Results of recent roentgenographic studies on topographical anatomy of lungs and pleura are not in complete accord with the findings of cadaver anatomy. According to conventional teaching the lungs and pleural cavities are separated posteriorly by a wide mediastinal space in which the oesophagus is placed directly in front of the spinal column. In contrast to this, roentgenograms sometimes depict superior medial portions of lung tissue interposed between oesophagus and vertebral column. The posterior inferior pleural reflection is characterized roentgenographically by a line extending horizontally or with a slight upward concavity from the lateral thoracic wall towards the spinal column at the level of the first or second lumbar vertebra. Anatomical texts usually place the inferior pleural boundaries higher than roentgen observations show, and disregard the commonly found upward concavity. Reasons for the described discrepancies are given and the practical importance of the roentgen findings is pointed out.