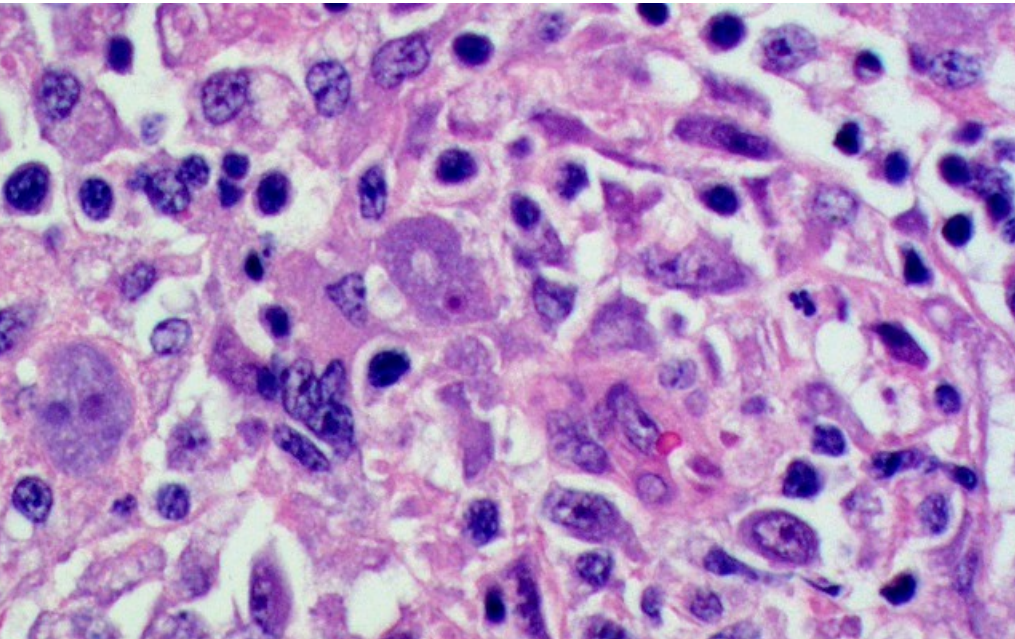
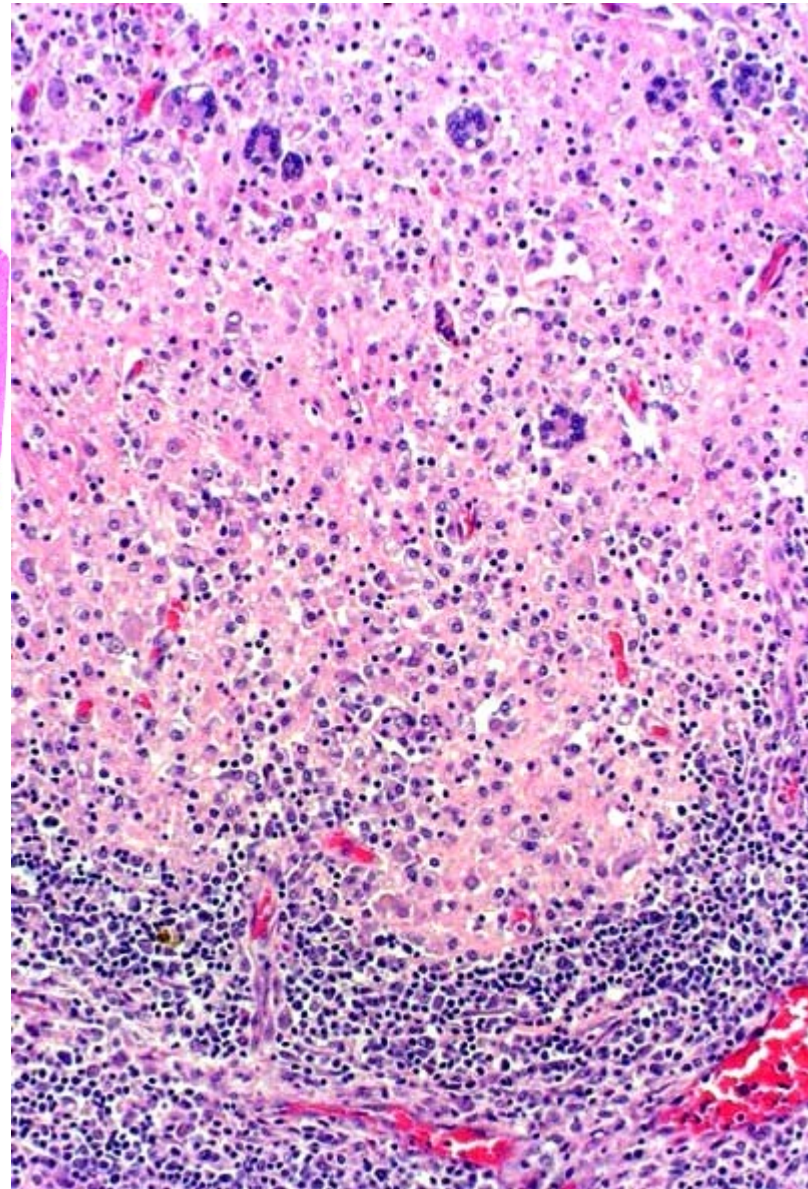
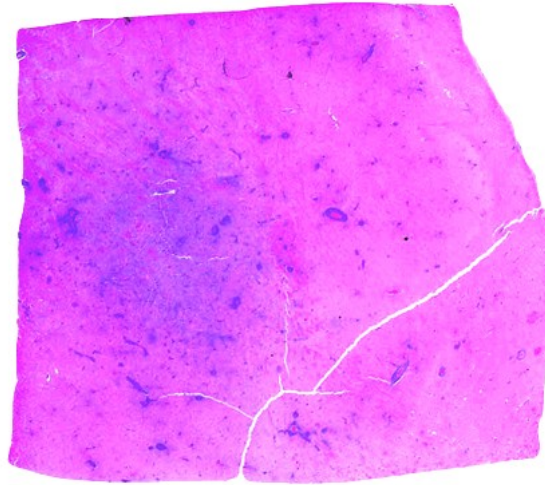


**Case 7.1 –Thalamus of a horse –
the lesion was confined to this
region.**

Review –

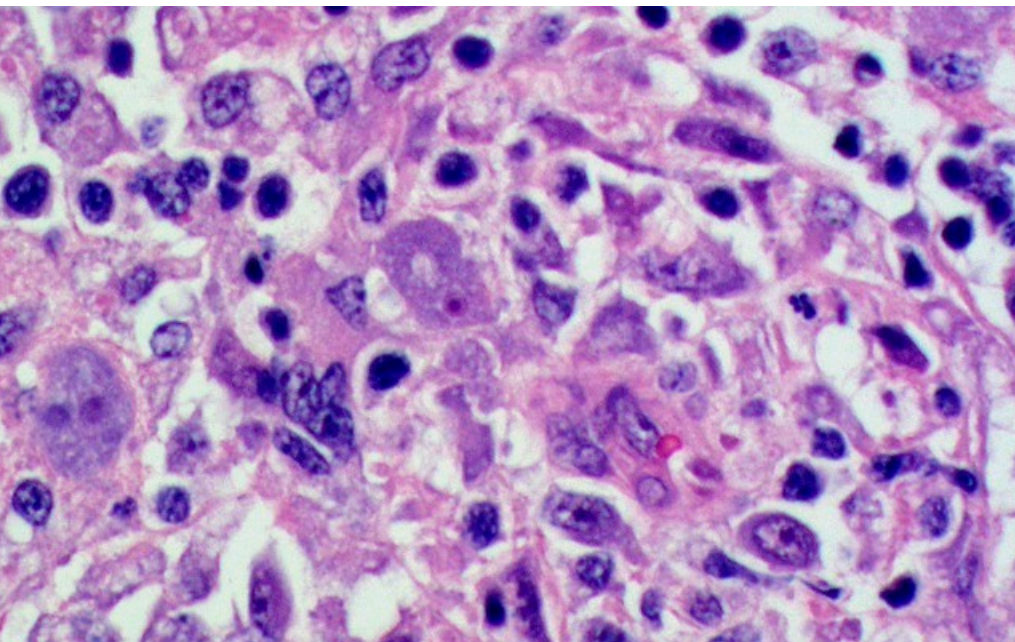
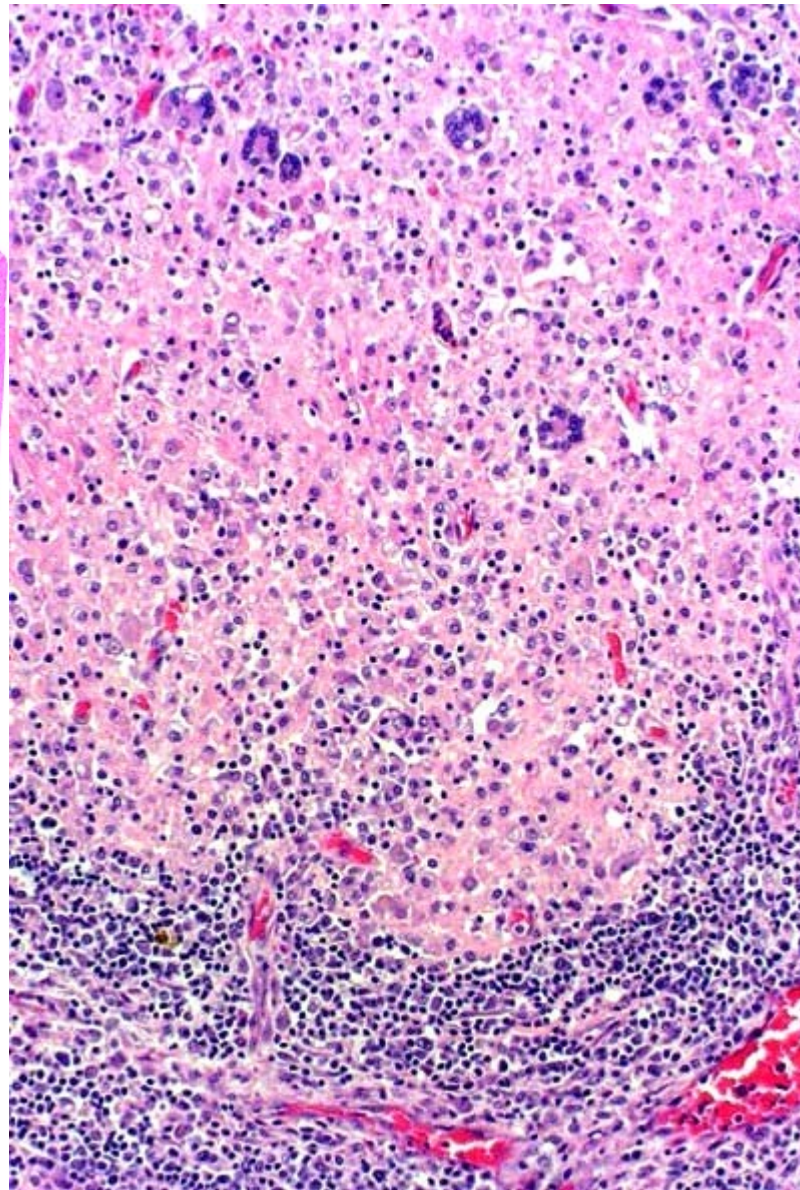
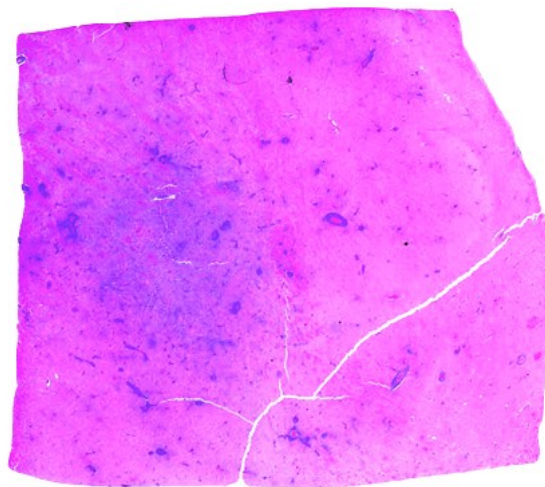
**1) – Changes to see include: locally
extensive hypercellularity due to
dense destructive infiltration of
the parenchyma by predominantly
macrophages with giant cell
formation and lesser numbers of
lymphoid cells and neutrophils.
Also dense lymphoplasmacytic
perivascular infiltration. At
higher magnification, amoebic
organisms are seen, one in center
field with a single prominent
endosome**

(continued next slide)



(continued from previous slide)

2) – An acceptable MDx would be “encephalitis, subacute, granulomatous and lymphoplasmacytic with intralesional amoebic organisms”. The organism in this case was *Balamuthia mandrillaris*.



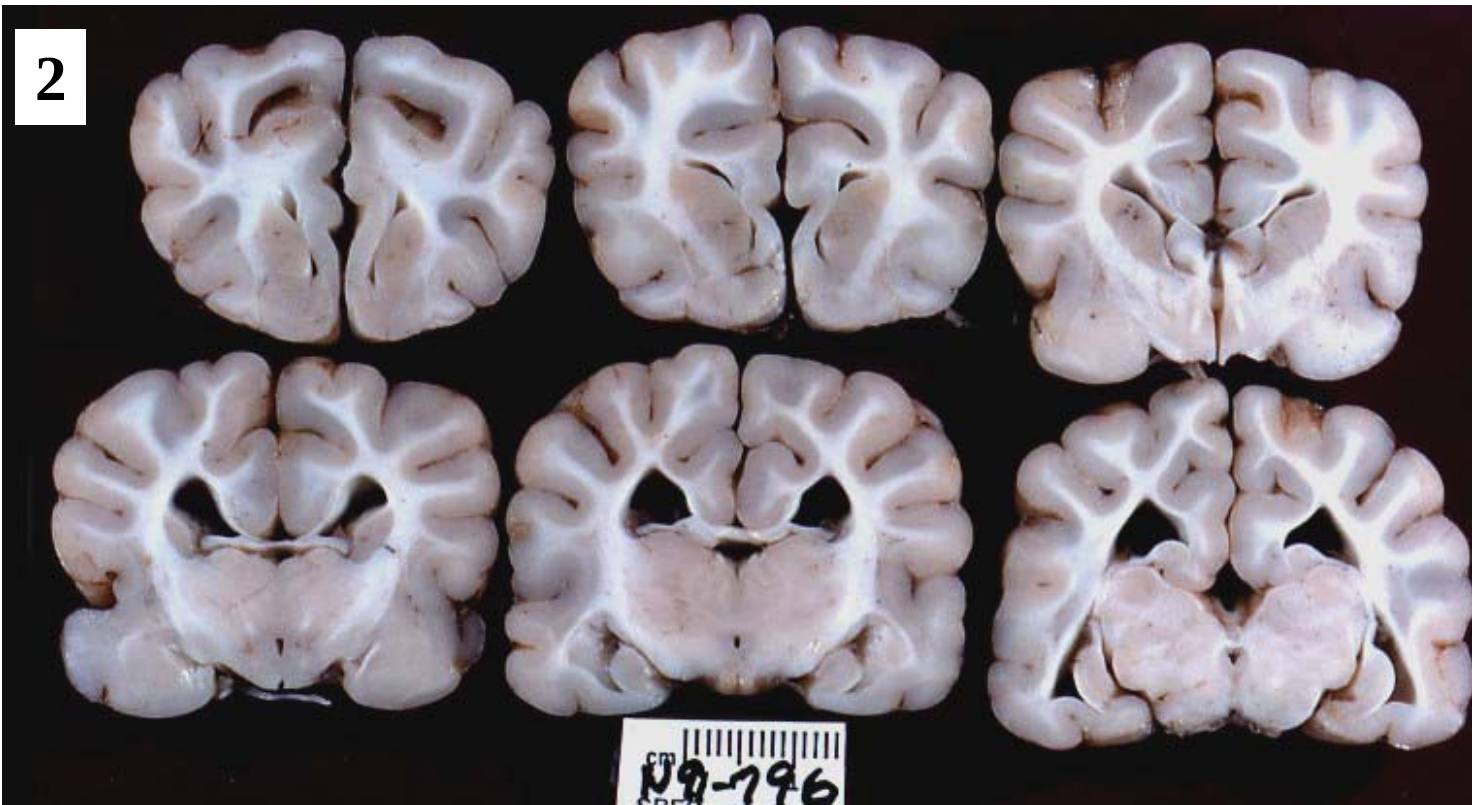
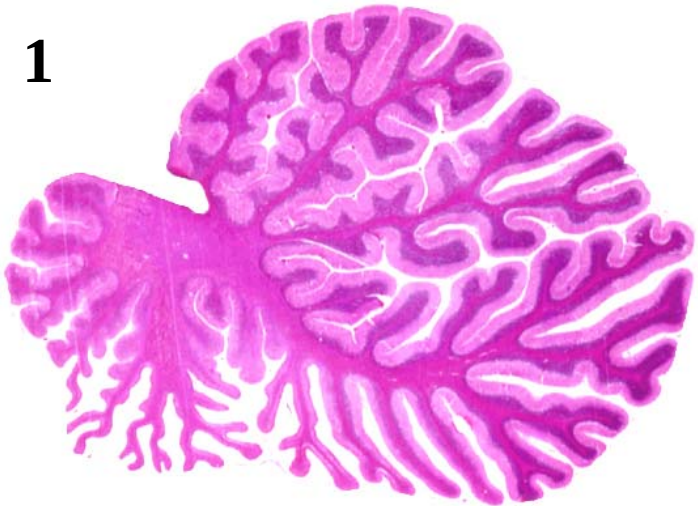
Case 7.2 –Samples from 2 different dogs

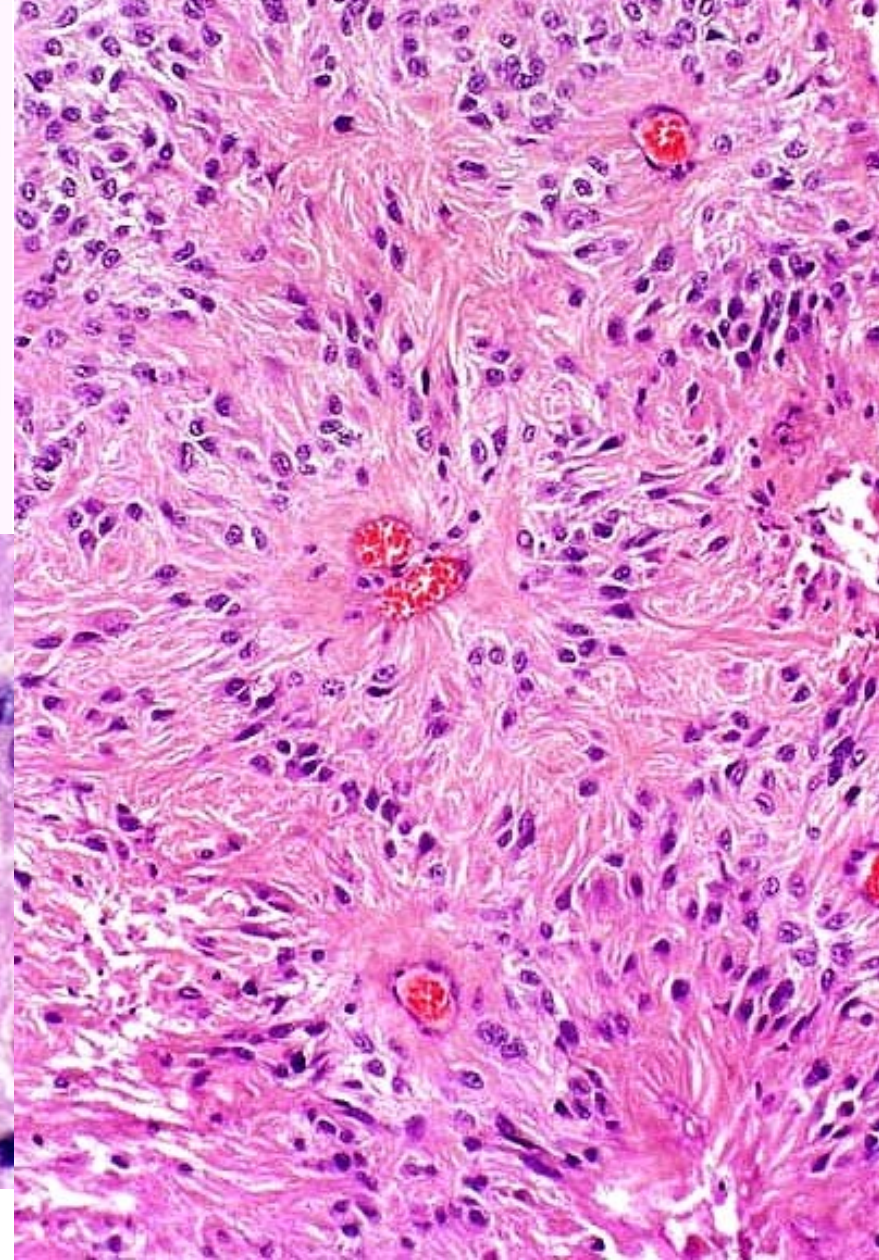
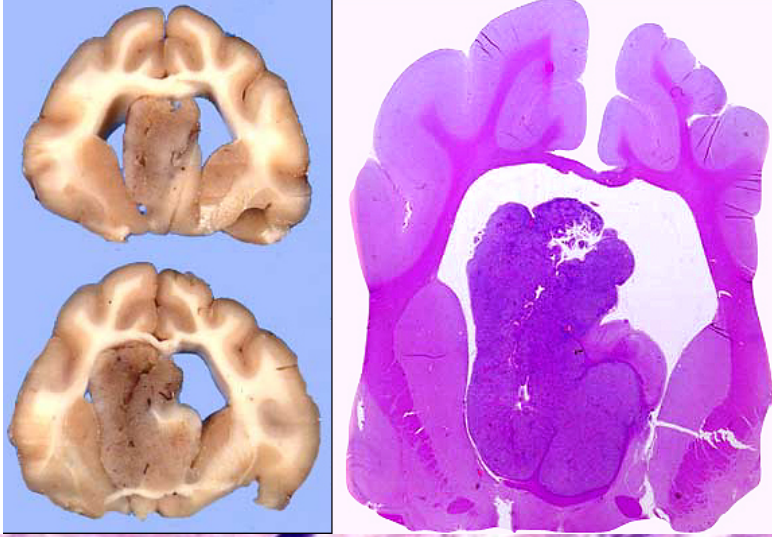
Review –

1)– Specimen #1 is the subgross view of the cerebellum in saggital section (vermis). There is a locally extensive area where folia exhibit pronounced cortical thinning, in some regions appearing totally devoid of grey matter. Speciment #2 is a series of transverse slices extending from the frontal lobes back to the level of the lateral geniculate nucleus in the thalamus. There is a total absence of the corpus callosum and septum pellucidum.

2) – MDx: #1 – Regional cerebellar cortical atrophy. #2 – Agenesis of the corpus callosum.

3) –Likely aetiopathogenesis - #1 – juvenile cerebellar degeneration (abiotrophy) is described in several breeds, usually localised to the antero-ventral lobes of the vermis, reflecting a heritable genetic defect. #2 – an occasionally described developmental malformation, presumably a failure to initially form this structure, but of unknown cause.

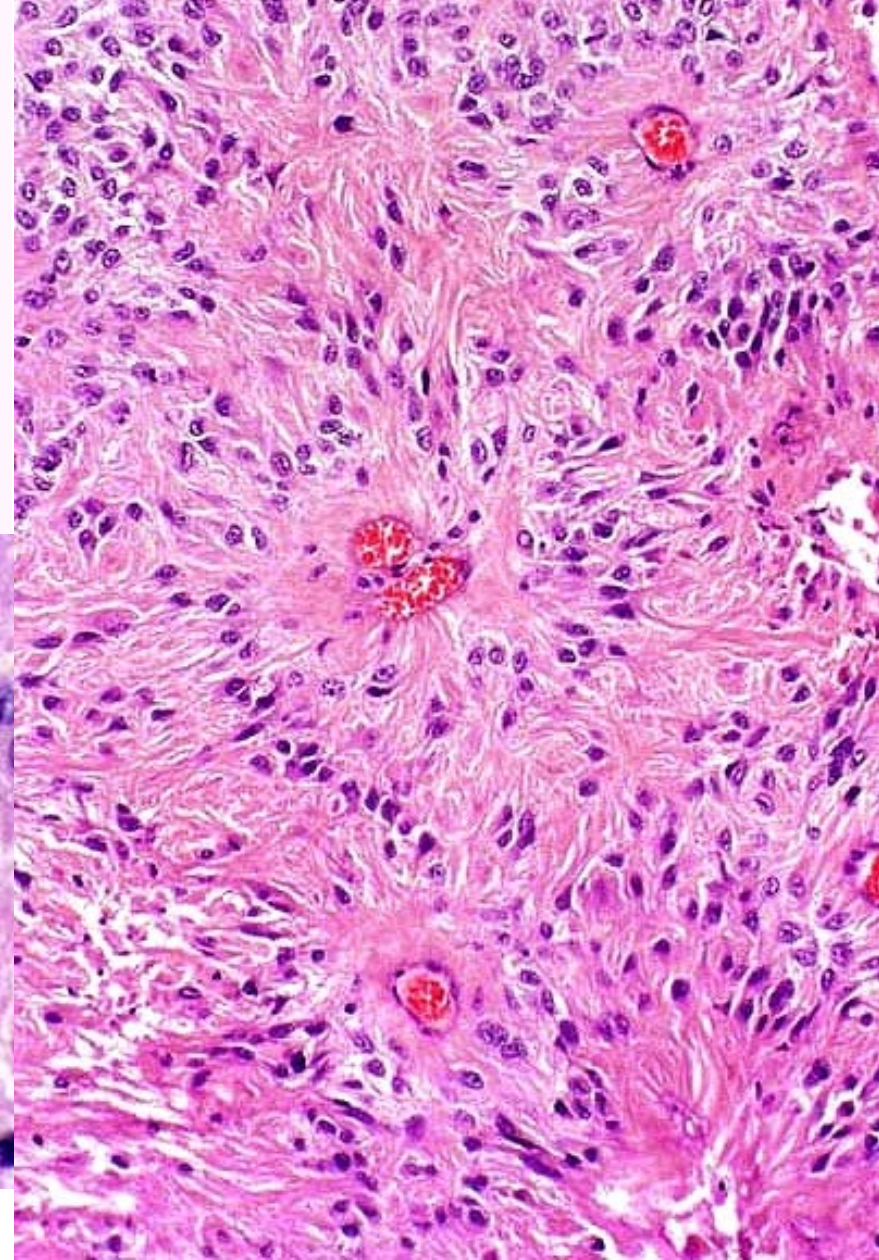
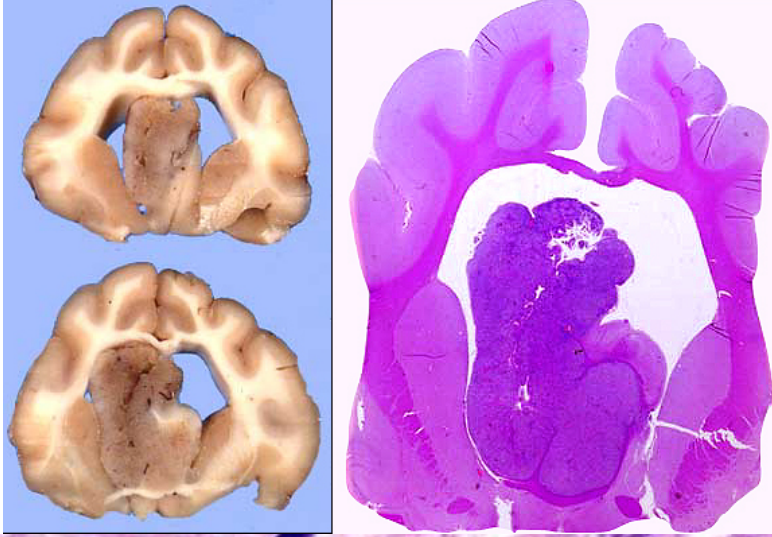




Case 7.3 –Samples from a cat

Review –

1) – Grossly there is a large tissue mass projecting into the lateral ventricles dorsal to the rostral commissure and between the caudate nuclei. It shifts the midline to the right and is accompanied by marked ventricular dilation. It appears to compress rather than invade normal tissue. Microscopically the mass consists of cells oriented around small blood vessels, which they contact via streaming cytoplasmic processes. (continued next slide)



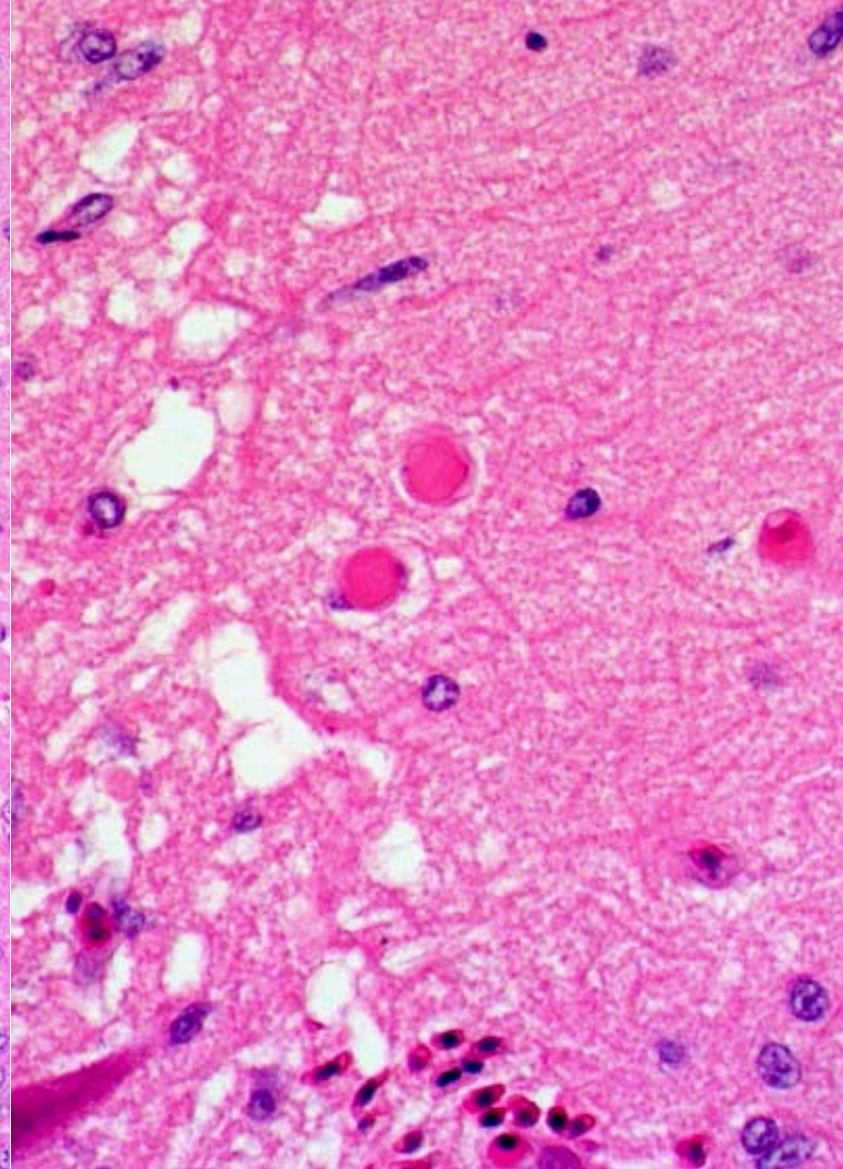
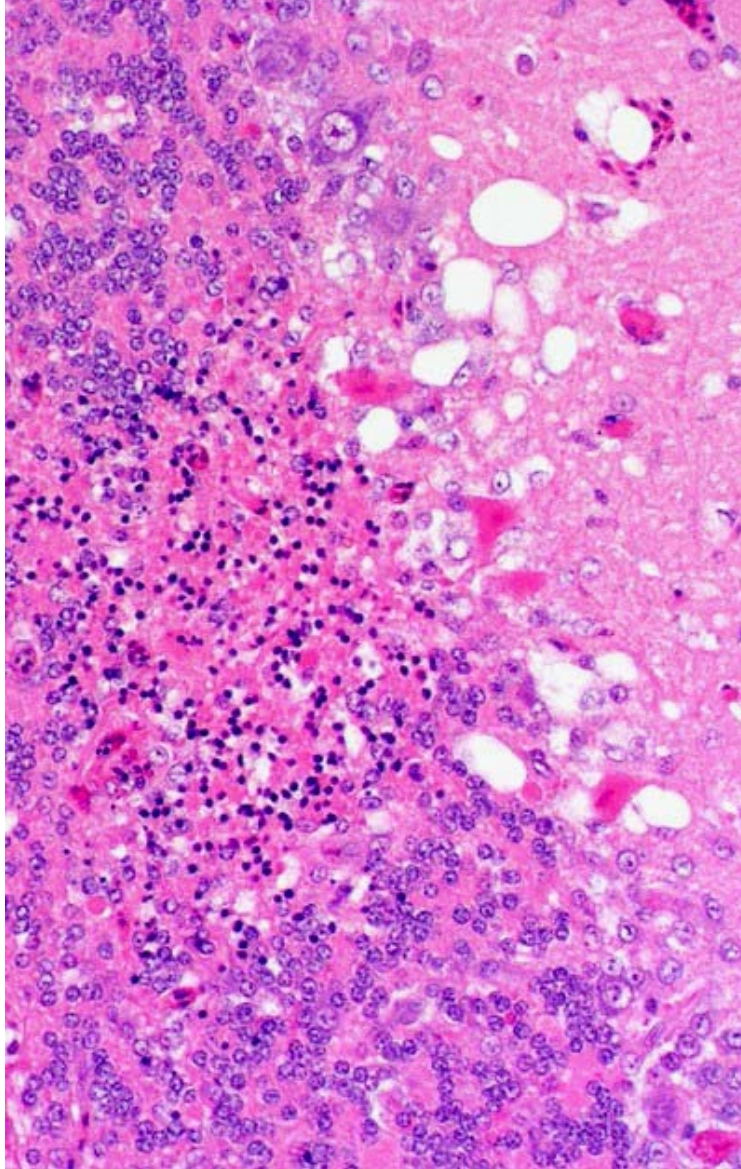
(continued from previous slide)
 2) – The basic pathologic process is neoplasia, probably benign. The pattern of pseudopallisading around blood vessels is consistent with a diagnosis of ependymoma. True rosettes and cilia may also be found.

Case 7.4 –Brain of a chicken. One of many focal lesions in this region of the brain.

Review –

1) – The location is the cerebellar cortex. There is a sharply localised area where Purkinje cells and granule cells are intensely eosinophilic with karyolysis in the former and karyopyknosis in the latter. The neuropil in the molecular layer is spongiotic. Small blood vessels are filled with hyaline material and free red cells are present in the tissue.

2) – Pathologic processes evident are acute neuronal necrosis, haemorrhage, capillary thrombosis and cytotoxic oedema.



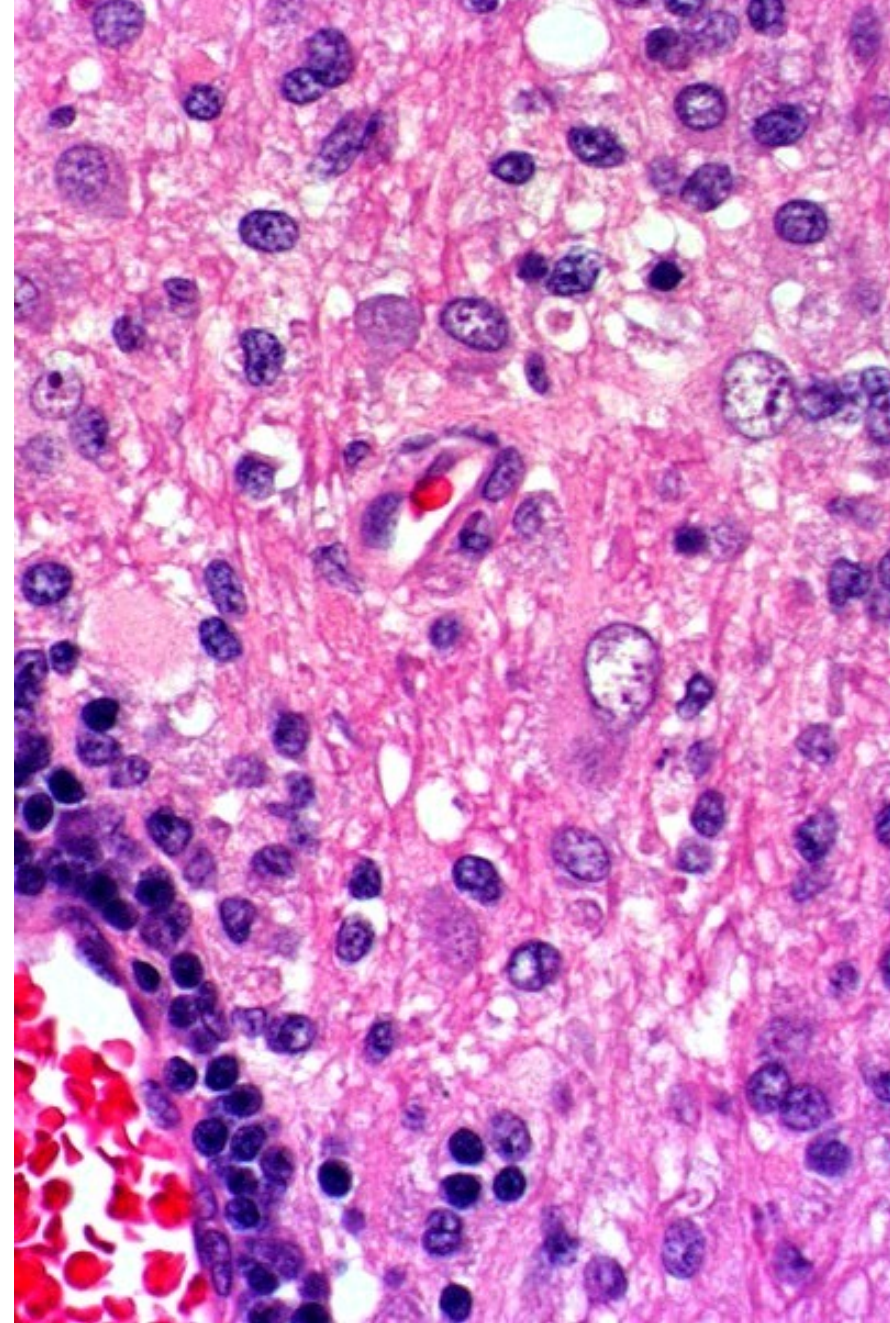
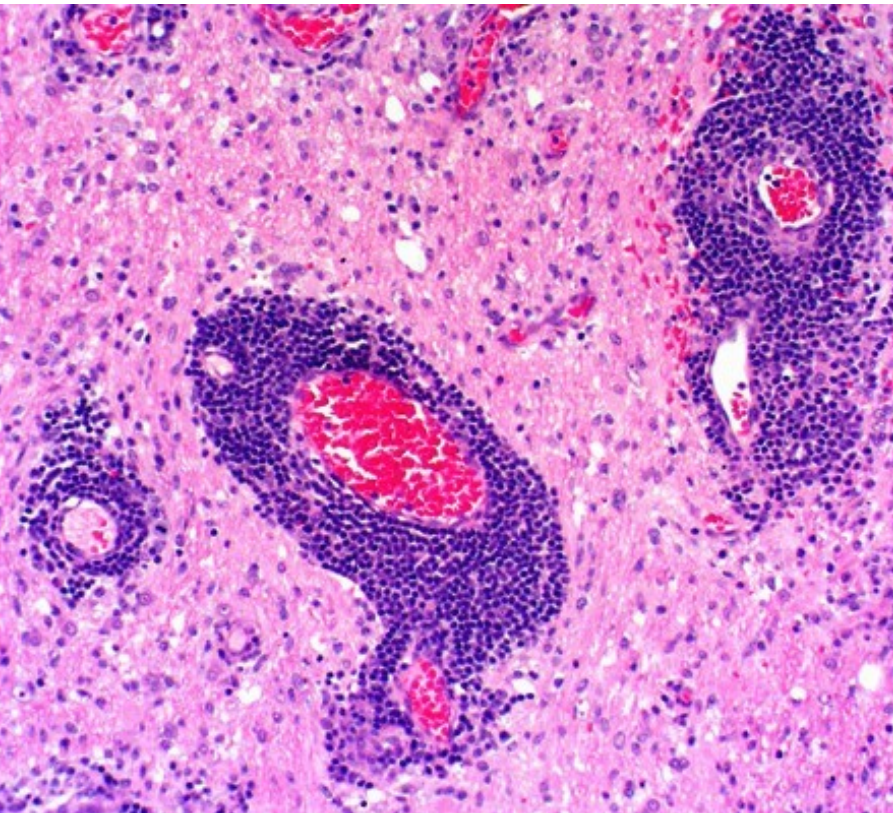
3) – An acceptable MDx would be “Encephalomalacia, acute, multifocal, haemorrhagic with capillary hyaline thrombi”

4) - A likely aetiology in this case is Hypovitaminosis E.

Case 7.5 – Cerebrum of an adult dog. The lesion was confined to the area shown.

Review –

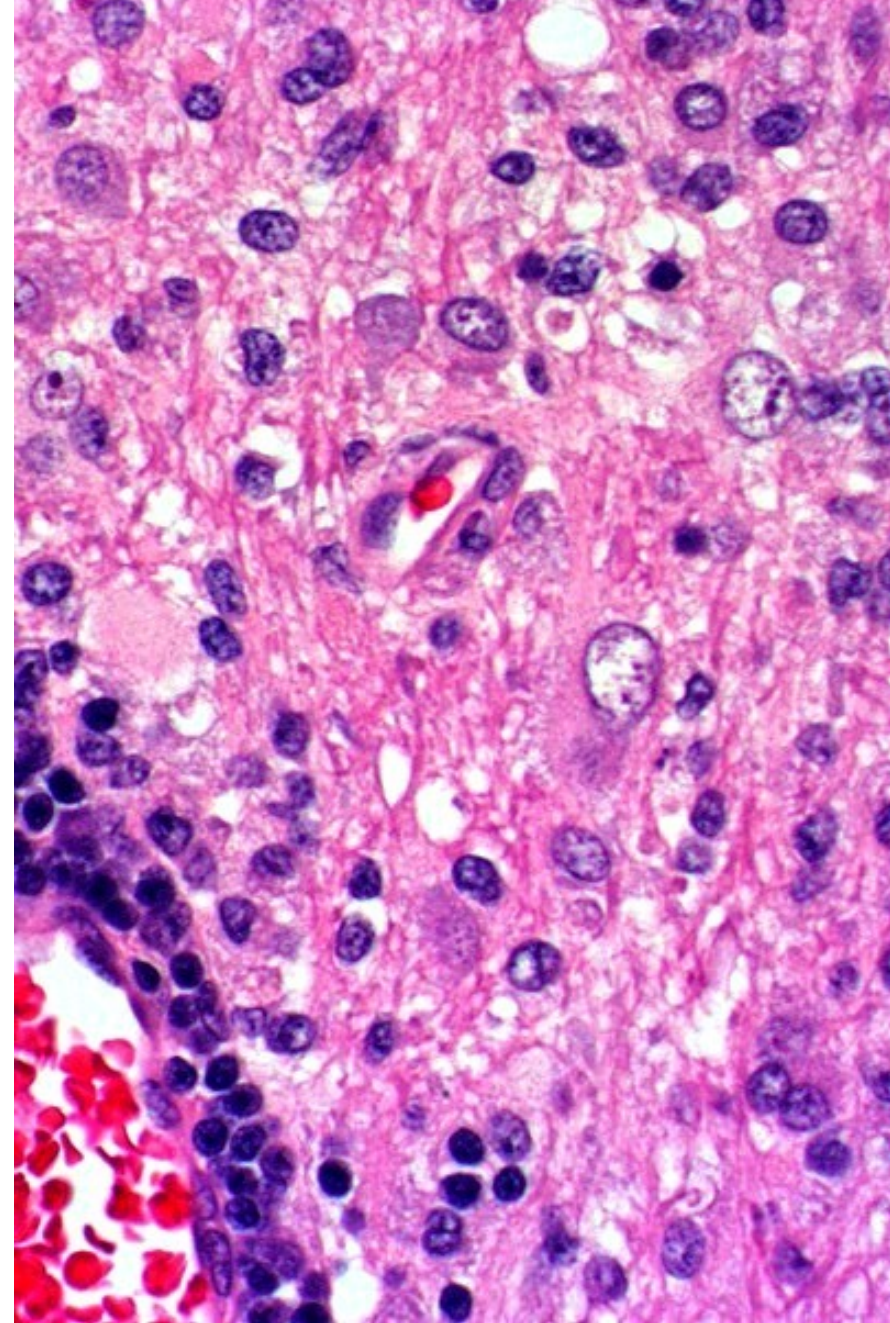
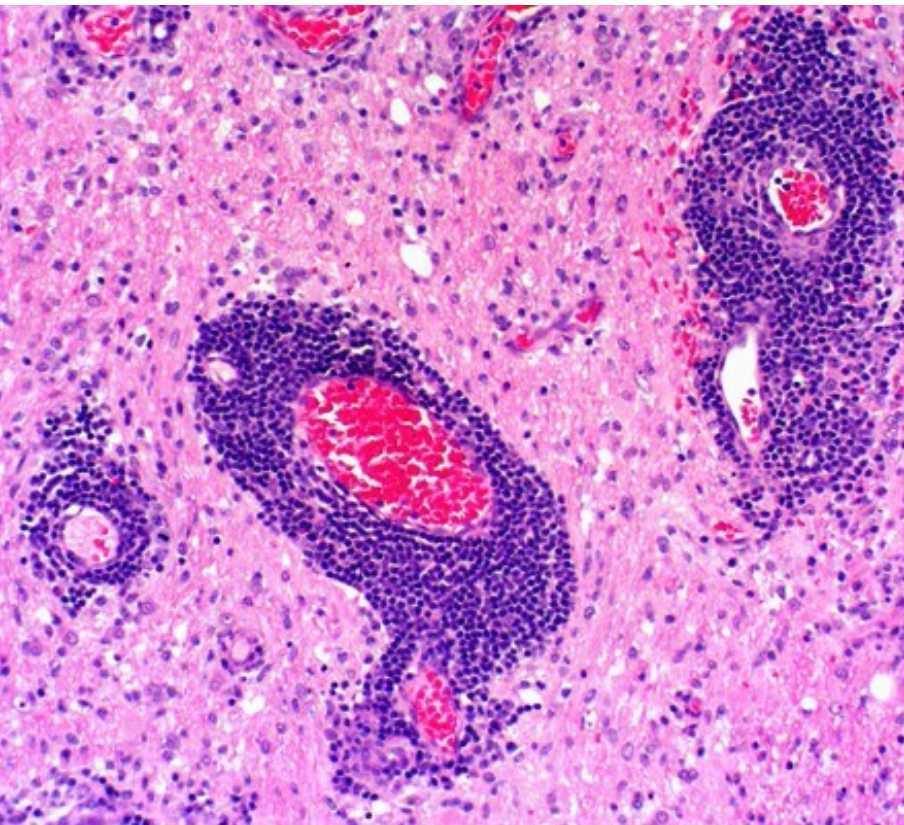
**1)– Significant changes are:
Locally extensive hypercellularity of cerebral white matter with a distinct bias to a paraventricular distribution. This involves dense lymphoplasmacytic perivascular cuffs with only slight infiltration of the parenchyma, and moderate gliosis with some enlarged astrocytes
(Continued next slide)**



(Continued from previous slide)

2) – an acceptable MDx would be “Leukoencephalitis, subacute, lymphoplasmacytic with polymorphic gliosis”

(continued next slide)



(continued from previous slide)

3) - Canine distemper would be expected to show more evidence of demyelination (spongiform change) with gemistocytic astrocytosis, and lesions concentrated around the fourth ventricle and in the spinal cord. Inclusion bodies should be prominent in astrocytes. GME would be expected to show obvious meningeal involvement, large histiocytoid cells in the cuffs and less gliosis. Lesions usually concentrated in the cerebellum-caudal brainstem and spinal cord

Comment: The Dx in this case was Yorkshire Terrier Encephalitis.

