <u>Spinal Cord</u> Infectious Meningomyelitis

	Often present with pain and lameness		
Clinical Signs	PNST: Nerve root signature Lameness due to nerve pain Actively holding up limb, not mechanical C6-T2, L4-S3	GME: Acute, progressive, non-specific multifocal intracranial and/or spinal signs, may have fever, no pathognomic signs SRMA: Main sign is cervical pain Dullness/lethargy Stiff gait Often febrile +/- IMPA **NO Neuro Deficits**	Acute or chronic Fever and weight loss 30% Spinal pain +/- neurologic signs
Diagnosis	Thoracic and abdominal rads to r/o metastasis Spinal radiographs Imaging: MRI, CT for RT planning CSF	GME: histopathology SRMA: Rule out other diseases (Chem, CBC, UA), vertebral rads, MRI CSF: Neutrophilic pleocytosis, elevated protein	Disko: Spinal radiographs CT/MRI Serology-Brucella Echocardiography r/o endocarditis
Treatment	Steroids Surgery Radiation Surgery and Radiation (often best prognosis)	GME: Immunosuppression, monitor clinical signs, Recheck CSF SRMA: Immune suppression, steroids, monitor clinical signs and recheck CSF Good prognosis, many taper off meds, may relapse	Activity restriction Pick drugs based on culture/sensitivity but can treat empirically with Cephalexin or TMS +/- NSAIDS and analgesics *Long tx course! 6mo to 1 yr Recheck rads q 2-3 months Patients should feel better within 1-2 weeks but do not stop the treatment