NEO 01
Coronal section showing space-occupying effects of two large tumor foci compressing adjacent brain tissue.

NEO 02
Hemorrhage into a neoplasm causing mass effect and increased intracranial pressure

NEO 03
Bright areas show edema surrounding tumor (CSF in ventricles is also bright)
Papilledema, as illustrated here, may be a clinical indication of increased intracranial pressure due to a brain tumor. Features of papilledema include blurring of the disc margins, congestion of retinal veins, and other characteristics.

Cerebellar astrocytoma - illustration of large cyst and mural nodule of tumor (at top of cyst)
NEO 06
Medulloblastoma in the cerebellum, with seeding in the subarachnoid space producing opaque appearance on the right side of the image

NEO 07
This image shows a solid ependymoma tumor in fourth ventricle. The pons is located below the tumor, the cerebellum surrounds the tumor.
NEO 08
Fibrillary astrocytoma in right temporal lobe. Note that there is no obvious demarcation between the tumor and the normal brain parenchyma.

NEO 09
Glioblastoma with hemorrhagic regions crossing the corpus callosum. Note that there appears to be a border between normal parenchymal tissue and the tumor.
NEO 10
Coronal section showing glioblastoma in cerebral hemisphere. The tumor has infiltrated most of the tissue on the right side of the image. Note the variation in color, compression of the ventricle, and cingulate gyrus herniation.

NEO 11
Glioblastoma microscopic pathology - perinecrotic palisading of tumor cells; the cells in the center have undergone necrosis due to outgrowing the blood supply.
NEO 12
Glioblastoma microscopic pathology – pleomorphism

NEO 13
Glioblastoma microscopic pathology - glomeruloid endothelial proliferation
NEO 14
Coronal section showing oligodendroglioma, infiltrating most of the hemisphere on the left side of the image. Pathologically, the calcification is only seen on microscopic exam.

NEO 15
Example of two lobes of a single meningioma. Both regions of the tumor are attached to the meninges, and are very well-circumscribed. It is more common to see only a single lobe of the tumor, Click to enlarge and also see a MRI of a meningioma in the posterior fossa, a less common location.
NEO 16
MRI showing well-circumscribed meningioma in the posterior fossa in a 27-year-old woman.

NEO 17
Vestibulo-acoustic Schwannoma at the cerebellopontine angle. The tumor mass is compressing the cerebellum, pons and medulla. The tumor originated on Cranial Nerve VII and grew to compress adjacent cranial nerves.
NEO 18
In this image of the base of the brain, the black circle indicates the pons, and part of the ponto-cerebellar angle is indicated by the black arrow. The blue oval indicates the location of cranial nerves 7 (facial nerve) and 8 (vestibulo-acoustic nerve) as they exit. A tumor growing on CN8 can also compress CN7 and CN5, which exits just caudal to CN7.

NEO 19
This image shows bilateral Schwannomas at the cerebellopontine angle. The medulla is indicated, and the vestibo-acoustic Schwannomas are adjacent to, and compressing, the pons.
NEO 20
Primary cerebral lymphoma in multiple locations in brainstem and cerebellum.

NEO 21
This image of the base of the brain shows a large pituitary tumor, a chromophobe adenoma.

NEO 22
This mid-sagittal section illustrates the relationship between the pituitary stalk and the optic chiasm. A tumor of the pituitary gland is likely to compress the center of the optic chiasm, causing bitemporal hemianopia.
NEO 23
Carcinomatous meningitis - tumor cells filling space between arachnoid and pia

NEO 24
This image shows the midbrain after the brainstem has been removed from the gross brain and a hemorrhage in the region of the pineal gland (red circle) due to a pineoblastoma. The lesion is compressing the dorsal midbrain and cerebral aqueduct.
NEO 25
Multiple metastatic carcinoma lesions. Two of the tumor foci in this coronal section are indicated by arrows.

NEO 26
Single large metastatic carcinoma focus in the temporal lobe on the left side. Note the extensive mass effect compressing the lateral ventricle and causing midline shift.