



DEPARTMENT OF PATHOLOGY

Short Report in Pathology

Organ system: Lung

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1=Resident, 2=Supervising Attending

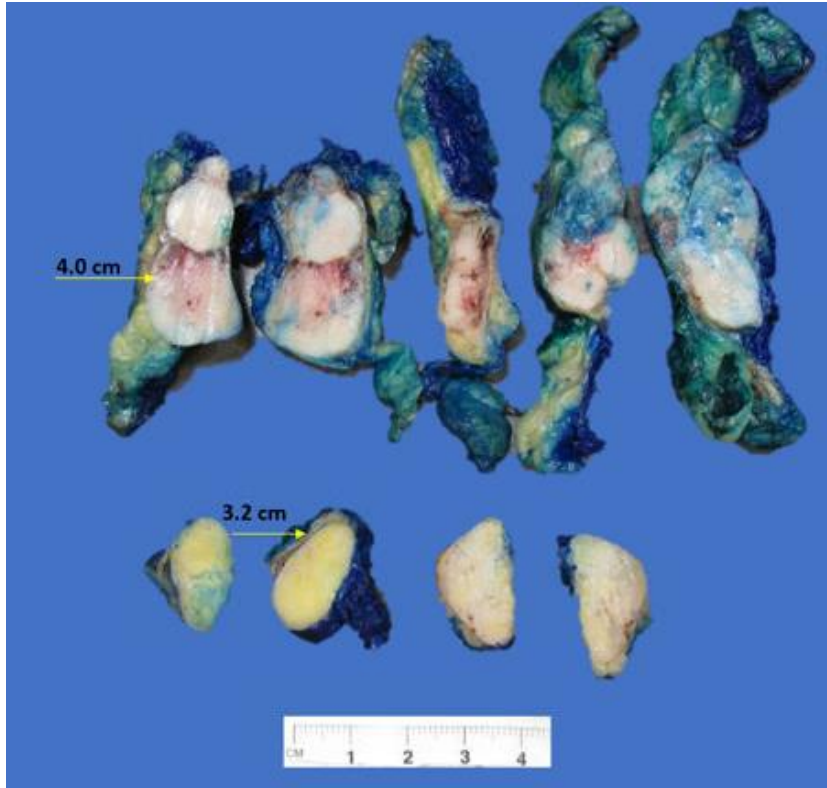
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History:

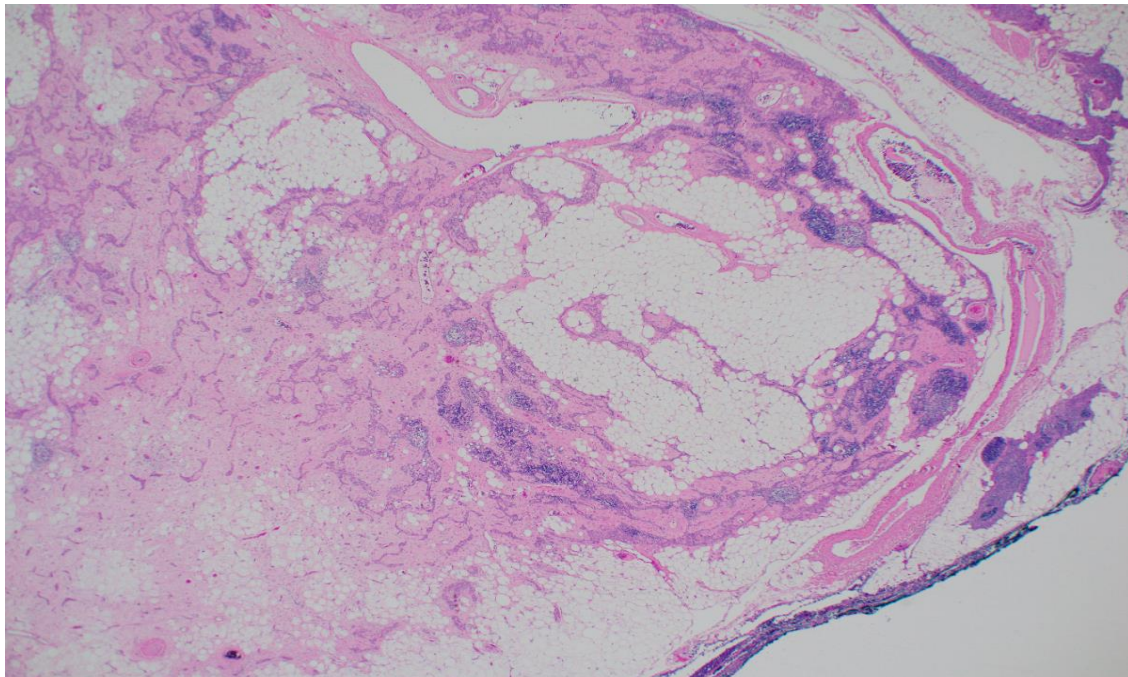
A 75-year-old male with past medical history of hypertension, hyperlipidemia, liver disease, mitochondrial myopathy, gout, hypothyroidism, was found to have an incidental anterior mediastinal mass measuring 36 x 37 mm on CT scan of chest and CT angiogram of coronary arteries. He was taken to the operating room for right robotic VATS, thymectomy. The specimen designated as "thymus" was sent for intraoperative consultation. The specimen is 64 g, 10 x 8.5 x 3 cm in size and contained two masses (4 cm tan white and 3.2 cm tan, yellow). The intraoperative diagnosis for the 4 cm mass is favor thymoma.

Gross Images:

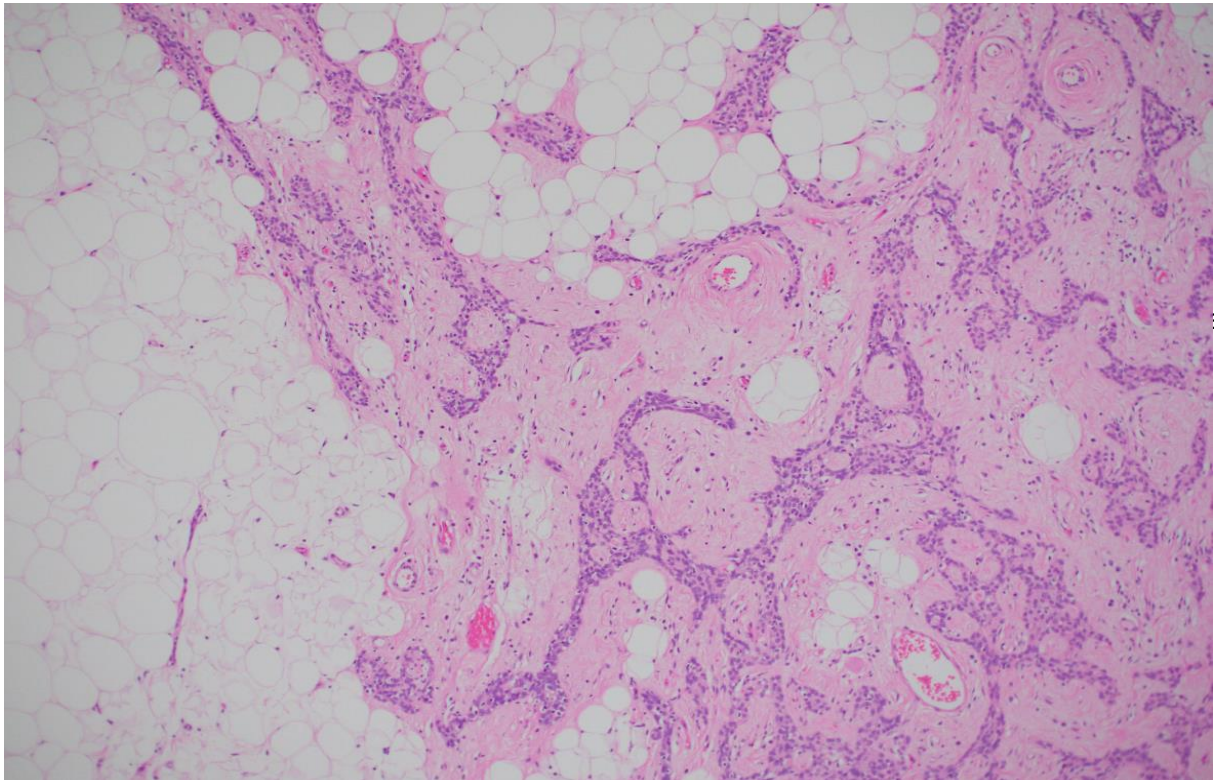


The cut surface of two masses. One mass is 4 cm, with tan, pink fleshy cut surface (top). Histology confirms that this is a type I thymoma. The second mass is 3.2 cm with tan yellow and fibrotic cut surface.

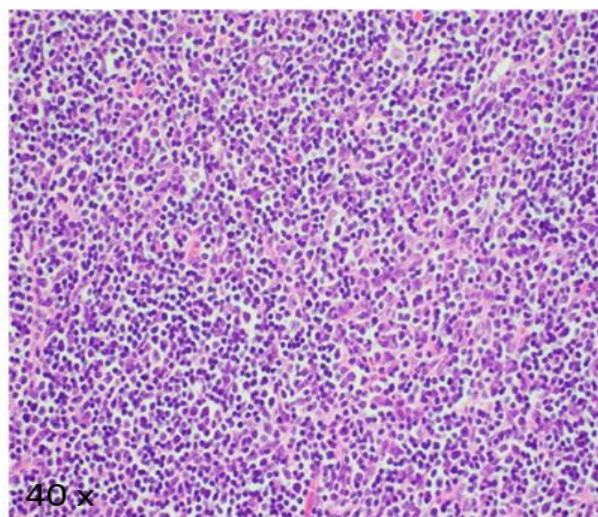
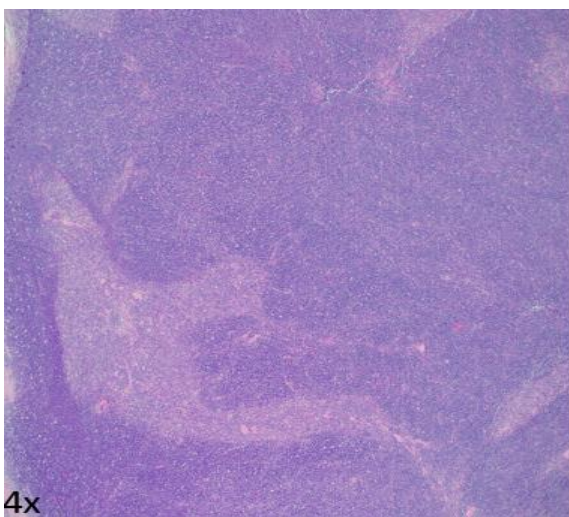
Microscopic Images:



At low power, the tumor consists of a large amount of mature adipose tissue and dense fibrous tissue, with scattered bands of epithelial component. (Hematoxylin and Eosin stain, 20x)

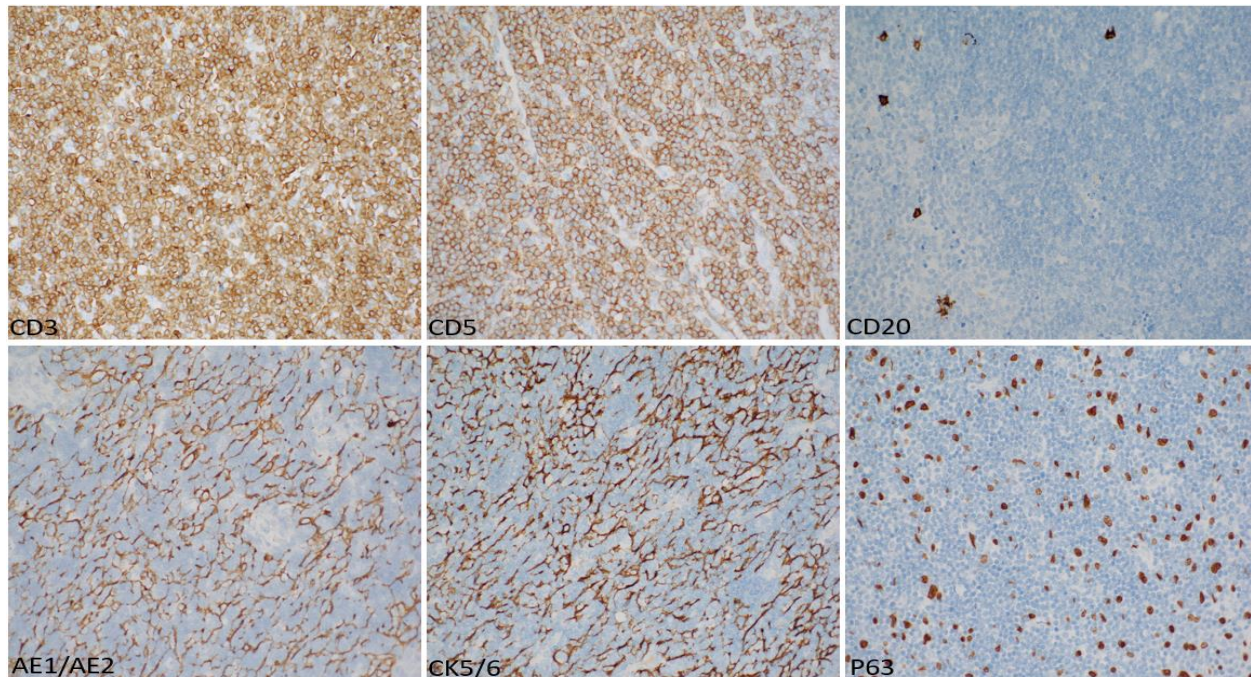


At medium power, the epithelial component consists of irregularly connected strands of thymic epithelial cells within fibrous stroma. The tumor cells are polygonal, and uniform in size. (Hematoxylin and Eosin stain, 200x)



H&E images of the 4 cm mass with tan white cut surface, confirm the frozen section diagnosis of thymoma B1. (Hematoxylin and Eosin stain, left 40x, right 400x).

Immunohistochemistry



CD3 and CD5 immunostains are positive in mature and immature T- cells in the medullary and cortical regions. CD20 staining shows presence of B cells. Pancytokeratin AE1/AE3 and CK 5/6 show positively stained delicate epithelial cells meshwork while p63 is positive in dispersed thymic epithelial cells. The immunohistochemistry and histology confirm the diagnosis of thymoma type B1.

Diagnosis:

Lipofibroadenoma associated with adjacent type B1 thymoma

Differential diagnoses:

Thymolipoma

Fibroadenoma of the thymus

Discussion:

Lipofibroadenoma of the thymus is an extremely rare benign thymic tumor. Histologically the tumor is similar to fibroadenoma of the breast, and characterized by fibrotic and hyaline stroma

predominates over narrow strands of bland looking epithelial cells, single or multiple fat cells and few lymphocytes. Our case is one of 6 tumors that have ever been reported, all in men aged 20-62 years old. Out of the 6 tumors, three cases arose adjacent to a type B1 thymoma.

References:

- 1.Thoracic Tumours WHO Classification of Tumours, 5th Edition, Volume 5
- 2.Kurtin PJ, Myers JL, Adlakha H, et al. Pathologic and clinical features of primary pulmonary extranodal marginal zone B-cell lymphoma of MALT type. *Am J Surg Pathol.* 2001 Aug;25(8):997-1008. PMID:11474283
- 3.Wang YL, Yi XH, Chen G, et al. Thymoma associated with a lipofibroadenoma: report of a case. *Zhonghua Bing Li Xue Za Zhi.* 2009 Aug;38(8):556-7. Chinese. PMID:20021971