The transverse processes of the fifth lumbar vertebra are large, substantial, postero-laterally projecting processes that are continuous with the whole of the pedicle and postero-lateral aspect of the body. The lower borders of the processes are angulated and pass laterally, before turning supero-laterally to end in a blunt apex.

They have a vertical ridge on the anterior surface near the apex to which the anterior layer of the thoracolumbar fascia attaches. Psoas major attaches medially and quadratus lumborum laterally. The middle layer of the thoracolumbar fascia attaches to the apex and longissimus thoracis and rotatores lumborum attach to the posterior surface, inferiorly and superiorly, respectively. Further, the lateral intertransversarii muscles attach to the superior and inferior borders.