

A Tale of Three Mediastinal Masses: A Case Series

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Objectives



A review of three of three different diagnoses of mediastinal masses with similar clinical presentations; **mature teratoma, seminoma malignancy and non-seminoma malignancy**

BACKGROUND

- ❖ Mediastinal masses account for 3% of tumours found in the thorax cavity with 50% of these being located in the anterior compartment.
- ❖ Several aetiologies including mature teratoma, seminoma germ cell malignancies and non-seminoma germ cell malignancies
- ❖ There is no clear standardized approach, which creates a diagnostic challenge and often delay in appropriate diagnosis and management

CASE 1

- ❖ A 48-year-old male presented with a six-month history of chest pain and developing left arm paresthesia
- ❖ PMH: Chronic back pain
- ❖ Multiple admissions to emergency department with negative investigations
- ❖ CT – 12.4 x 6cm anterior mediastinal mass
- ❖ Tumour Markers **AFP 20 β**
hCG 59



Image 1 – Initial Imaging of Case 1

- ❖ MDT - Thoracic surgeons- Difficult resection, high volume disease
- ❖ Management - 1 cycle Low EP followed by 5 cycles POM/ACE
- ❖ Repeat CT - 8.2x 5.5cm mass
- ❖ MDT - Resection of tumour
- ❖ Histopathology: Pathological complete response



Image 2 – Post operative Imaging of Case 1

CASE 2

- ❖ A 30-year-old female presented with chest pain and cough
- ❖ PMH: Nil relevant
- ❖ CT - 6.5cm anterior mediastinal mass

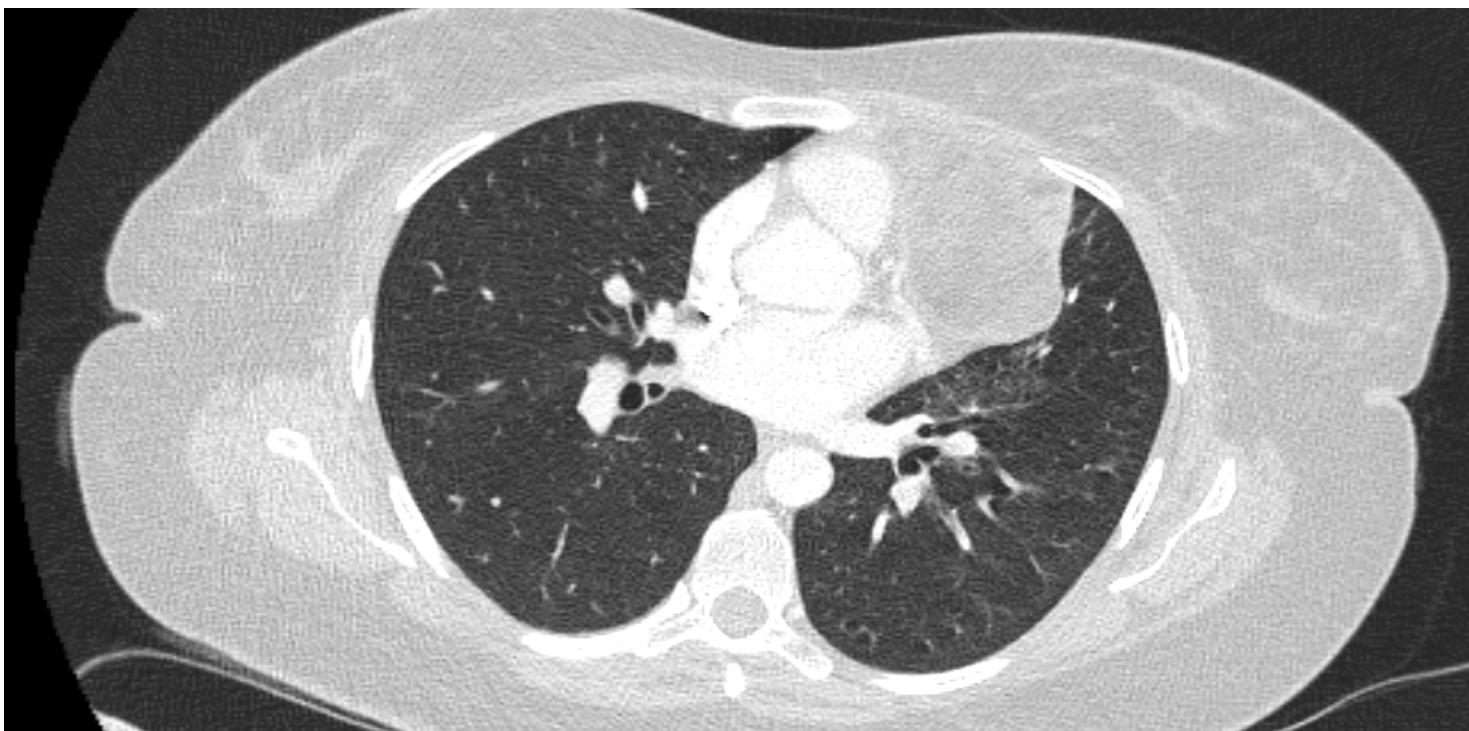


Image 3 – Initial Imaging of Case 2

- ❖ Tumour Markers AFP 2 β - HCG <2 LDH normal
- ❖ MDT – Resection of tumour
- ❖ Histopathology : **Mature teratoma**

CASE 3

- ❖ A 44-year-old male presented with a two-month history of cough, chest pain and arm swelling
- ❖ PMH: Current Smoker
- ❖ CT - 15 x12 cm anterior mediastinal mass
- ❖ Tumour Markers LDH 331, AFP 4, β HCG 8

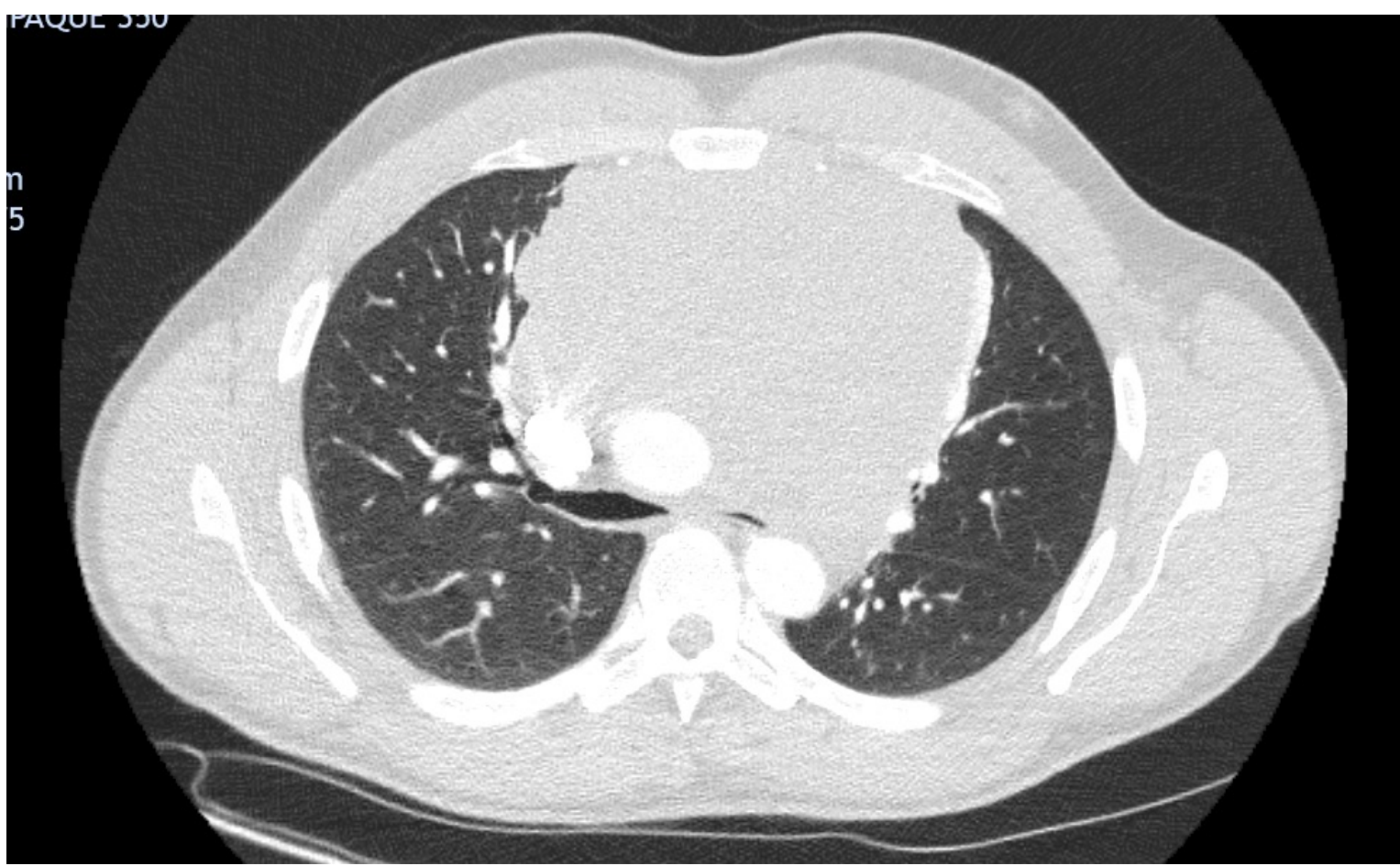


Image 4 – Initial Imaging of Case 3

- ❖ MDT - Thoracic surgeons- High volume disease, complicated surgery
- ❖ Tissue biopsy – **Seminoma**
- ❖ Management - 1 cycle of low dose EP followed by 5 cycles of POM/ACE
- ❖ Repeat CT - 5x5cm
- ❖ MDT Resection of tumour
- ❖ Histopathology: necrosis and complete pathological response



Image 5 – Post operative Imaging of Case 3

DISCUSSION

- ❖ Careful review of demographics, imaging and tumour markers should be sought.
- ❖ Due to the rarity of mediastinal masses and germ cell tumours, specialised germ cell, respiratory and cardio-thoracic input is needed with a collaborative approach.
- ❖ Standardised guidance and low threshold to consider malignant germ cell tumours, in mediastinal masses, is required for timely intervention.