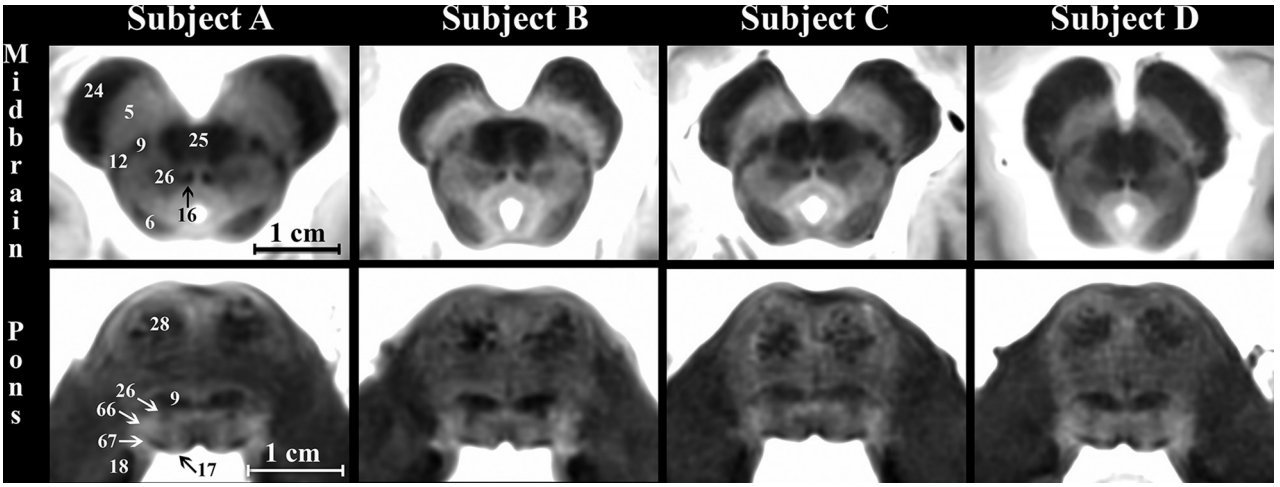
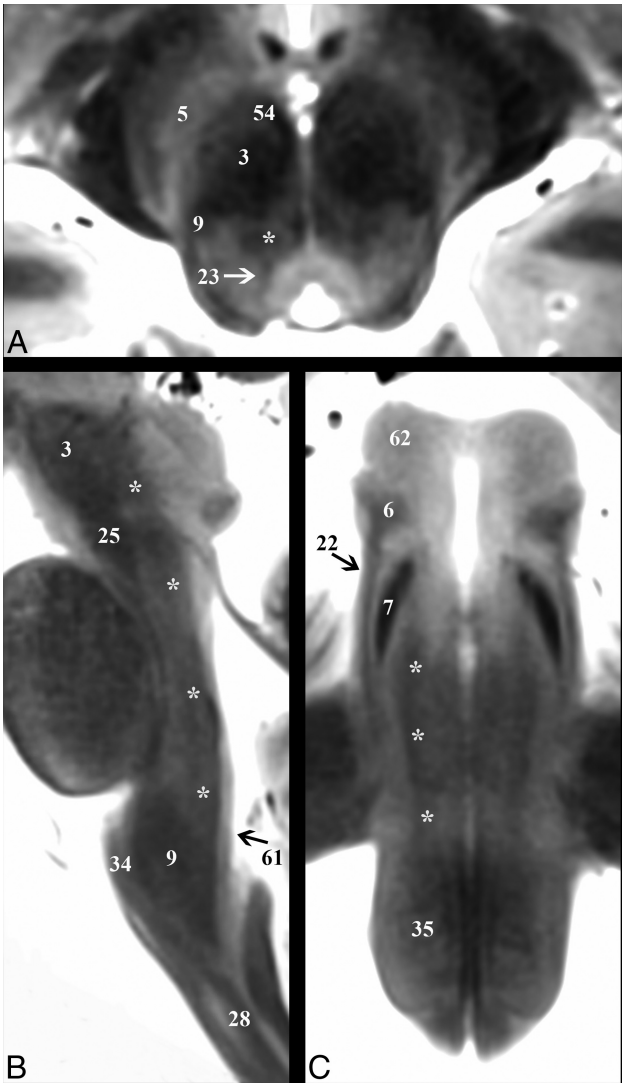
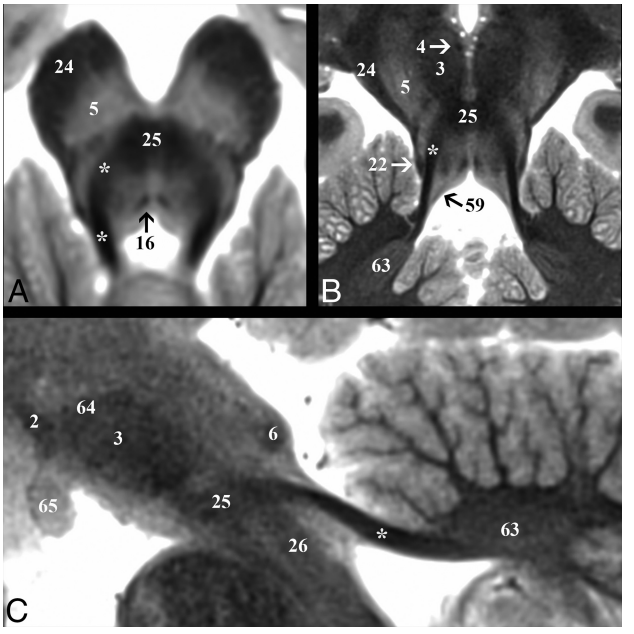


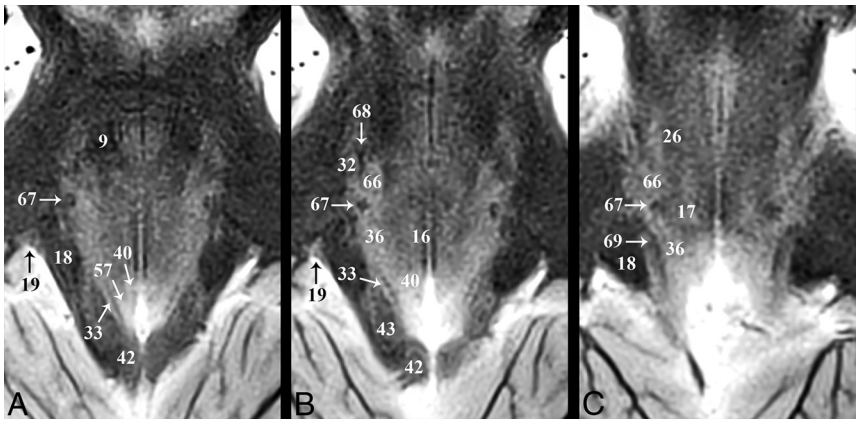
ON-LINE FIG 1. Selected images of the caudal midbrain (*upper row*) and middle pons (*lower row*) from 4 of 13 total postmortem brains illustrate excellent anatomic contrast reproducibility across individual datasets. Subtle variations are present. Note differences in the shape of cerebral peduncles (24), decussation of superior cerebellar peduncles (25), and spinothalamic tract (12) in the midbrain of subject D (*top right*). These can be attributed to individual anatomic variation, some mild distortion of the brain stem during procurement at postmortem examination, and/or differences in the axial imaging plane not easily discernable during its prescription parallel to the anterior/posterior commissure plane. The numbers in parentheses in the on-line legends refer to structures in the On-line Table.



ON-LINE FIG 2. Demonstration of the central tegmental tract (*asterisk*) throughout the brain stem. *A*, Axial cranial midbrain image angled 10° anterosuperior to posteroinferior relative to the ACPC plane shows the tract coalescing dorsal to the red nucleus (3). *B*, Parasagittal image shows the course of the central tegmental tract dorsal to the red nucleus (3) and then descending to the central brain stem. *C*, Coronal image depicts the tract terminating in the ipsilateral inferior olivary complex (35).



ON-LINE FIG 3. Demonstration of the dentatorubrothalamic tract within the superior cerebellar peduncle (*asterisk*) and rostral brain stem. *A*, Axial caudal midbrain image angled 10° anterosuperior to posteroinferior relative to the ACPC plane demonstrates the tract traveling the midbrain to reach the decussation (25). *B*, Coronal oblique image that is perpendicular to the long axis of the hippocampus (structure not shown) at the level of the ventral superior cerebellar decussation shows a component of the dentatorubrothalamic tract arising from the cerebellar dentate nucleus (63), ascending via the superior cerebellar peduncle to the decussation (25), and then enveloping the contralateral red nucleus (3). *C*, Parasagittal image shows the relatively long anteroposterior dimension of this tract, which becomes less compact and distinct as it ascends toward the thalamus.



ON-LINE FIG 4. Oblique coronal images perpendicular to the long axis of the hippocampus (structure not shown) arranged anterior to posterior at 3 mm (*A*), 2 mm (*B*), and 1 mm (*C*) from the rhomboid fossa show the functional cell columns of the major cranial nerve nuclei. Not every substructure can be directly identified (eg, the different nuclei making up the vestibular complex ([36]). However, many substructures not seen directly now can be more precisely located indirectly because we now can discriminate several adjacent structures.

On-line Table: Brain stem structure labeling key

Structures
1) Lenticular fasciculus
2) Mammillothalamic tract
3) Red nucleus
4) Habenulopeduncular tract
5) Substantia nigra
6) Nucleus of inferior colliculus
7) Superior cerebellar peduncle
8) Basis pontis
9) Medial lemniscus
10) Decussation of corticospinal tract
11) Cuneate fasciculus
12) Spinothalamic tract
13) Commissure of superior colliculus
14) Cerebral aqueduct
15) Periaqueductal gray matter
16) Medial longitudinal fasciculus
17) Abducens nucleus
18) Inferior cerebellar peduncle
19) Cochlear nuclei
20) Tectospinal tract
21) Medial geniculate nucleus
22) Lateral lemniscus
23) Mesencephalic trigeminal nucleus
24) Cerebral peduncle
25) Decussation of superior cerebellar peduncle
26) Central tegmental tract
27) Frontopontine tract
28) Corticospinal tract
29) Occipitotemporopontine tract
30) Middle cerebellar peduncle
31) Superior olivary complex
32) Spinal trigeminal tract
33) Solitary tract
34) Pyramid
35) Inferior olivary complex
36) Vestibular nuclei
37) Internal arcuate fibers
38) Ventral spinocerebellar tract
39) Dorsal spinocerebellar tract
40) Hypoglossal nucleus
41) Cuneate nucleus
42) Gracile nucleus
43) Genu of facial nerve
44) Olivospinal tract
45) Optic tract
46) Subthalamic nucleus
47) Pontocerebellar fibers
48) Spinal trigeminal nucleus
49) Gracile fasciculus
50) Medial lemniscus terminations in ventral posterolateral nucleus (thalamus)
51) Brachium of superior colliculus
52) Tracts of ventrolateral funiculus of spinal cord
53) Interpeduncular nucleus
54) Rubrospinal tract
55) Mesencephalic reticular formation
56) Fourth ventricle
57) Dorsal motor vagus nucleus
58) Third ventricle
59) Mesencephalic trigeminal tract
60) Cranial nerve III nucleus
61) Stria medullaris
62) Superior colliculus
63) Dentate nucleus
64) Prerubral tract
65) Mammillary body
66) Trigeminal motor nucleus
67) Facial nerve
68) Trigeminal nerve
69) Vestibular division of vestibulocochlear nerve