

ADVANCED NEUROANATOMY

Brain Stem Structural & Functional Mapping

MIDBRAIN (MESENCEPHALON)

- Superior Colliculi
- Inferior Colliculi
- Cerebral Peduncles
- Substantia Nigra

PONS (METENCEPHALON)

- Basilar Sulcus
- Middle Cerebellar Peduncle
- Pontine Tegmentum
- Cranial Nerve Nuclei (V-VIII)

MEDULLA (MYELENCEPHALON)

- Pyramidal Decussation
- Olive (Inferior Olive)
- Nucleus Gracilis
- Nucleus Cuneatus

[Illustration Placement: Sagittal & Cross-Sectional Views]

Cranial Nerve	Exit Point	Primary Function
III - Oculomotor	Interpeduncular Fossa	Eye movement; Pupil constriction
V - Trigeminal	Lateral Pons	Mastication; Facial sensation
X - Vagus	Postolivary Sulcus	Autonomic control; Laryngeal
XII - Hypoglossal	Preolivary Sulcus	Tongue motility

Clinical Observations / Pathological Correlation