



# Convex endobronchial ultrasound bronchoscope may enhance visualization and diagnosis by respiratory physicians: Clinical image of an endoscopic ultrasound with bronchoscope

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Associate Editor: Belinda Miller

## Key message

Herein, we present the detection of two cystic lesions via the transesophageal route using endobronchial ultrasound and emphasize the fact that understanding the anatomy may enhance the diagnostic yield.

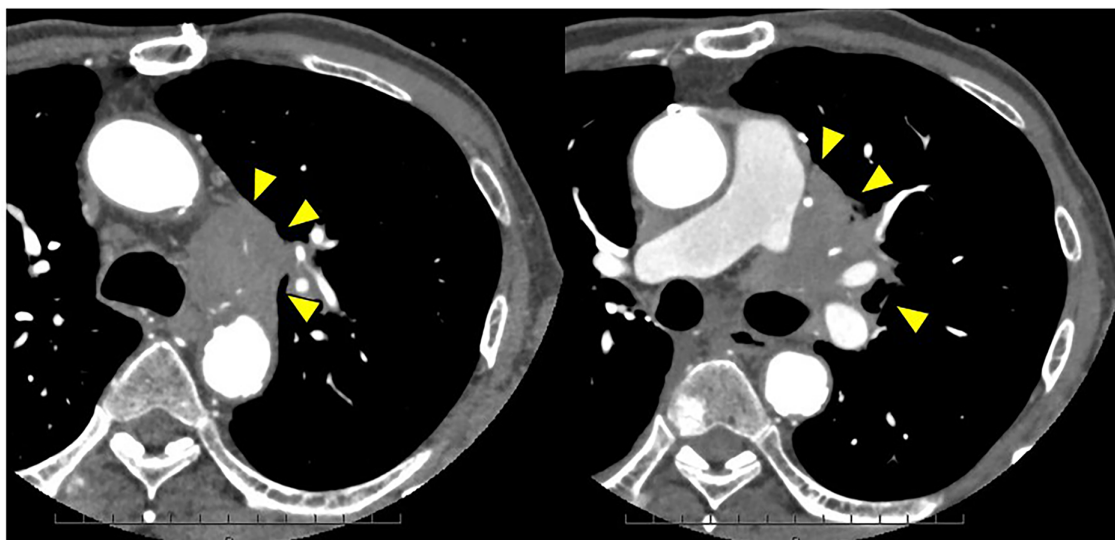
## KEYWORDS

convex endobronchial ultrasound (EBUS) bronchoscope, endoscopic ultrasound with bronchoscope-guided fine needle aspiration (EUS-B-FNA), mediastinal mass, splenic space-occupying lesion

## CLINICAL IMAGE

A 68-year-old man with follicular lymphoma in complete remission was referred because of a mediastinal

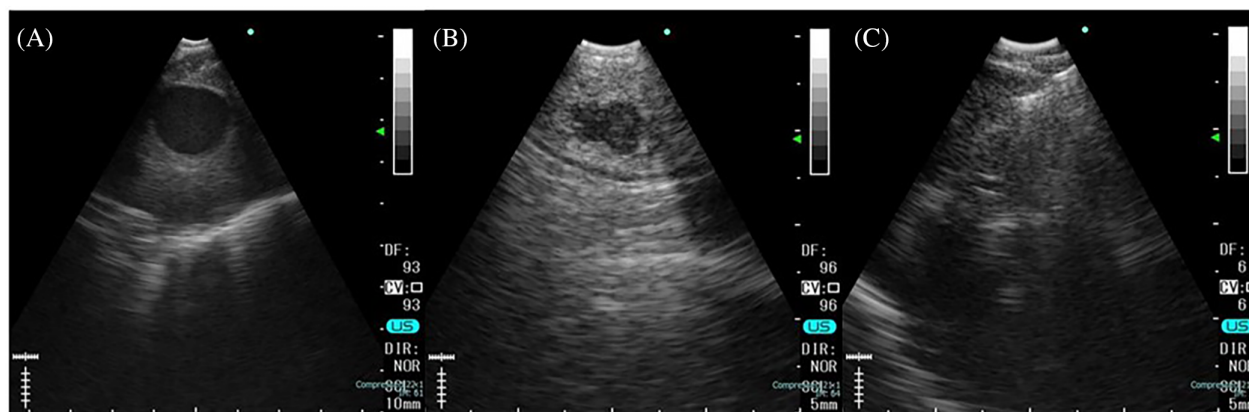
mass observed on coronary artery computed tomography (CT) located between the aortic arch (AA) and left pulmonary artery (PA) (Figure 1). A convex endobronchial ultrasound (EBUS) bronchoscope was used via the



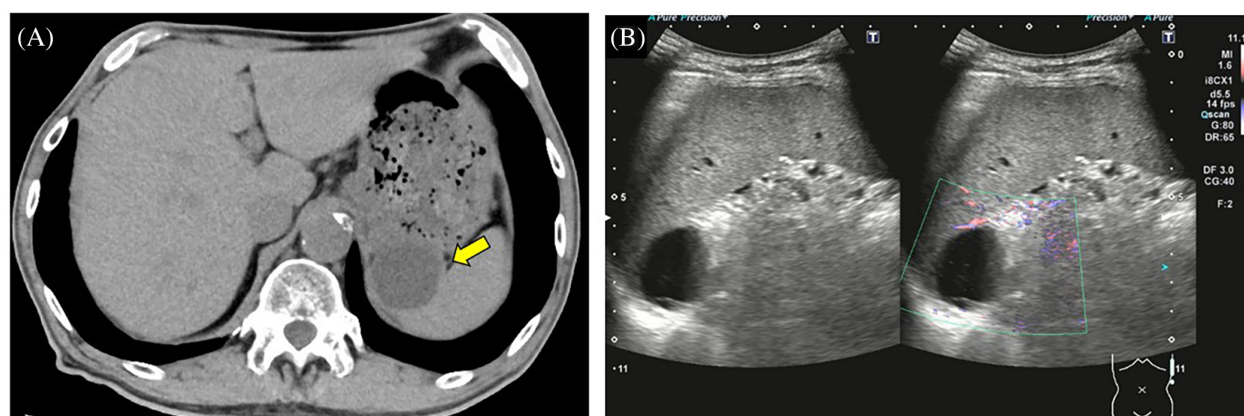
**FIGURE 1** Computed tomography (CT) scan. Coronary artery CT scan showing the mediastinal mass located between the aortic arch and left pulmonary artery.

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logy.



**FIGURE 2** Ultrasound image. (A) Convex endobronchial ultrasound (EBUS) bronchoscope used for detecting space-occupying lesions in the spleen and (B) another space-occupying lesion in the thyroid gland via the transesophageal route. (C) An intranodal forceps was inserted into the mediastinal mass under simultaneous ultrasound guidance via the transendobronchial route.



**FIGURE 3** Computed tomography (CT) scan and ultrasound image. (A) Abdominal CT scan and (B) ultrasound image after bronchoscopy showed no findings suggestive of lymphoma, and it was considered to be a cystic disease.

transendobronchial and transesophageal routes. We observed the liver, spleen, left atrium, PA, AA, thyroid gland, and mediastinal mass via the transesophageal route. Space-occupying lesions were subclinically detected via the transesophageal route: one newly identified in the spleen and the other previously noted in the thyroid gland (Figure 2A,B). Here, we considered EBUS-guided intranodal forceps biopsy (EBUS-IFB) as the best biopsy method and performed it (Figure 2C) in the left main bronchus; the pathological diagnosis revealed follicular lymphoma. Regarding the splenic space-occupying lesion, additional abdominal ultrasound and CT scans (Figure 3A,B) revealed no findings suggesting lymphoma. Although the transesophageal approach did not directly enhance diagnostic yield, it revealed the spleen, difficult to visualize from the trachea. Understanding the anatomy and acquiring convex

probe EBUS-related technical skills can help detect lesions in organs beyond the lung and mediastinum, ultimately enhancing diagnostic yield.<sup>1,2</sup>

## ACKNOWLEDGMENTS

The authors thank the patient and his family.

## FUNDING INFORMATION

No funds, grants, or other support was received.

## CONFLICT OF INTEREST STATEMENT

None declared.

## DATA AVAILABILITY STATEMENT

Data sharing not applicable to this article as no datasets were generated or analysed during the current study.

## ETHICS STATEMENT

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

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**How to cite this article:** Matsuoka S, Takigawa Y, Sato K, Inoue T, Watanabe H, Kudo K, et al. Convex endobronchial ultrasound bronchoscope may enhance visualization and diagnosis by respiratory physicians: Clinical image of an endoscopic ultrasound with bronchoscope. *Respirology Case Reports*. 2024;12(11):e70072. <https://doi.org/10.1002/rcr2.70072>