

## CLINICAL IMAGE

# Intrapulmonary lymph nodes masquerading as pleural metastasis

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**Abstract**

Intrapulmonary lymph nodes (IPLNs) are a frequent finding of computed tomography for lung cancer and can grow without malignant findings. Linear densities extending from the nodules are a characteristic of IPLNs.

**KEYWORDS**

intrapulmonary lymph node, lung cancer, pleural nodule

## 1 | CASE PRESENTATION

The differentiation between pleural dissemination and intrapulmonary lymph nodes is important if pleural nodules are present in a patient with lung cancer. It is imperative to make comparisons with previous images whenever possible, and surgery should be performed for accurate staging unless obvious distant metastases are observed.

A 71-year-old man with a 50 pack-year history of smoking presented with an abnormal shadow on chest radiography. Chest computed tomography (CT) revealed a 45-mm-sized lesion in the right lower pulmonary lobe and two pleural nodules (Figure 1A–C). Transbronchial biopsy revealed squamous cell carcinoma. Single-slice chest CT performed 13 years ago revealed a very small pleural nodule (Figure 1D–E). Thoracoscopy revealed a black nodule in the pleura, and histopathological examination revealed that the two pleural nodules were intrapulmonary lymph nodes (IPLNs) (Figure 1F).

**Key Clinical Message**

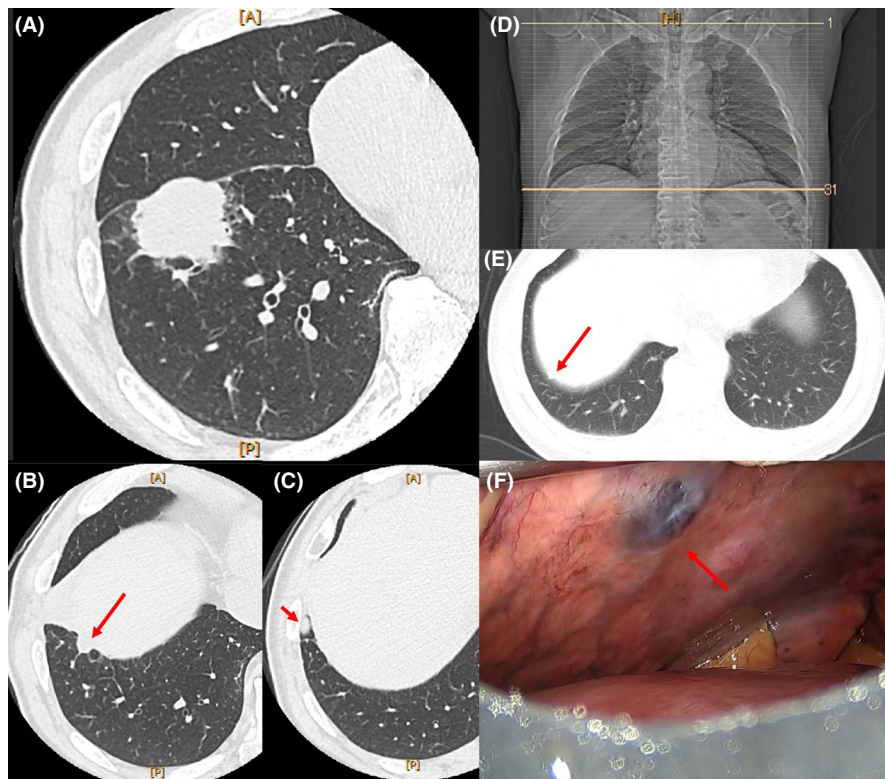
Intrapulmonary lymph nodes (IPLNs) are a frequent finding of computed tomography for lung cancer and can grow without malignant findings. Linear densities extending from the nodules are a characteristic of IPLNs.

## 2 | DISCUSSION AND CONCLUSION

The present case described herein provides two important clinical suggestions. First, IPLNs can grow without malignant findings. A previous study of 794 IPLNs revealed that 123 (15.5%) grew slowly and 66 (8.3%) enlarged like malignant nodule, suggesting the possibility of growing IPLNs.<sup>1</sup>

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**FIGURE 1** CT scan image revealing a 45-mm large squamous cell carcinoma in the right lower pulmonary lobe (A). Two pleural nodules in the same right pulmonary lower lobe as the lung cancer are observed: One is a 10-mm-sized polygonal nodule with linear densities extending from the nodules (B), and the other is a 14-mm-sized oval nodule (C). Low-resolution CT performed 13 years ago (slice thickness: 7.4 mm) showing an exceedingly small pleural nodule (D-E). Thoracoscopy showing a black nodule in the pleura, which is not pleural metastasis but an intrapulmonary lymph node (F). The pathological stage after surgery is pT2bN0M0, stage IIA. The patient remains disease-free for 4 years after surgery. CT, computed tomography

Second, comparisons with previous imaging examinations are useful, even if they are of comparatively poor quality. The presence of one pleural nodule and absence of lung cancer on CT images obtained more than 10 years ago led us to consider the possibility of IPLNs and proceed with surgery. Furthermore, linear densities extending from the nodules, pathologically ectatic lymphoid channels and a characteristic of IPLNs, were seen in our patient.<sup>2</sup>

#### ACKNOWLEDGMENTS

None.

#### CONFLICT OF INTEREST

None.

#### AUTHOR CONTRIBUTIONS

YM was responsible for writing the initial draft of the manuscript. AO was responsible for conception, design, drafting, image modification, and finalizing the manuscript. TY was responsible for surgery and image modification. KS was responsible for design and finalizing. All authors read and approved the final manuscript.

#### ETHICAL STATEMENT

Informed consent for publication and related images has been obtained from the patient.

#### DATA AVAILABILITY STATEMENT

No datasets were generated or analyzed during this case report.

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