

286 Diagnostic Procedures in Respiratory Disease

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Diagnostic procedures in respiratory disease encompass a wide array of invasive and noninvasive modalities. Methods for acquiring diagnostic specimens are described in this chapter, as are the various imaging modalities at hand. [Pulmonary function tests and measurements of gas exchange are described in Chap. 284.](#)

BEDSIDE PLEURAL PROCEDURES

■ THORACENTESIS

Thoracentesis, also known as pleurocentesis, refers to percutaneous aspiration of fluid from the pleural space. The right and left pleural spaces do not normally communicate with each other, and either can be directly accessed between the thoracic ribs. The current standard of care entails using point-of-care ultrasonography to mark the site of needle puncture; this reduces the risks of “dry tap” as well as complications such as pneumothorax. Beside palliation of symptoms associated with pleural effusion (most commonly dyspnea), thoracentesis may be performed for diagnostic purposes. The range of hematologic, biochemical, microbiologic, and cytologic pleural fluid studies has largely remained unchanged over the past few decades, as has the widespread adoption of Light’s criteria for distinguishing exudates from transudates that were described in 1972. However, newer assays such as mesothelin-1 testing for neoplastic diseases (chiefly mesothelioma) have also become available more recently. [More details on pleural fluid testing are described in Chap. 294.](#)

■ CLOSED PLEURAL BIOPSY

Closed pleural biopsy involves percutaneous sampling of the parietal pleural lining. This procedure can be performed either “blindly”