Anterolateral Thoracotomy

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The anterolateral thoracotomy provides excellent access to either upper lobe, the right middle lobe, and the anterior hila. It can be extended across the sternum into the opposite chest (clamshell incision). Anterolateral thoracotomy is our preferred approach for unilateral lung transplantation. Bilateral sequential lung transplantation can usually be performed through bilateral anterolateral thoracotomy without sternal division. This incision has the advantage of allowing the patient to remain supine. Cosmetic results are superior to a median sternotomy or posterolateral thoracotomy. The exposure to the posterior pleural space is more limited than with a posterolateral thoracotomy. For procedures requiring excellent posterior exposure, this incision should be avoided.

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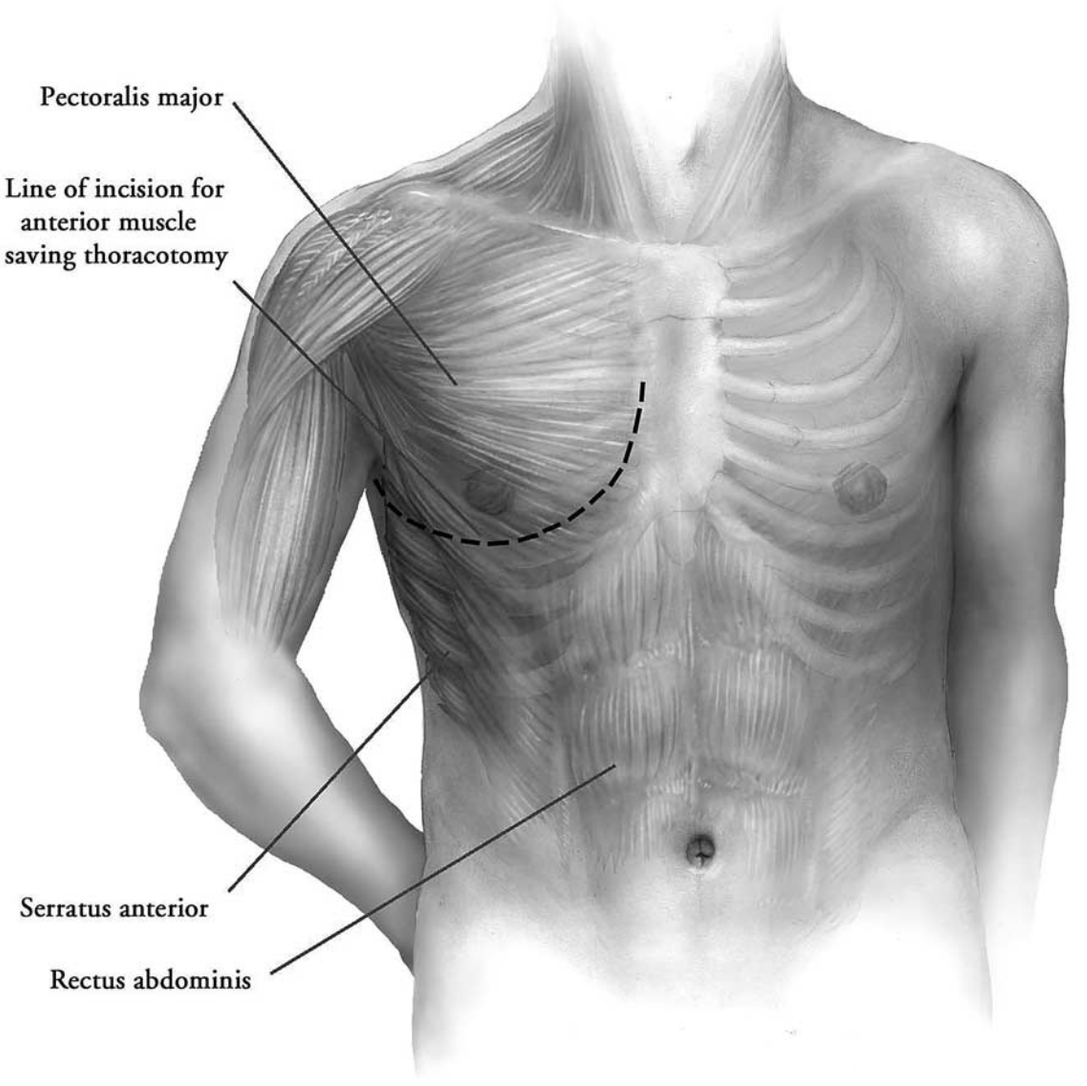
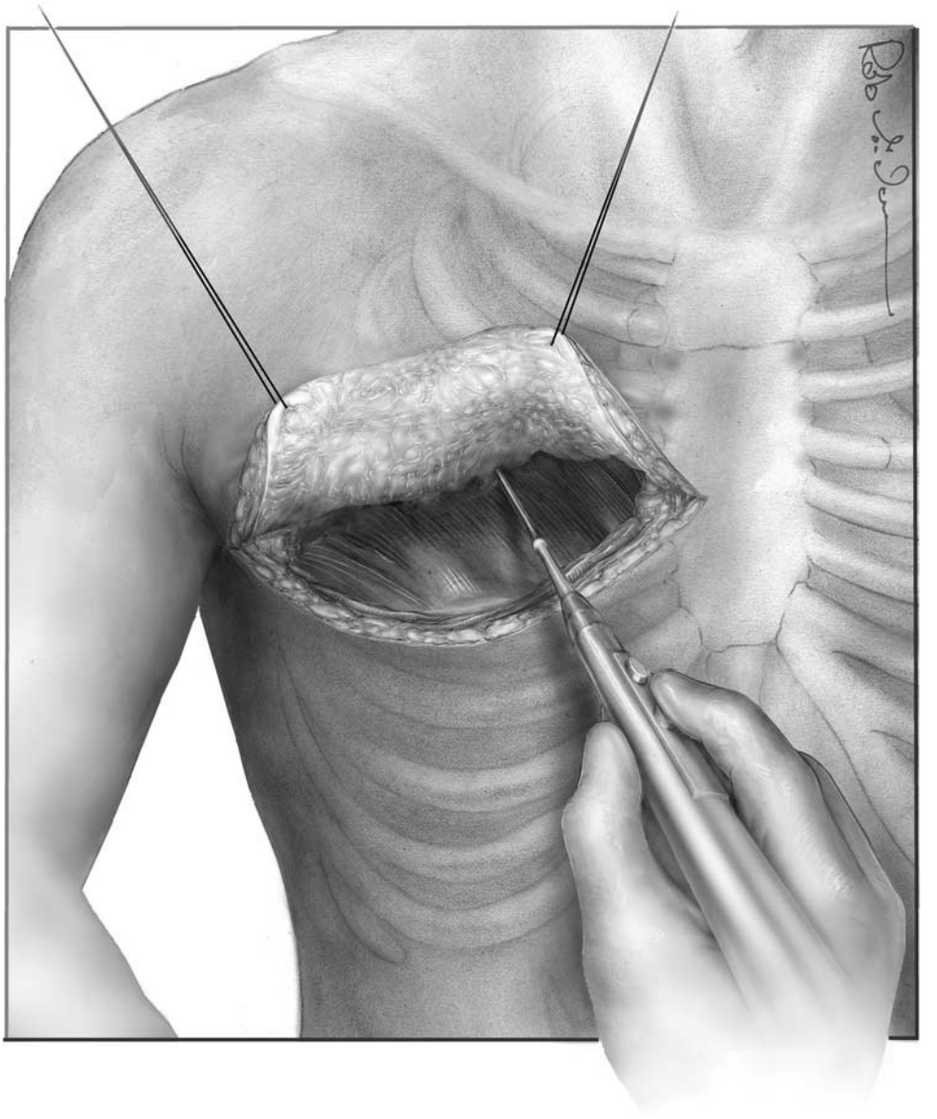
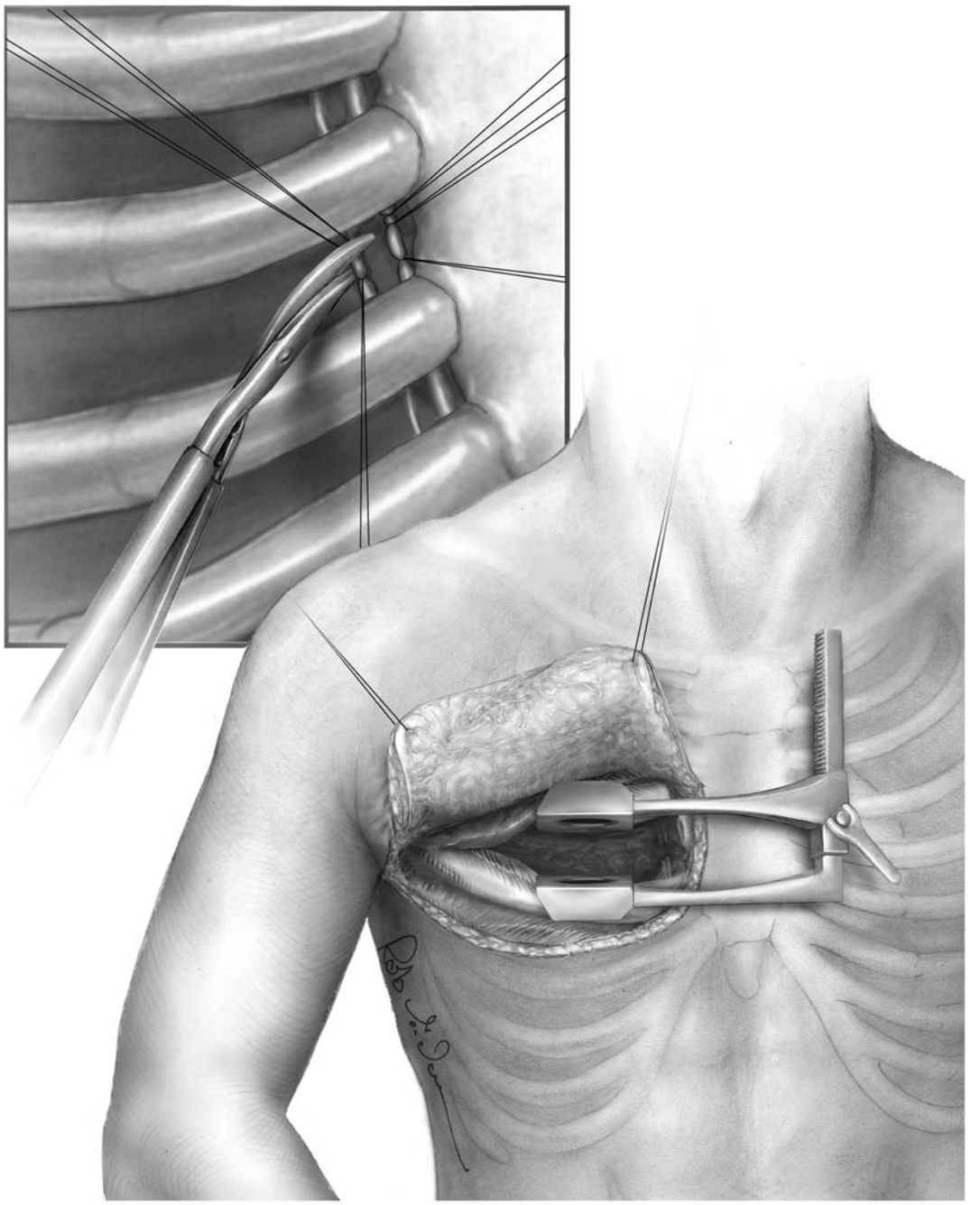
SURGICAL TECHNIQUE



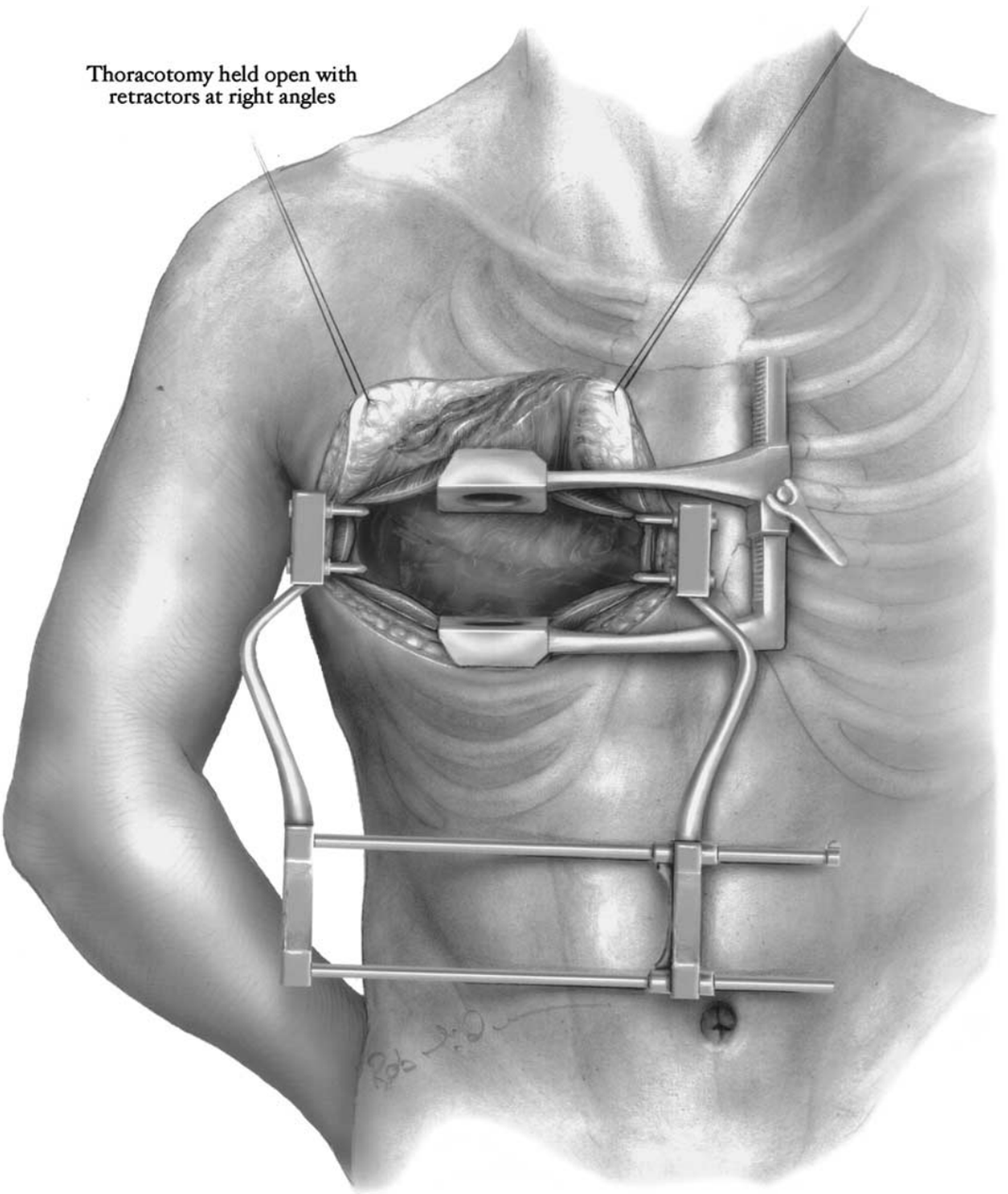
1 Patients are placed in the supine position with a small roll under the ipsilateral shoulder. The patient's arms are tucked. Alternately, the ipsilateral hand can be placed under the buttock and the elbow padded to avoid any pressure on the ulnar nerve. The skin incision begins in the fourth or fifth interspace at the lateral edge of the sternum and curves along the submammary crease to the anterior axillary line. Palpating the second rib where it joins the sternomanubrial joint can help in locating the fourth interspace. This interspace provides good exposure for most resections and lung transplantation.



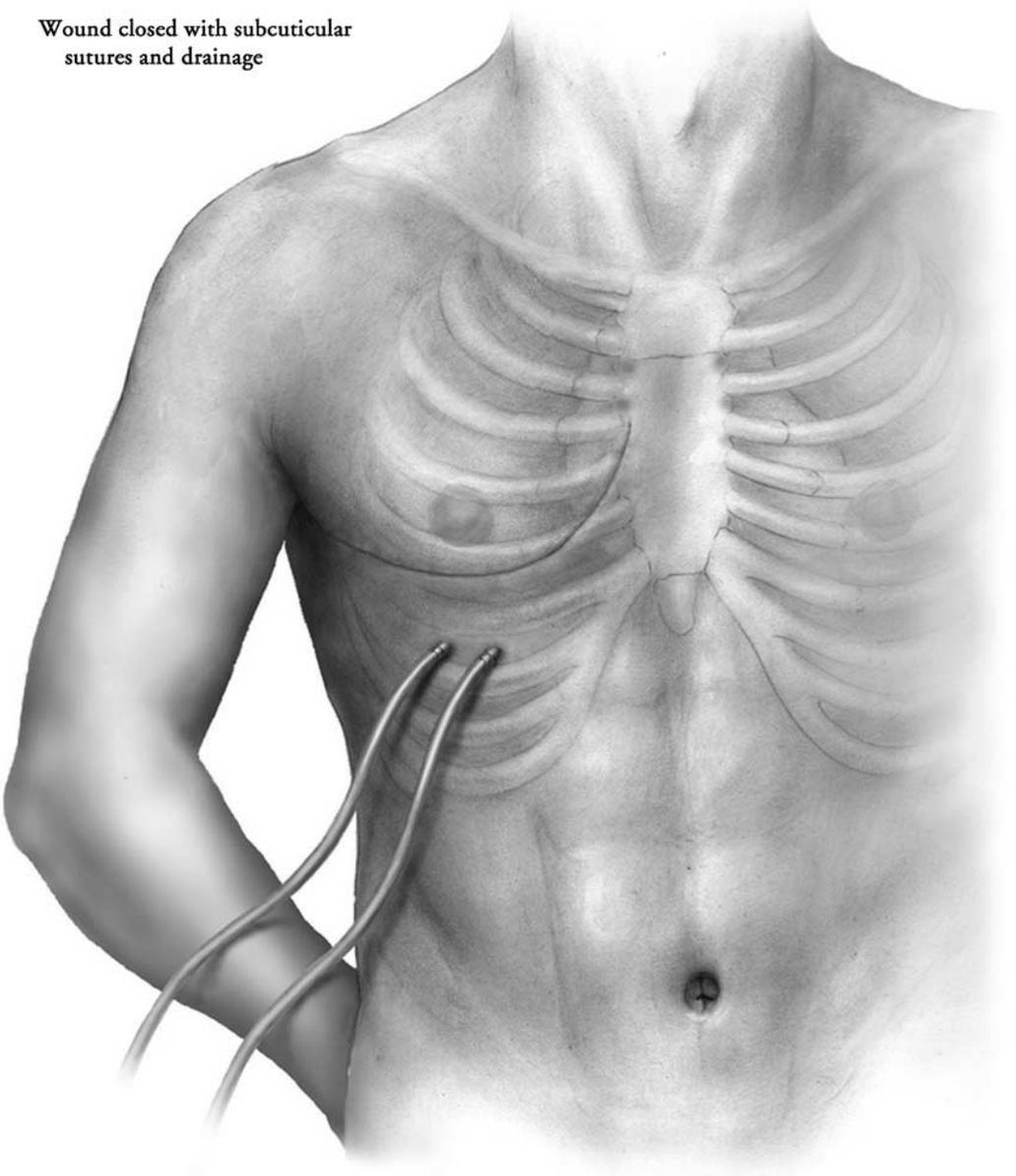
2 The incision is carried down through the subcutaneous tissue to the pectoralis fascia. In heavy patients or women with pendulous breasts, it is necessary to elevate the soft tissue or breast tissue so that the pectoral muscle can be divided at the level of the fourth interspace. Intercostal muscles are divided the length of the incision.



3 Further exposure can be gained by removing a small portion of the fourth costal cartilage or by disarticulating the costosternal joint. For this latter technique, the mammary vessels are dissected and ligated to avoid tearing them. With placement of a retractor and rib spreading, the intercostal muscles are divided posteriorly to increase exposure.



4 Placement of a Balfour retractor at right angle enables satisfactory lateral retraction of the latissimus and serratus muscles.



5 The incision is closed by reapproximating the ribs with 4 pericostal sutures. The pectoralis muscle is then reapproximated, followed by the subcutaneous tissue and the skin.