

Subdivision	Surface feature	Internal structure
Caudal medulla (Figure 4)	<b>Gracile tract</b> (dorsal surface) <ul style="list-style-type: none"> <li>pair of extended longitudinal bulges or columns on either side of a deep midline furrow; technically, this bulge is called the <i>tuberculum gracilis</i>, which is formed by the underlying gracile tract</li> <li>continuation of the tract of the dorsal spinal cord</li> </ul>	<b>Gracile tract &amp; nucleus</b> <ul style="list-style-type: none"> <li>medial, superficial bundle of myelinated axons arising from the dorsal column of the spinal cord</li> <li>just deep to the gracile tract is the <b>gracile nucleus</b>, a compact gray matter structure that receives the synapses made by gracile tract axons</li> </ul>
	<b>Cuneate tract</b> (dorsal surface) <ul style="list-style-type: none"> <li>pair of extended longitudinal bulges or columns just lateral to the gracile tracts; technically, this bulge is called the <i>tuberculum cuneatus</i>, which is formed by the underlying cuneate tract</li> <li>continuation of the tract of the dorsal spinal cord</li> </ul>	<b>Cuneate tract &amp; nucleus</b> <ul style="list-style-type: none"> <li>just lateral to the gracile tract, superficial bundle of myelinated axons arising from the dorsal column of the spinal cord</li> <li>at the superior “head” of the cuneate tract is the <b>cuneate nucleus</b>, a compact gray matter structure that receives the synapses made by cuneate tract axons</li> </ul>
	<b>Pyramidal decussation</b> (ventral surface) <ul style="list-style-type: none"> <li>see <b>Medullary pyramids</b> below</li> <li>apparent “stitching” of fibers that cross the midline</li> </ul>	<b>Pyramidal decussation</b> <ul style="list-style-type: none"> <li>see <b>Medullary pyramids</b> below</li> <li>midline crossing of dense bundles of myelinated axons that run the longitudinal extent of the ventral brainstem</li> <li>accounts for the formation of the <b>lateral</b> and <b>ventral (anterior) corticospinal tracts</b> of the spinal cord</li> </ul>
Middle to rostral medulla (Figure 5)	<b>Medullary pyramids</b> (ventral surface) <ul style="list-style-type: none"> <li>pair of extended longitudinal bulges or columns on either side of a deep midline furrow</li> </ul>	<b>Medullary pyramids</b> <ul style="list-style-type: none"> <li>dense bundle of myelinated axons that run the longitudinal extent of the ventral brainstem; these axons are also known as the <b>corticospinal tract</b></li> <li>these same axons are present in the <b>internal capsule</b>, <b>cerebral peduncles</b>, basilar pons, and about 90% are present in the <b>lateral columns</b> of the spinal cord</li> </ul>
	<b>Inferior olive</b> (ventral-lateral surface) <ul style="list-style-type: none"> <li>pair of elongated bulges just lateral to the pyramids; a shallow furrow separates the pyramid and olive on each side</li> </ul>	<b>Inferior olivary nucleus</b> <ul style="list-style-type: none"> <li>prominent nucleus of the ventral-lateral medulla just dorsal to the medullary pyramids</li> <li>note the highly convoluted bands of gray matter that account for the superficial, ventral-lateral bulge</li> </ul>
	<b>Hypoglossal nerve (XII)</b> (ventral-lateral surface) <ul style="list-style-type: none"> <li>exits through ventral-medial surface</li> </ul>	<b>Hypoglossal nerve roots &amp; nucleus</b> <ul style="list-style-type: none"> <li>nerve roots emerge between the <b>medullary pyramid</b> and the <b>olive</b></li> <li>trace these nerve roots dorsally to their origin in the <b>hypoglossal nucleus</b>, located along the dorsal midline</li> </ul>