

[PICTURES IN CLINICAL MEDICINE]

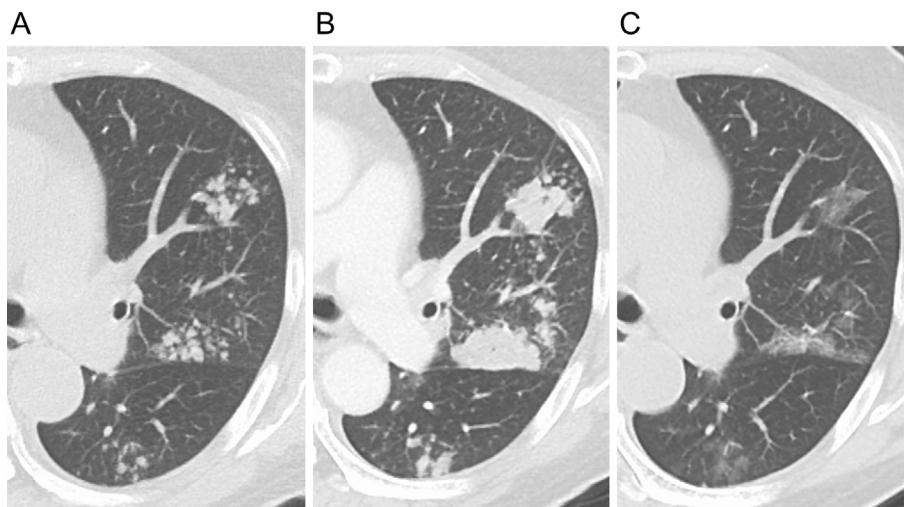
Tree-in-bud Pattern in *ALK*-positive Lung Adenocarcinoma

Takayuki Shiroyama^{1,2}, Shingo Nasu², Ayako Tanaka² and Tomonori Hirashima²

Key words: tree-in-bud, lung adenocarcinoma, *ALK*, alectinib

(Intern Med 59: 1461, 2020)

(DOI: 10.2169/internalmedicine.4076-19)



Picture.

A 62-year-old woman presented with a 3-month history of cough and hemoptysis. Computed tomography (CT) revealed nodular shadows with centrilobular distribution in the left lung (Picture A). Three sputum smears for acid-fast bacillus were negative. Based on the results of a transbronchial biopsy, she was diagnosed with stage IVA lung lepidic adenocarcinoma harboring *ALK* translocation. At this point, CT showed progressive shadows (Picture B; 1 month after the first CT scan), and alectinib was immediately initiated. Acid-fast bacillus culture of bronchoscopic biopsy tissue was negative. One month later, marked remission was observed (Picture C), providing definitive evidence to exclude mycobacterial infection. The tree-in-bud pattern occurs commonly in patients with mycobacterial infection (1). Central lung cancer is reportedly another common cause of the tree-in-bud pattern (2). Nevertheless, when encountering a tree-in-bud pattern, physicians tend to be anxious about the possibility of tuberculosis; even when mycobacterial tests are

negative, the absence of evidence is not evidence of absence. In the present case, we managed to exclude tuberculosis early based on the efficacy of potent mutation-driven therapy.

The authors state that they have no Conflict of Interest (COI).

References

1. Miller WT Jr, Panosian JS. Causes and imaging patterns of tree-in-bud opacities. *Chest* **144**: 1883-1892, 2013.
2. Li Q, Fan X, Huang XT, et al. Tree-in-bud pattern in central lung cancer: CT findings and pathologic correlation. *Lung Cancer* **88**: 260-266, 2015.

The Internal Medicine is an Open Access journal distributed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view the details of this license, please visit (<https://creativecommons.org/licenses/by-nc-nd/4.0/>).

¹Department of Respiratory Medicine and Clinical Immunology, Osaka University Graduate School of Medicine, Japan and ²Department of Thoracic Oncology, Osaka Habikino Medical Center, Japan

Received: October 19, 2019; Accepted: January 26, 2020; Advance Publication by J-STAGE: March 12, 2020

Correspondence to Dr. Takayuki Shiroyama, takayuki.s12@hotmail.co.jp

© 2020 The Japanese Society of Internal Medicine. *Intern Med* 59: 1461, 2020