

PREOPERATIVE DIAGNOSIS: , Left chest wall tumor, spindle cell histology.,POSTOPERATIVE DIAGNOSIS: , Left chest wall tumor, spindle cell histology with pathology pending.,PROCEDURE: ,Resection of left chest wall tumor, partial resection of left diaphragm, left lower lobe lung wedge resection, left chest wall reconstruction with Gore-Tex mesh.,ANESTHESIA: , General endotracheal.,SPECIMEN: , Left chest wall with tumor and left lower lobe lung wedge resection to pathology.,INDICATIONS FOR PROCEDURE: , The patient is a 79-year-old male who began to experience back pain approximately 2 years ago, which increased. Chest x-ray and CT scan revealed a 3 cm x 4 cm mass abutting the left chest wall inferior to the left scapula with pleural thickening. A biopsy was performed at an outside hospital (Kaiser) and pathology was consistent with mesothelioma. The patient had a metastatic workup, which was negative including a brain MRI and bone scan. The bone scan showed only signal positivity in the left 9th rib near the tumor. The patient has a significant past medical history consisting of coronary artery disease, hypertension, non-insulin dependent diabetes, longstanding atrial fibrillation, anemia, and hypercholesterolemia. He and his family were apprised of the high-risk nature of this surgery preoperatively and informed consent was obtained.,PROCEDURE IN DETAIL: , The patient was brought to the operating room and placed in the supine position. The patient was intubated with a double-lumen endotracheal tube. Intravenous antibiotics were given. A Foley catheter was placed. The patient was placed in

the right lateral decubitus position and the left chest was prepped and draped in the usual sterile fashion. An incision approximately 8 inches long was made centered over the mass and extending slightly obliquely over the mass. The skin and subcutaneous tissues were dissected sharply with the electrocautery. Good hemostasis was obtained. The tumor was easily palpable and clearly involving the 8th to 9th rib. A thoracotomy was initially made above the mass in approximately the 7th intercostal space. Inspection of the pleural cavity revealed multiple adhesions, which were taken down with a combination of blunt and sharp dissection. The thoracotomy was extended anteriorly and posteriorly. It was clear that in order to obtain an adequate resection of the tumor, approximately 4 rib segment of the chest wall would need to be resected. The ribs of the chest wall were first cut at their anterior aspect. The ribs 7, 8, 9, and 10 were serially transected after the interspaces were dissected with electrocautery. Hemostasis was obtained with both electrocautery and clips. The chest wall segment to be resected was retracted laterally and posteriorly. It was clear that there were at least 2 areas where the tumor was invading the lung and a lengthy area of diaphragmatic involvement. Inferiorly, the diaphragm was divided to provide a margin of at least 1 to 2 cm around the areas of tumor. The spleen and the stomach were identified and were protected. Inferiorly, the resection of the chest wall was continued in the 10th interspace. The dissection was then carried posteriorly to the level of the spine. The left lung at this point was further

dissected out and multiple firings of the GIA 75 were used to perform a wedge resection of the left lower lobe, which provided a complete resection of all palpable and visible tumor in the lung. A 2-0 silk tie was used to ligate the last remaining corner of lung parenchyma at the corner of the wedge resection. Posteriorly, the chest wall segment was noted to have an area at the level of approximately T8 and T9, where the tumor involved the vertebral bodies. The ribs were disarticulated, closed to or at their articulations with the spine. Bleeding from the intercostal vessels was controlled with a combination of clips and electrocautery. There was no disease grossly involving or encasing the aorta. The posterior transection of the ribs was completed and the specimen was passed off of the field as a specimen to pathology for permanent section. The specimen was oriented for the pathologist who came to the room. Hemostasis was obtained. The vent in the diaphragm was then closed primarily with a series of figure-of-8 #1 Ethibond sutures. This produced a satisfactory diaphragmatic repair without undue tension. A single 32-French chest tube was placed in the pleural cavity exiting the left hemithorax anteriorly. This was secured with a #1 silk suture. The Gore-Tex mesh was brought on to the field and was noted to be of adequate size to patch the resulting chest wall defect. A series of #1 Prolene were placed in an interrupted horizontal mattress fashion circumferentially and tied down individually. The resulting mesh closure was snug and deemed adequate. The serratus muscle was reapproximated with figure-of-8 0 Vicryl. The latissimus was

reapproximated with a two #1 Vicryl placed in running fashion. Of note, two #10 JP drains were placed over the mesh repair of the chest wall. The subcutaneous tissues were closed with a running 3-0 Vicryl suture and the skin was closed with a 4-0 Monocryl. The wounds were dressed. The patient was brought from the operating room directly to the North ICU, intubated in stable condition. All counts were correct.,