



8TH - 10TH NOVEMBER, 2024 | GRAND HYATT MUMBAI

Registration No-453

CT GUIDED PERCUTANEOUS TRANSSTERNAL BIOPSY OF ANTERIOR MEDIASTINAL MASS

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INTRODUCTION:

Anterior mediastinal lesions which are directly posterior to the sternum and have no significant parasternal component are difficult to approach for biopsy.

Anterior mediastinal masses can be approached via either parasternal approach or transsternal approach.

Parasternal approach has risk of injury to the internal mammary artery which is branch of 1st part of subclavian artery.

- Very few cases of percutaneous transsternal core biopsy of anterior mediastinal mass has been published in the literature

Aims/ Objectives:

This study aims to evaluate the safety and efficacy of CT-guided transsternal core biopsy for anterior mediastinal masses, particularly in cases where traditional parasternal approaches may pose significant risks, such as injury to the internal mammary artery leading to life-threatening hemothorax.

To avoid this grave complication we can approach anterior mediastinal masses via transsternal approach.

Methodology:

- Prepare the part by painting and draping by betadine and sterillium
- Give 10 cc 2% Lignocaine upto periosteum for local anaesthesia
- Insert bone biopsy needle to pierce the sternum and reach anterior mediastinum
- Insert bard tru cut semiautomatic core biopsy needle upto the desired site for biopsy
- Take 3-5 adequate cores
- Dressing the biopsy site with betadine

CASE REPORTS:

- 1. A 55 years/Male patient presented with mass in the apical and anterior segment of the right upper lobe extending into the anterior mediastinum in the retrosternal location

CT guided percutaneous transsternal core biopsy done without any procedure related complications

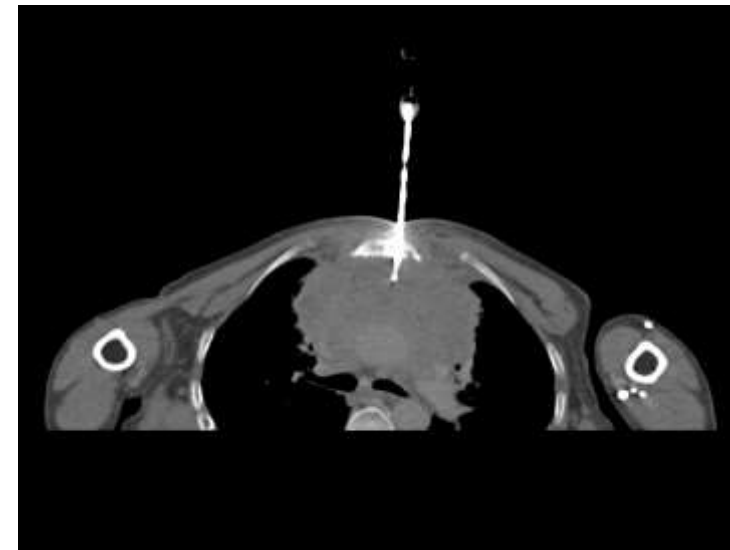
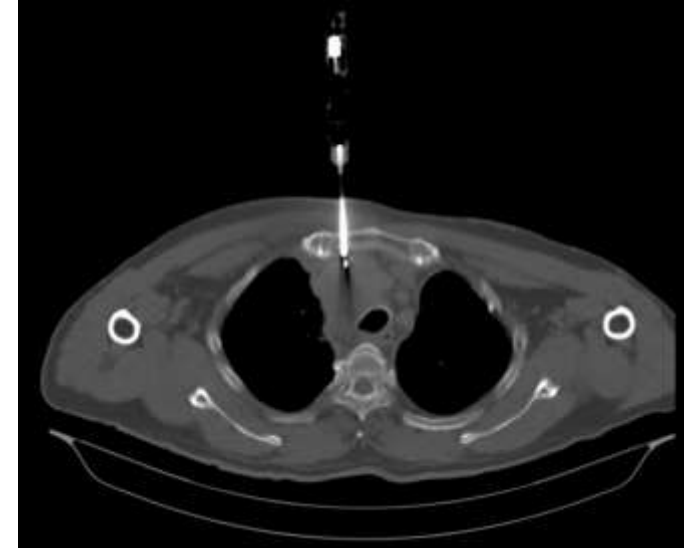
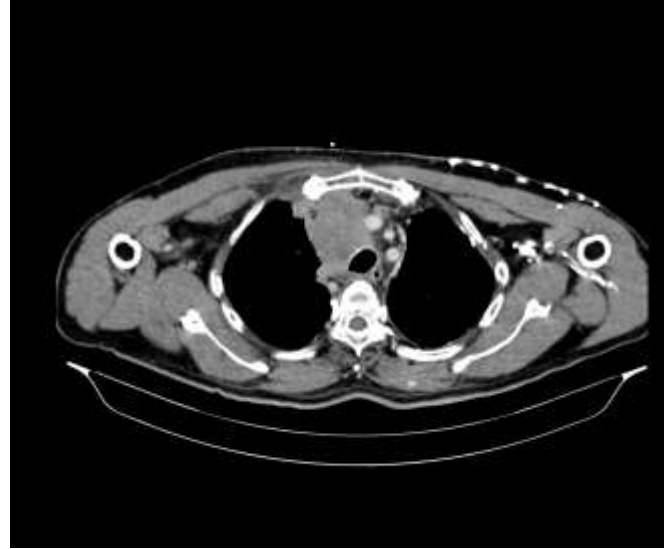
HPE report: Small cell lung cancer

- 2. A 73 years/male patient presented with large anterior and superior mediastinal mass.

CT guided percutaneous transsternal core biopsy done without any procedure related complications

HPE report: ALK negative anaplastic large cell lymphoma

Representative images: Case 1 & 2



Conclusion:

CT-guided transsternal core biopsy is a safe and effective technique for accessing anterior mediastinal masses.

It offers advantages over the parasternal approach, including a reduced risk of vascular injury and complications such as hemothorax and pneumothorax.

Our findings support the use of this method in clinical practice for obtaining tissue samples from difficult-to-reach anterior mediastinal lesions.

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