The asymmetrically heart-shaped thoracic vertebral bodies share similar transverse and antero-posterior diameters. Their bodies are narrowed between the superior and inferior surfaces and feature flattened left sides due to pressure from the thoracic aorta. The superior and inferior surfaces have a thin covering of hyaline cartilage, the 'vertebral end-plates', to which the adjacent intervertebral discs are attached

On each side of the vertebral body lies shallow concave demifacets, located superiorly and anteriorly. The superior demifacets are situated at the upper border of the vertebral body, anterior to the pedicles. The inferior demifacets are situated at the lower border of the vertebral body, anterior to the inferior vertebral notch. The posterior surface has vascular foramina. The anterior and posterior longitudinal ligaments attach to the anterior and posterior discal borders while capsular and radiate ligaments attach to the margins of the costal facets.