The lumbar spinous process is quadrangular in shape and projects horizontally. It features thickened upper and lower borders that arise from the junction between the laminae. The posterior margin, which lies at the level of the lower half of the vertebral body, can be palpated in the midline.

The supraspinous ligament and posterior layer of the thoracolumbar fascia are attached to the apex and the interspinous ligament and interspinales muscles are attached to the superior and inferior borders. Further, multifidus, spinalis thoracis and erector spinae attach to the lateral surface antero-posteriorly.