



# Anatomical Pathology Findings of Surgically Resected Mediastinal Masses in Dr Soetomo Academic General Hospital, Surabaya, Indonesia: A Summary of 5 Years Observational Study

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## INTRODUCTION

A myriad of pathology may present in mediastinum, both neoplastic and non-neoplastic. The differential diagnosis is derived from the tissue or structure from which the mass is arising, and later confirmed by anatomical pathology examination. We report our experience and finding in surgically resected mediastinal masses during 5 years period (February 2017 – September 2022).

## RESULTS

A total of 89 patients were admitted and surgical resection of mediastinal masses was performed. Our patients were ranging from 5 months to 69 years old, with median age of 41 years. Of these, 76 patients underwent open surgery (either thoracotomy or median sternotomy), while 13 patients underwent video-assisted thoracoscopic surgery (VATS). Up to 80.9% ( $n = 72$ ) were anterior mediastinal masses, 12.4% ( $n = 11$ ) were posterior mediastinal masses, 3.4% ( $n = 3$ ) were middle mediastinal masses, and 3.4% ( $n = 3$ ) were superior mediastinal masses. Anatomical pathology examination were performed. Of these, 37.1% ( $n = 33$ ) were thymoma, 11.2% ( $n = 10$ ) were teratoma, and 10.1% ( $n = 9$ ) were thyroid carcinoma. We present our findings in Table 1.

## DISCUSSION

We found that thymic lesions, especially thymomas, were the most common mediastinal neoplasm in our study. Previous study stated that the incidence of thymoma was 0.15 cases per 100,000. Although rare in children, thymomas represent 20% of anterior mediastinal neoplasms in adults. Thymomas usually appear as homogeneous, oval, rounded or lobulated soft-tissue masses in the anterior mediastinum. Surgical resection remains the standard of care for both noninvasive and invasive thymomas as it provides the best prognosis. Beside thymoma, we also found that neoplasm of thyroid, teratoma, and lymphoma were quite common in anterior mediastinum. In posterior mediastinal space, neurogenic tumors (e.g. schwannoma) were the most frequent type of lesions. Schwannomas are slow growing lesions but can nevertheless be debilitating. They almost never undergo malignant transformation. Again, surgery is the treatment of choice.

## CONCLUSION

Knowledge and understanding of the varying mediastinal masses is crucial for thoracic surgeons to appropriately prepare the surgical strategy, avoid morbidity, and expedite hospitalization.

Table 1. Anatomical pathology findings and their number of cases in our observational study

Mass Location	Anatomical Pathology Finding	Number of cases
Anterior (n=72)	Thymoma A	3
	Thymoma AB	9
	Thymoma B1	3
	Thymoma B2	14
	Thymoma B3	4
	Thymic carcinoma (C)	2
	Thymic remnant	7
	Mature teratoma	9
	Immature teratoma	1
	Seminoma	3
	Yolk sac tumor	1
	Papillary thyroid carcinoma	3
	Follicular thyroid carcinoma	2
	Adenomatous goiter	2
	Hodgkin lymphoma	3
	Non-hodgkin lymphoma	1
	Liposarcoma	1
Synovial sarcoma	1	
Posterior (n=11)	Malignant round cell tumor	1
	Spindle mesenchymal tumor	2
	Schwannoma	4
	Ganglioneuroma	1
	Malignant peripheral nerve sheath tumor	1
	Benign cyst	2
Middle (n=3)	Ependymoma	1
	Solitary fibrous tumor	1
	Lipoblastoma	1
	Follicular thyroid carcinoma	1
	Metastasis osteosarcoma	1
Superior (n=3)	Metastasis malignant phyllodes tumor	1
	Papillary thyroid carcinoma	3

## REFERENCES

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