

## CLINICAL IMAGE OPEN ACCESS

# Non-Specific Chest Pain—Possibility of Finding Suggestive of Hidden Pleural Metastasis

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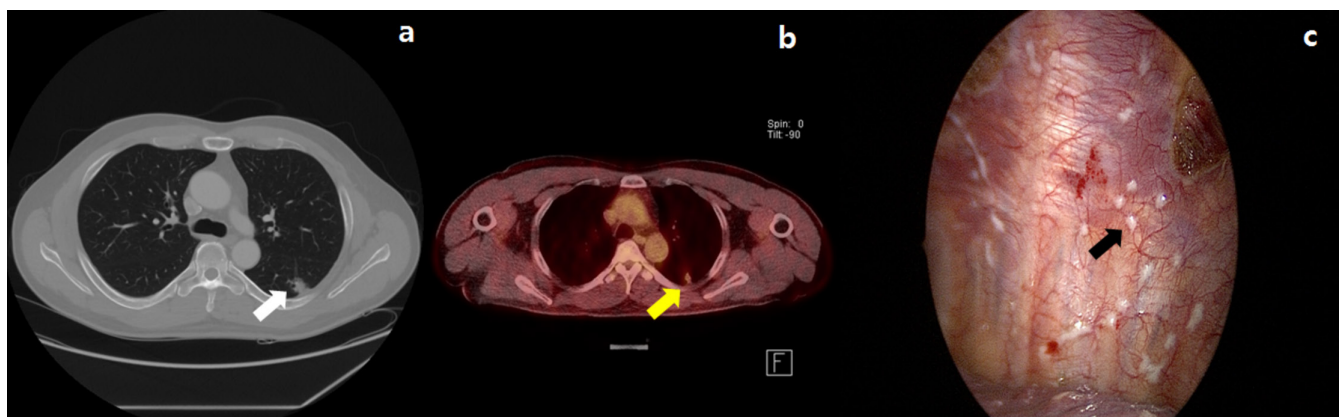
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## ABSTRACT

Non-specific chest pain may suggest important implications such as pleural metastasis. Therefore, active diagnostic procedures such as thoracoscopy and surgical biopsy should be considered in patients with lung mass without obvious pleural involvement who complain of non-specific persistent chest pain, even in the absence of specific findings on imaging studies and the association of pain with trauma.

A 45-year-old male patient visited our hospital complaining of persistent left chest pain after a traffic accident. There was no underlying disease and no significant fractures. Following the accident, he had been treated at a pain clinic but his symptom persisted. A chest computed tomography (CT) revealed a 1.9 cm part-solid, pleural-based mass in the left lower lobe (LLL)

superior segment (Figure 1a). CT-guided lung biopsy was performed, and chronic inflammation and fibrosis were diagnosed. A chest CT scan taken 3 months later showed no change in mass size, but the solid portion of the mass had increased. Surgical biopsy was planned, taking into account the possibility of false negative results due to the location of the mass and the part-solid



**FIGURE 1** | Chest CT showing a 1.9 cm part-solid, pleural-based mass in LLL superior segment (white arrow) (a). PET CT showing a subsolid lesion with mild hypermetabolism in LLL (yellow arrow) (b). A few white flat nodules on parietal pleura (black arrow) (c).

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lesion. A positron emission tomography (PET) CT taken before surgery showed no specific findings other than mild hypermetabolism in LLL (Figure 1b). He underwent exploration through uniportal video-assisted thoracic surgery. Numerous white flat nodules were observed in the parietal pleura along with the LLL mass (Figure 1c). There was no pleural effusion. The nodule in the parietal pleura was diagnosed as adenocarcinoma on frozen biopsy. The LLL mass was removed by wedge resection. The patient is currently taking a kinase inhibitor of epidermal growth factor receptor. Pleural dissemination accounts for 13%–14% of all metastatic lung cancers [1, 2]. When accompanied by pleural metastasis, pleural effusion, small nodules, and pleural thickening are usually observed on imaging study. In patients with persistent, non-specific chest pain, such as the above patient, with a lung mass without obvious pleural involvement, the possibility of pleural metastasis could exist. Therefore, even if there are no specific findings suggested by imaging studies and the association of pain with trauma could not be completely ruled out, active diagnostic procedures such as thoracoscopy and surgical biopsy should be considered in these patients.

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#### **Author Contributions**

Jaejun Jeong was involved in investigation, writing – original draft, writing – review. Min Kyun Kang was involved in editing and final approval of the manuscript. Both authors approved the manuscript.

#### **Ethics Statement**

The authors declare that appropriate written informed consent was obtained for the publication of this manuscript and accompanying images.

#### **Conflicts of Interest**

The authors declare no conflicts of interest.

#### **Data Availability Statement**

The data in this study are available from the corresponding author upon reasonable request.

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