

The second thoracic ventral spinal rami exit the vertebral column through the intervertebral foramina between the pedicles of T2 and T3. They emerge above the transverse processes of T3 and pass into the intercostal spaces between the pleura and internal intercostal membrane (fascia), where each ramus receives at least one grey (proximal) and white (distal) rami communicantes from adjacent sympathetic ganglia. The main nerves may give branches to the brachial plexus.

The rami then pass below the intercostal vessels in the neurovascular plane between the second internal and innermost intercostal muscles. Before reaching the costal angle they give rise to collateral and lateral branches. The collateral branches follow the inferior borders of the intercostal spaces and near the sternum they pass anterior to the internal thoracic vessels, pierce the internal intercostal muscles, external intercostal membrane and pectoralis major muscles to terminate as the second anterior cutaneous nerves of the thorax. These anterior cutaneous branches may join the medial supraclavicular nerves. The lateral cutaneous branches (intercostobrachial nerves) pierce the intercostal muscles obliquely to join with the medial cutaneous nerves of the arm.

The first and second intercostal nerves often communicate across the neck of the second rib.

Supply

The second thoracic ventral rami supply the second intercostal muscles and skin over the front and side of the chest and the upper half of the posterior and medial aspects of the arms.