Third left pulmonary lobe

Liang Zeng,[1] Qinqin Xu,[2] Nong Yang,[1] Analyn Lizaso,[3] Yongchang Zhang [1]

[1]Department of Medical Oncology, Lung Cancer and Gastrointestinal Unit, Hunan Cancer Hospital/The Affiliated Cancer Hospital of Xiangya School of Medicine, Central South University, Changsha, China
[2]Department of Medical Oncology, Qinghai Provincial People's Hospital, Xining, China
[3]Department of Medical Affairs, Burning Rock Biotech, Guangzhou, China

Correspondence to
Dr Yongchang Zhang, Department of Medical Oncology, Lung Cancer and Gastrointestinal Unit, Hunan Cancer Hospital/The Affiliated Cancer Hospital of Xiangya School of Medicine, Central South University, Changsha, China;
zhangyongchang@csu.edu.cn

LZ and QX contributed equally.

LZ and QX are joint first authors.

Received 1 September 2020
Revised 29 October 2020
Accepted 29 October 2020
Published Online First 23 November 2020

To cite: Zeng L, Xu Q, Yang N, *et al*. *Thorax* 2021;**76**:525.

A 67-year-old man with a 20 pack-year smoking history presented to our hospital with a month-long persistent cough. Blood tests showed elevated serum tumour biomarkers including neuron-specific enolase and carcinoembryonic antigen up to 10-fold the normal range. CT examination of the chest and whole abdomen revealed a 5 cm mass located on the left upper lobe with diffuse metastasis in both lobes of the lung. In addition to the mass in the left upper lung lobe, we also observed extra lung tissue with notable interstitial markings and the presence of metastasis situated above the left upper lobe (figure 1A and B) which we then referred to as the 'third left lung lobe'. There was no evidence of extrathoracic metastatic disease. A CT-guided biopsy was performed to obtain tissue samples from the primary lesion in the left upper lobe and the metastatic lesion in the 'third left lung lobe'. The histopathological diagnosis of both lesions revealed small cell lung cancer, characterised by positive expression of TTF-1, Syn, CgA, and CD56, and negative expression of CK7 and NapsinA (figure 1C and D). The patient was diagnosed with extensive-stage small-cell lung carcinoma and was administered with cisplatin-based etoposide plus atezolizumab as front-line therapy. After two cycles of chemotherapy, chest CT revealed significant tumour shrinkage both in the primary and 'third left lung lobe' which was evaluated as partial response.

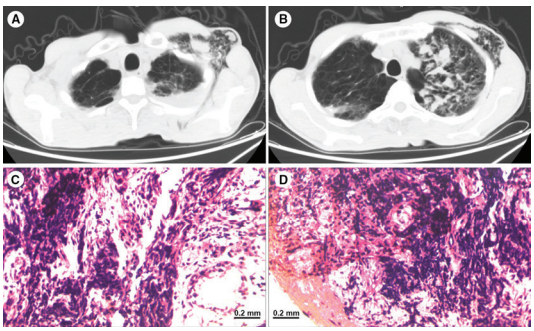

Figure 1 Chest CT scans revealing the third left pulmonary lobe (A, B). Histological examination of the metastatic lesion (C) in the 'third left lung lobe' and the primary lesion (D) reveal small-cell carcinoma.

An ectopic or a third left pulmonary lobe is rare.[1] Without the protection from the ribs, pneumothorax and bleeding can occur, which can easily be misdiagnosed as subcutaneous emphysema. If malignancy is suspected within an ectopic lobe, it can be a more accessible biopsy site but does carry a higher risk of complications such as bleeding and pneumothorax.[2 3] Physicians must be able to recognise this disease in order to provide accurate diagnosis and suitable treatment strategies that can improve the survival and quality of life of patients presenting with rare ectopic lesions.

Contributors YZ contributes to conceptualisation, organisation and data collection. LZ and QX collected the clinical data and drafted the manuscript. NY and AL gave critical comments and suggestions. All authors approved the final version of the manuscript.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

ORCID iD
Yongchang Zhang http://orcid.org/0000-0002-6829-7176

REFERENCES

1 Chinoy MR. Lung growth and development. *Front Biosci* 2003;8:d392–415.
2 Yeow K-M, Su I-H, Pan K-T, *et al*. Risk factors of pneumothorax and bleeding: multivariate analysis of 660 CT-guided coaxial cutting needle lung biopsies. *Chest* 2004;126:748–54.
3 DiBardino DM, Yarmus LB, Semaan RW. Transthoracic needle biopsy of the lung. *J Thorac Dis* 2015;7:S304–16.