History: Presenting for necropsy was a 30 to 40-year-old Amazon parrot that was found at the bottom of its cage with ruffled feathers. The owner noted that the bird did not seem neurologically appropriate and elected for euthanasia.
History: Presenting for necropsy was an 8-week-old collie-cross that was found dead. There was no vaccination history and the puppy failed to thrive over the preceding two weeks. On gross examination, there were multifocal petechial and ecchymotic hemorrhages throughout the lungs, epicardium, and liver. The spleen was moderately enlarged and meaty on palpation. There was a small amount of diarrhea present within the intestines.
History: A white-tailed buck was submitted to determine the cause of unusual behavior. The deer was euthanized after demonstrating lethargy, circling and loss of fear of humans. The left antler was broken. Severe meningitis was observed at necropsy.
History: Received formalin fixed sections of brain and heart from a feedlot animal for examination. The animal was 35 days on feed when it developed sudden onset of ataxia. The animal went down shortly thereafter. The animal was treated with Ceftiofur and Dexamethasone. The referring veterinarian noted fibrinous pericarditis at post-mortem examination.

Gross examination of the formalin fixed tissues revealed multifocal, randomly scattered, 3-5 mm areas of hemorrhage within all sections of brain. The epicardium had a ground glass appearance and extensive areas of hemorrhage were noted within the myocardium.
Signalment: 12-week old, male Great Pyrenees puppy

Clinical Signs: Progressive neurological signs. Initially, this puppy presented with reduced proprioception, increased knuckling, decreased hopping on right hind limb and thoracolumbar spine pain. Within 5 days, progressed to circling and falling to the right, reduced proprioception to all limbs, absent placing of both hindlimbs, possible neck pain and limb stiffness. No abnormalities were noted in cranial nerve exam, PLP, withdrawal, patellar, sciatic, or panniculus reflexes. Treatments: meloxicam (NSAID) and Clindamycin. Euthanized 11 days after onset of clinical signs.
This herd is experiencing sudden onset of neurological deficit in piglets. Within two to three weeks of entry into the nursery, piglets develop front limb ataxia that progresses to hind limbs, lateral recumbency and death.
Signalment: A 2-year-old, intact male, German wirehair pointer.

History: Decreased appetite and activity over the last 2 weeks. The dog was prescribed cefpodoxime proxetil for a urinary tract infection and developed ataxia and a head tilt the next day. After trying marbofloxacin, and then clindamycin and prednisone, the dog had a brief interlude of improvement before deteriorating significantly. The dog was euthanized.
Signalment: A 9-year-old, female spayed, Labrador retriever.

History: A rapidly growing, subcutaneous mass has been present on the right dorsal carpus for approximately 2 weeks. The mass was expansile, firm, with and multilobular.
Signalment: A 13.5-year-old, female spayed, Shih-Tzu.

History: A 1-month history of anorexia, chronic weight loss, weakness and nasal discharge. The clinical diagnoses were chronic renal failure, severe dental disease, and grad III/VI heart murmur.
Signalment: An eight year old, male castrated, Springer Spaniel dog presented with a large mass in the frontal sinus and nasal cavity causing deviation of the right eye.
History: Three Yorkshire-cross gilts out a group of 23 pigs at a small hog farm in Eastern Washington went off feed and drink after a change in supplementation during a week of exceptionally cold weather in December. The day prior to death the gilts were circling and bumping heads against the wall. There were no other recent changes in feed or management. Necropsy findings in one gilt included locally extensive and severe subdural hemorrhage in the atlanto-occipital region, contusion on the left hind limb, and marked small intestinal ascariasis.
History: Two 6-month-old emus with a history of disorientation and ataxia were found dead. On necropsy, emu A had severe hepatic rupture, and emu B had moderate hepatic lipidosis.
Signalment: 15-week-old, female, Weimaraner puppy

Acute illness: initially lethargy, purulent nasal discharge, conjunctivitis, enlarged pre-scapular lymph node, and mild fever (102.8). Progressed over 30 hours to muscle tremors and blindness; then to grand-mal seizures, and subsequently euthanized. This puppy was vaccinated with DHLPP 11 days prior to onset of signs.
History:

This 1 year old mare had 6 month history of gradual onset, symmetric ataxia. No abnormalities were noted on spinal radiographs and cerebrospinal fluid was normal. Humane euthanasia was elected.
History:

Tissues are from a 2.5 week-old Red Angus heifer calf. From birth, the calf exhibited intermittent neurologic signs, including tetraparesis, ataxia, collapse, and head-pressing. Necropsy revealed severe hydrancephaly.
History:

A 4-year-old Standardbred mare was treated with pre-race medication (arnica) which was accidentally administered into the carotid artery. The horse collapsed into right lateral recumbency, and remained unresponsive. Cranial nerve function: no response to nasal stimulation, no menace response, weak to absent palpebral reflex, no nystagmus, no pupillary light reflex, flaccid tongue, no jaw tone. The mare died prior to initiation of treatment.
History:

The owner of a flock of 2000 mixed-breed meat sheep reported 4 sick and 2 dead 8-week-old lambs from a total of 300 lambs at risk. The referring veterinarian euthanized one lamb exhibiting flaccid paralysis, and performed an on-farm post-mortem. The lamb was emaciated. Mesenteric lymph nodes were edematous and tapeworms were present in the intestines. Fresh and fixed tissue samples were collected and submitted to the AHL for testing.
Signalment: 1.75-year-old, female spayed, Yorkshire terrier.

History: Three-month history of progressing circling to the right. Absent CPS on left, central blindness, lethargic, and decreased appetite. MRI: multifocal hyperintensities in right cerebrum and brainstem. Clinical diagnosis: inflammatory brain disease. CBC WNL. Chemistry: mildly elevated ALT 134. AUS: liver hyperechoic, normal size, no shunt vessel, bilateral renal medullary mineralization or fibrosis. CSF: 57000 RBCs (likely contamination), 200 cells, protein 181.

Gross necropsy findings: The animal presented in good body condition and good post-mortem state is necropsied at 1pm on 2/5/13. There is evidence of a mild splenomegaly, most consistent with euthanasia [injection of barbiturates]. A CSF cytology showed many mononuclear cells, consistent with a non-suppurative inflammation of the meninges. The brain was trimmed in serial sections after one week fixation with buffered formalin 10%. Multifocal areas of softening were observed bilaterally and asymmetrically but mostly evident in the corona radiata, midbrain and pons. No other lesions were observed on gross examination.
History: A female spayed, 16-year-old domestic long hair cat had a 3 month history of conjunctivitis which was treated bilaterally. The cat presented to emergency service with sudden onset of ataxia and falling to the right. Upon examination, the cat was found to have right-sided facial paralysis, ocular swelling, miotic pupils, equivocal right head tilt and heart murmur. The cat had a seizure and went into cardiopulmonary arrest.
History:

Adult cat, DLH, 8 years old, spayed female presented to ER with acute onset of blindness Monday morning after being inappetent and acting oddly on Sunday; owner had noted polydipsia and polyuria over the preceding 2 weeks. Physical exam: severe hypertension (230 mm Hg Doppler). Basic bloodwork: NAF. Started having seizures and was treated with mannitol. That evening went into respiratory distress, became anisocoric and mentally dull. Decision to euthanize was made.
History: Female adult beef cow of unknown breed that has been intermittently recumbent for several days.
History: This 11-month-old Poodle cross dog developed muscle twitching, tremors, seizures and ataxia 4 days after vaccination against canine distemper.
Signalment: 4.5-year-old intact male Maltese dog.

History: CNS illness for 4-5 months. First presented September 22, 1998 with vague symptoms - cowering, shaking, and reluctant to sit. No abnormal findings on physical exam at this time. Treated for back pain with ketoprofen (not responsive) and then Prednisone - did respond. A similar episode was observed on December 8, 1998, and the dog returned to the clinic on December 9 with severe CNS signs: circling, falling, neck turned to left. A stress/steroid response was noted on the CBC, chemistry panel showed an increase in sodium (165) and chloride (133). Treated with IV fluids and Dexamethasone, seemed to recover by December 12, and was sent home. Presented again on December 17 with head tremor, ataxia, side-stepping and hypermetric gait. Bloodwork was repeated -> normal. Presented for a 4th time on January 18, 1999, depressed, stilted gait, ataxic, falling to right, drooling. The CBC was within normal limits, and the chemistry panel showed the dog to be hyperosmolar with increased sodium (170) and Chloride (131). The dog responded again to treatment with IV fluids. The owner reports that the dog is pu/pd, and not completely normal in between these “episodes” – he is lethargic and has a decreased appetite and has lost weight since his initial presentation. The dog was euthanized and presented for necropsy on January 22, 1999.
History: One, adult, female mute swan (*Cygnus olor*) of unknown age was found dead with no observed previous clinical signs. The animal had been housed at the local zoo for many years with one other mute swan and several other species of waterfowl. Other findings included: severe, generalized, fibrinonecrotic salpingitis; severe, granulomatous pneumonia and airsacculitis with fibrosis and intralesional acid-fast bacteria; multifocal necrotizing hepatitis; severe generalized amyloidosis; glomerulosclerosis and mild heterophilic interstitial nephritis and fibrosis.
History: A 9-month old Simmental bull was presented with a one-month history of progressive neurological disease characterized by depression and bilaterally symmetrical ataxia and weakness, which was worse in the hind limbs than the fore limbs. Gross necropsy findings included: bilaterally symmetrical, oblong to circular foci that were brown and depressed in the brainstem cranial to the obex, meningeal congestion and mild suppurative bronchopneumonia from which *Pasteurella multocida* was cultured.
History: A 3 month old Limousin cross calf became acutely recumbent and showed neurological signs: flexing neck, strabismus, apparent blindness and occasional convulsions.
History: A female yearling moose (Alces alces) calf was submitted for necropsy to the pathology laboratory, Animal Health and Assurance Division of Alberta Agriculture and Rural Development, Edmonton, Canada. The moose was euthanized by Fish and Wildlife officer due to severe neurologic signs of uncoordinated movement with crashing into willow trees, acting blind, head tilt and unresponsive to its surroundings. Grossly, the calf was in good body condition with shiny body coat. All the temporary incisors were present. There was no evidence of ocular discharge and both corneas were intact with no visible gross lesions. There was mild hemorrhage in the anterior chamber of the right eye. Multiple pinpoint hemorrhages were seen on the cortical surface of both kidneys and in the peri-renal adipose tissues.
History: 3 month old calf. Very rigid muscles. Had good suck reflex, but could not stand. On necropsy, large abscess attached to the liver was found. Fibrin was present in several joints of the limbs. At the junction of C6-7, there was moderate amount of friable white material in the body of the spinal column, which protruded into the spinal canal and compressed the spinal cord. The spinal cord had a soft depression at the associated location on palpation.
Signalment: 6-week-old Rottweiler puppy.

History: Started to have trouble walking when she was 3-4 weeks old. She was normal before this time, walking, sucking normally. At 4 weeks old, owner noticed muscle weakness in hind limbs then shortly after front legs were also affected. Referral vet reported signs of lower motor neuron disease in all 4 limbs initially with poor reflexes which progressed to severe muscle disease. Mentation is normal. Normal cranial nerves.

On necropsy, the dog had very poor musculature of all four limbs. No other significant changes were noted grossly.
History: An approximately 6 month old Hereford/Angus heifer was intracranially challenged with Classical BSE. 1 month after inoculation, the animal presented with an abnormal head position and mild to moderate depression, and mild fever. Antibiotic therapy was initiated and over several days, fever persisted and neurologic abnormalities progressed. These included head tilt, abnormal head position, fever and depression and eventually the animal became recumbent and opisthotonous was observed. Intravenous antibiotic therapy was continued over several weeks and physical therapy was performed. The animal recovered, with residual mild stiff gait and ataxia.

At approximately 17 months following the intracranial challenge, the animal developed clinical disease which was suggestive of BSE. The animal showed moderate anxiety, was hyperalert in the pen with other animals, had an excessive response to light and sound stimuli and showed progressive ataxia and dysmetria. The animal was euthanized at 20 months post challenge.

At necropsy examination, lateral ventricles of the brain were bilaterally moderately dilated. There was extensive firm adhesion between the midbrain and cranial portions of the cerebellum. The cerebellum showed moderate atrophy especially the left hemisphere and the caudal portions of the cerebellum including the vermis were elongated and shifted caudally. Firm adhesions were also noted between the caudal cerebellum and dorsal surface of the fourth ventricle, which also contained a firm red slightly gelatinous tissue (likely fibrosis and/or hyperplasia of the choroid plexus). The brainstem was firmly adhered to the dura mater on the ventral surface of the medulla and this extended into the cranial cervical spinal cord approximately 8 cm.
Signalment: Seven year-old Kittitian Creole cow (Bos taurus, bovine)

History: Six day history of anorexia, fever, lethargy and weakness. Clinical examination performed five days prior to death (on Wednesday of that week) revealed pale and icteric mucous membranes with a PCV of 17%. The cow was treated with 12000mg of oxytetracycline IM and 400mg of flunixin IV. That evening the cow appeared slightly brighter and had some interest in forage. Dark red urine was observed on Friday afternoon. On Saturday the cow was still feverish and the PCV remained low (17%). The animal was given another dose of flunixin and 2500 mcg of cyanocobalamine IM. The cow was found dead on Sunday morning and submitted for post-mortem examination.

Gross Pathology Findings:

The subcutaneous, intra-abdominal and intra-thoracic adipose tissues were diffusely yellow (icterus). Focal areas of hemorrhage were scattered within the muscles of the hind-limbs.

The spleen was markedly enlarged (64 cm X 20 X 6 cm) and meaty with petechial and ecchymotic hemorrhage scattered throughout the capsular surface. The gallbladder was moderate distended with thick slightly granular dark-green bile.

A moderate amount of dark red urine was present within the urinary bladder (hemoglobinuria) and petechial hemorrhage was present throughout the mucosal surface of the bladder. Petechial hemorrhage was occasionally observed throughout the peritoneum and pleural surfaces.

The surface of the brain appeared deep pink and wet (edematous) and there was diffuse congestion of the meningeal blood vessels.
Signalment: 5-year-old female domestic shorthair cat

History: Patient had a 6-8 month history of progressive neurological signs (right sided ataxia, weakness, falling to the right side). Toxoplasma titers were negative

Necropsy findings: The most relevant findings were confined to the head and the cranial cervical area. There was a large amount of brown, waxy material (cerumen) in the right external acoustic meatus. In the oral cavity, and extending from the right pharyngeal area, there was a firm yellow mass of approximately 4 cm on diameter that on section oozed pale, yellow, opaque fluid (abscess). The exudate extended into, and obliterated the tympanic cavity and bulla, causing marked remodeling of the right temporal bone. The severe expansion of the bone caused compression of the right side of the cerebellum. The purulent exudate extended through the foramen magnum into the cervical spinal cord causing marked compression of the spine. There was a focal area of malacia in the parenchyma of the right cerebellar hemisphere. No other gross lesions were present elsewhere.
Signalment: 4-year-old female intact Rottweiler

Clinical history: Patient had a history of neurologic abnormalities (right sided hemiparesis, slight depression, right sided menace deficits and seizures). Treated with steroids, mannitol and phenobarbital.

Necropsy findings: The most relevant findings were confined to the brain. Within the right cerebral hemisphere and starting at the level of the frontal lobe and predominantly affecting the white matter, there was a poorly circumscribed area of malacia that extended caudally to the level of the caudate nucleus and the internal capsule. The cerebral white matter in these areas was markedly edematous and had multifocal areas of hemorrhage and necrosis. The meninges were diffusely congested and there was mild compression of the left brain hemisphere. No other gross lesions were present elsewhere.
History: In January 2007, a 10 year old Arabian cross horse was presented to a local veterinarian after being found stumbling on pasture. The horse was observed to have lost a considerable amount of weight. The horse was initially able to stand, but lost the ability to stand soon after. Within one day of presentation the horse began to thrash in his stall and had lost anal tone and the ability to move his tail. The horse was euthanized based on the presumed poor prognosis and lack of facilities to manage a recumbent horse. The horse had been on pasture for several months and was observed only infrequently by the owner.
History: A 2.5-year-old, female moose (*Alces alces*) was found on the edge of a farm yard, unable to stand. The cow had left her behind. She was in poor nutritional condition but there were still fat stores in the coronary groove of the heart. The rumen was full of browse and there were formed feces in the colon. The moose was euthanized via a shot to the chest. The estimated weight was 270 kg.

The moose was found about 30 km Southeast of Nipawin, SK
History: An adult, female skunk was found near a slough, South of Saskatoon, just outside city limits. It was frothing at the mouth and wandering around in circles. The skunk was poorly groomed and covered in dirt. There were multiple puncture wounds along left side of the face and over the top of the head which were exuding a viscous, pale, yellow fluid. The major vessels of the meninges were surrounded by a pale, hazy cuff.
History: Acute onset, progressive, non-painful hind limb paralysis. Owners noticed no problem before Thursday night when dog got out of car and couldn't use hind limbs.
History: 11-year-old male domestic short hair presented last summer for subacute onset of neurologic signs. He was knuckled over on his left front paw and would use his right forelimb to slide forward. Delayed placing in the left hind limb. Mentation and cranial nerve function has always been normal.