

Pneumomediastinum and pneumoperitoneum after endobronchial laser therapy and debulking in leiomyosarcoma lung metastasis



Carolina Silva Alves, André Fabiano, Marina Alves,
Luís Maia Morais, Miguel Ferrão Silveira, Laura Santos, Rui Costa,
José Boléo-Tomé, Fernando Rodrigues
Pulmonology - Hospital Professor Doutor Fernando da Fonseca



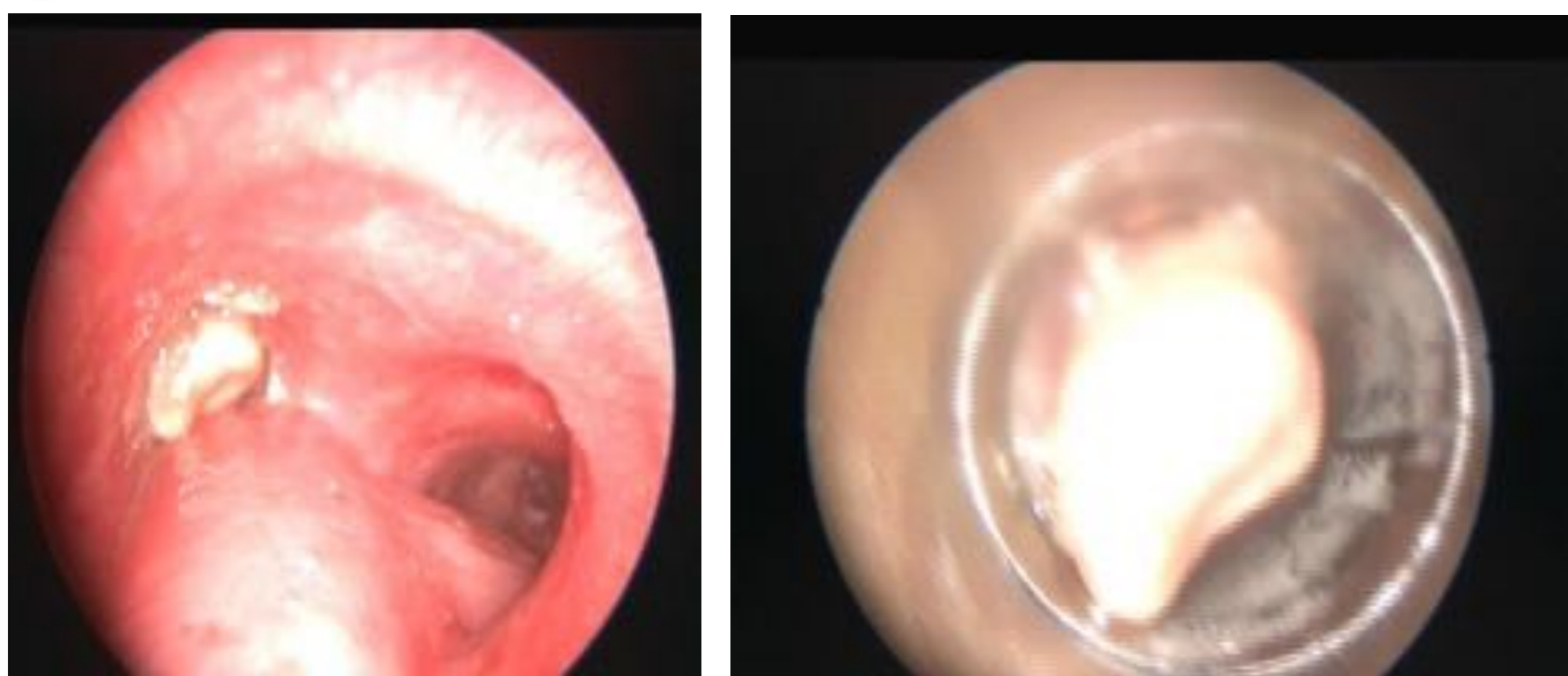
Amadora, Portugal

BACKGROUND

- Rigid bronchoscopy is mainly used for central airway obstruction;
- Pneumomediastinum and pneumoperitoneum are rare complications of rigid bronchoscopy;
- Leiomyosarcoma is a rare solid neoplastic malignancy characterized by aggressive behavior, occasionally metastizing to the lung.



The patient underwent a rigid bronchoscopy revealing:

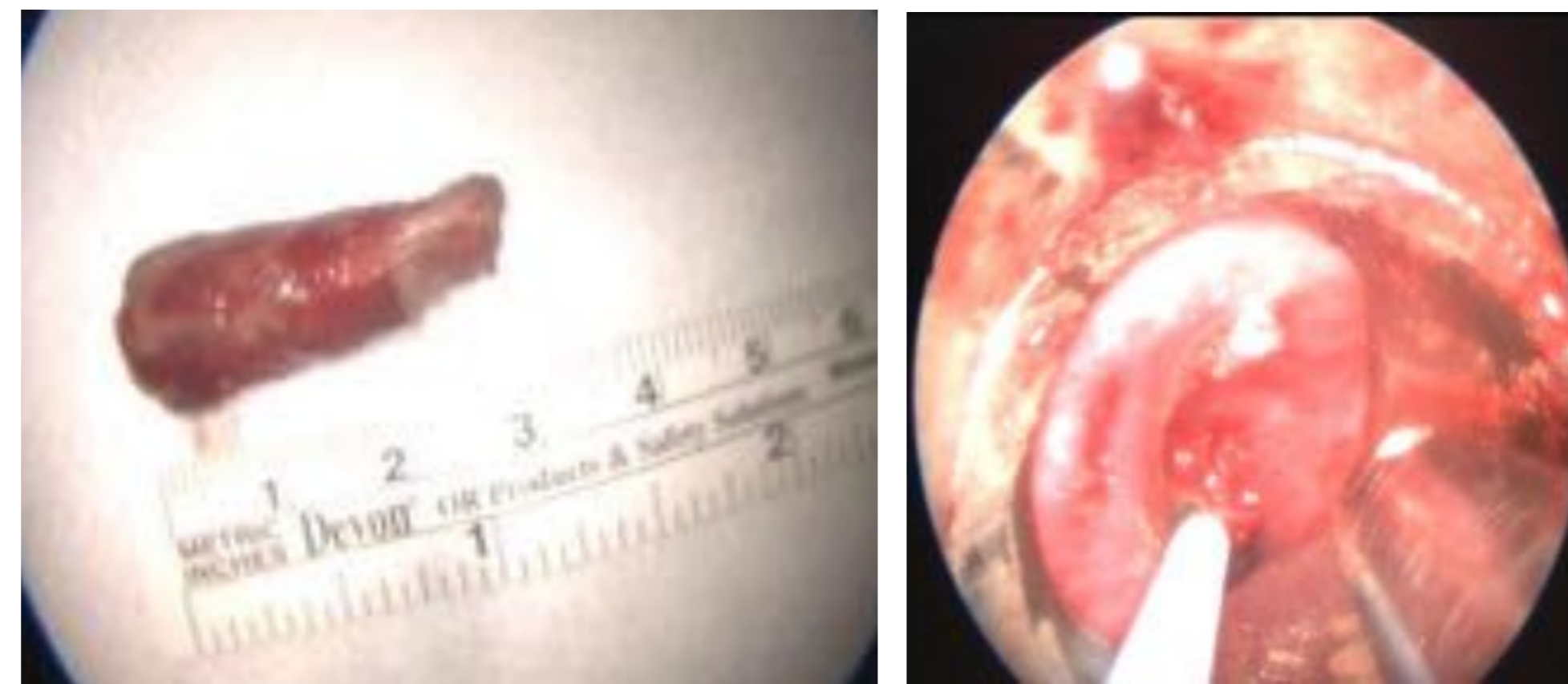


Necrotic neoplastic growth occluding the main left bronchus (90% stenosis)

The techniques performed:

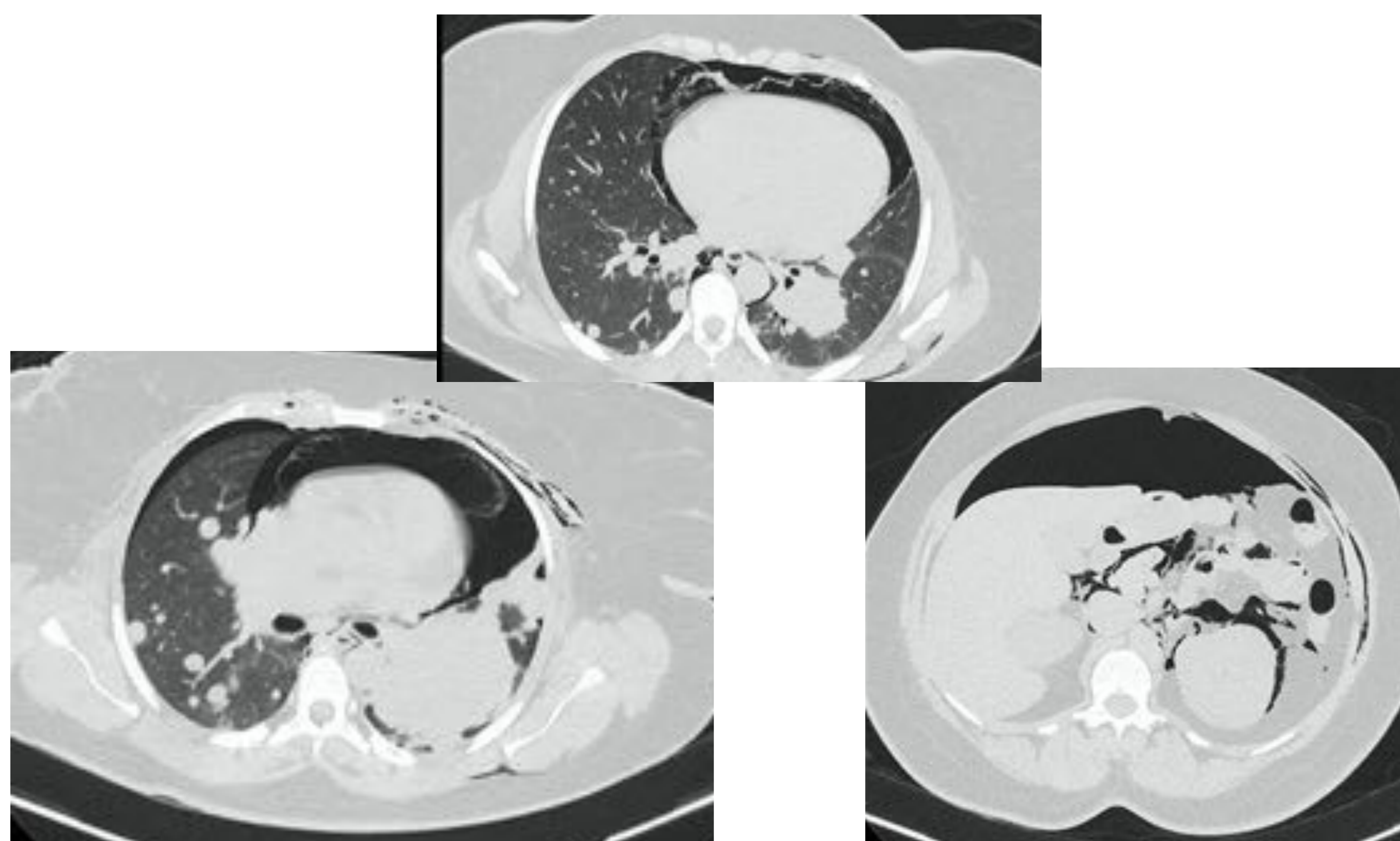
➤ **Mechanical debulking**

➤ **Laser Nd:YAG photocoagulation**



Showing occlusion of left upper lobe bronchus and permeability of lower lobe segments

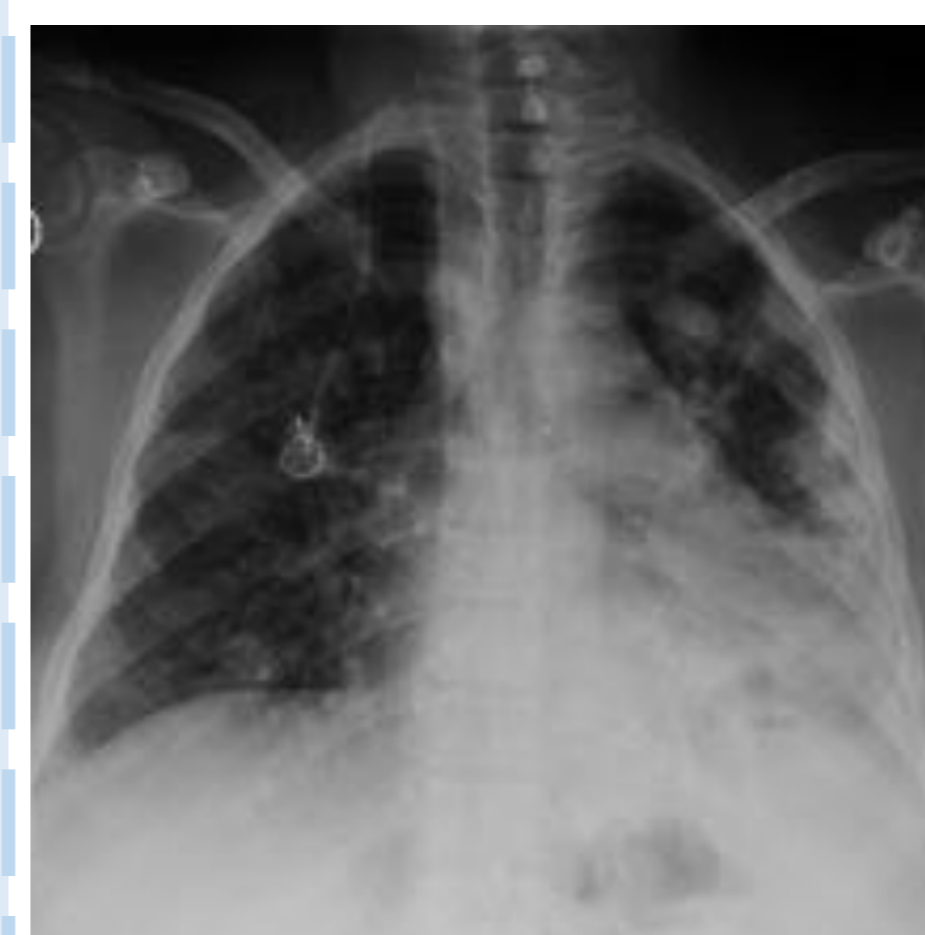
Biopsy of the lung mass → leiomyosarcoma of unknown origin



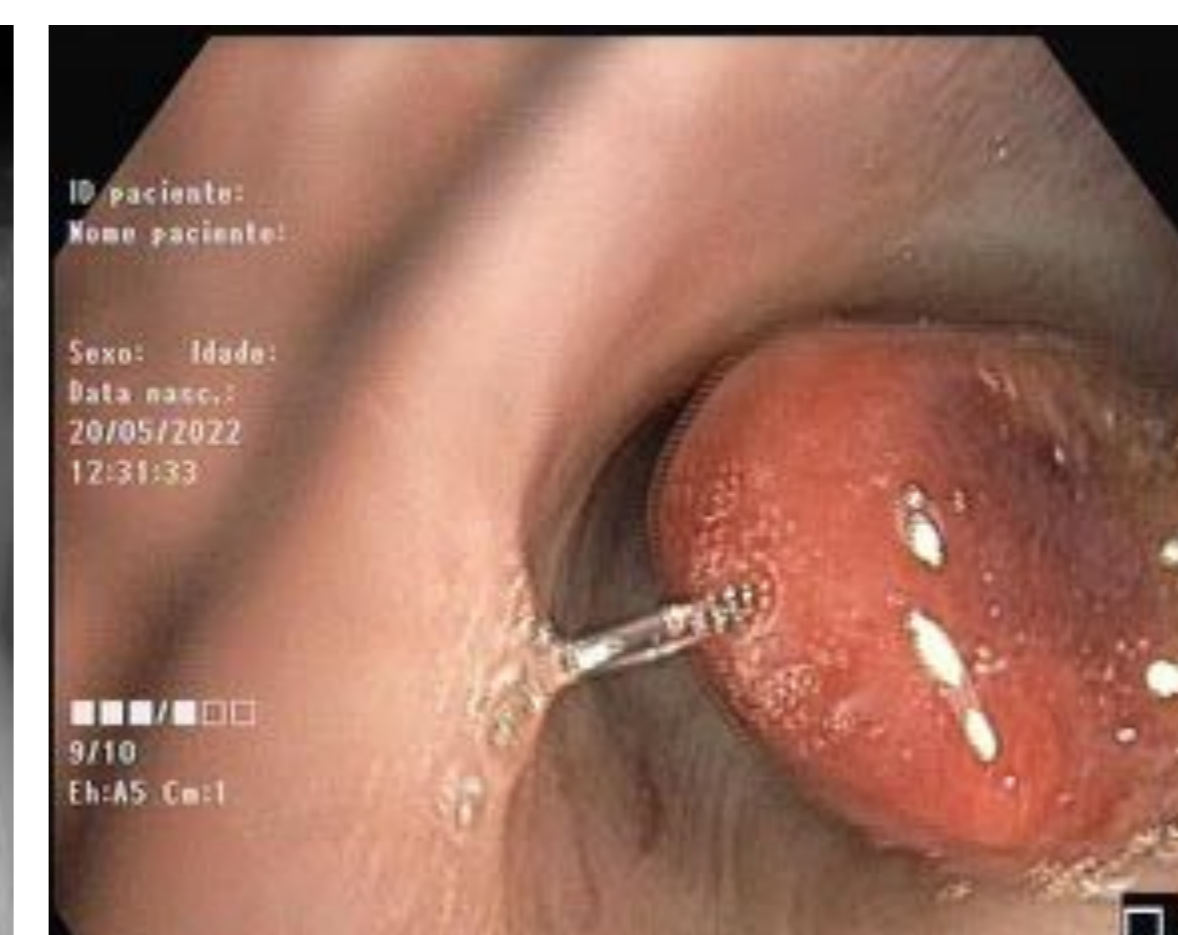
Bilateral pneumomediastinum and pneumothorax, pneumoperitoneum and retroperitoneum

Managed conservatively

3 WEEKS LATER



Left atelectasis.



New rigid bronchoscopy: Neoplastic growth occluding the main left bronchus and right B6 segment.

- **Mechanical debulking** was performed of both lesions.
- A **Dumon stent** was placed in the left main bronchus.

Biopsy of the right kidney mass → renal leiomyosarcoma stage IV.

CASE REPORT

♀ 41-year-old

Presented to ER with



- Hemoptoic cough
- Progressive weight loss

previous 2 months



Chest Radiography – Multiple “cannon ball” pulmonary nodules.



Chest CT – Multiple pulmonary nodules.



Chest CT – Left mass invading the main left bronchus.

In the recovery room



Patient developed sudden subcutaneous emphysema (face and neck).



Subcutaneous needles were inserted → clinical improvement

CONCLUSION

- We report these rare complications following bronchoscopy and rapid progression of leiomyosarcoma lung metastasis.
- Although no laceration was detected during the procedure, pneumomediastinum and pneumothorax are possible, and the air can spread to the abdominal cavity through small pleuroperitoneal anatomic defects, resulting in pneumoperitoneum and retroperitoneum