

The fourth thoracic dorsal nerve roots contain afferent somatic and visceral nerve fibers corresponding to the fourth thoracic spinal cord segment. They emerge as two or three rows of rootlets from the posterolateral sulci of the spinal cord. Rootlets of adjacent dorsal roots may communicate via thin branches.

The roots pass infero-laterally to their exit through the intervertebral foramina between the pedicles of T4 and T5. They are slightly larger in diameter than their corresponding ventral roots and larger in obliquity and length than the dorsal roots above. They pass over the superior surface of the transverse processes of T5 to join with the fourth thoracic ventral roots to form the fourth thoracic spinal nerves. Each of the fourth thoracic dorsal roots possesses an ovoid spinal ganglion (dorsal root ganglion) proximal to where it joins the fourth thoracic ventral nerve roots.

The roots are covered by a sleeve of pia mater, which is continuous with that of the spinal cord, and loosely invested by a prolongation of dura and arachnoid mater (the dural sleeve) almost as far as the spinal nerves.