

# EUS-guided fine-needle biopsy of prevertebral lesion in the diagnosis of CD30-positive T-cell lymphoma (with videos)

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A 62-year-old male with a history of bilateral lung transplantation presented with 1 week of fever and night sweats. Magnetic resonance imaging (MRI) showed abnormal bone marrow signal with enhancement in T10 vertebral body suggestive of osteomyelitis. He was empirically discharged on intravenous antibiotics, but he was readmitted with recurrent fevers 1 week following treatment. Repeat MRI now showed a T2-hyperintense enhancing soft tissue lesion anterior to T10 vertebral body [Figure 1]. There was a high concern for malignancy or other noninfectious etiologies given the lack of response to antibiotics, and sampling was warranted to establish a diagnosis. EUS-fine-needle biopsy of prevertebral soft tissue lesion was pursued under monitored anesthesia care due to its anterior location. The lesion was not amenable to biopsy through posterior approach by interventional radiology, and surgical biopsy through anterior approach would also be challenging because of extensive adhesions from previous lung transplantation. EUS demonstrated a 53 mm by 33 mm ill-defined heterogeneously hypoechoic lesion arising from the

vertebral body, posterior to the esophagus [video 1]. EUS-guided fine-needle aspiration biopsy with a 22-gauge needle [Figure 2] [video 2] showed atypical lymphocytes on onsite cytology. Cellblock revealed large dyscohesive cells with scant to moderate amounts of cytoplasm and irregular bilobed nuclei with occasional nucleoli with the expression of CD4 and CD30 on immunohistochemistry further confirmed on flow cytometry. A diagnosis of CD30+ T-cell lymphoma was established, and he was treated with brentuximab vedotin combination. Fever subsided, and he was discharged after 4 days.

This illustrates the use of EUS to sample lesions in the anterior vertebral space and vertebra in the mediastinum because of the proximity of these structures with the esophagus.<sup>[1,2]</sup> Real-time sonography allows continuous monitoring of needle tip, with minimal risk of injury to the spinal cord and adjoining structures.<sup>[3,4]</sup> A

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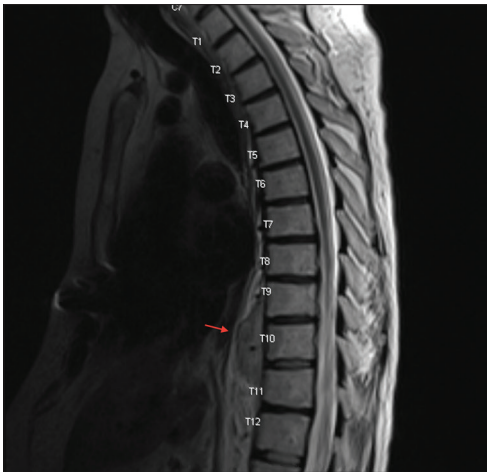
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**Figure 1.** MRI of the thoracic spine showed T-2 hyperintense enhancing soft tissue lesion anterior to T10 vertebral body

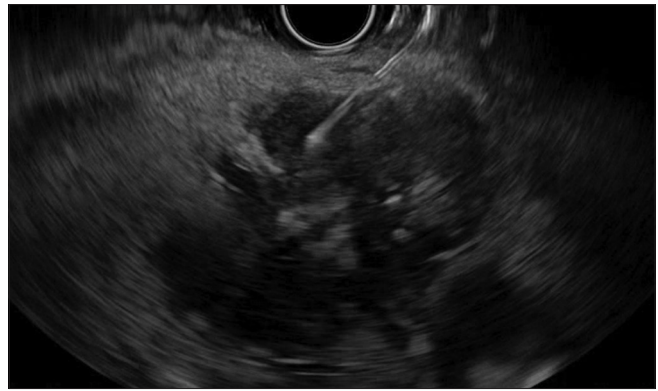
multidisciplinary approach, based on the location of the prevertebral lesion and patient's anatomy, is crucial to improve outcomes.<sup>[5]</sup>

#### *Declaration of patient consent*

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that his name and initials will not be published and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

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Nil.



**Figure 2.** EUS-guided fine needle aspiration biopsy with a 22-gauge needle

#### *Conflicts of interest*

There are no conflicts of interest.

#### **REFERENCES**

1. ASGE Standards of Practice Committee, Jue TL, Sharaf RN, Appalaneni V, *et al.* Role of EUS for the evaluation of mediastinal adenopathy. *Gastrointest Endosc* 2011;74:239-45.
2. Yasuda I, Tsurumi H, Omar S, *et al.* Endoscopic ultrasound-guided fine-needle aspiration biopsy for lymphadenopathy of unknown origin. *Endoscopy* 2006;38:919-24.
3. Chung A, Kwan V. Endoscopic ultrasound: An overview of its role in current clinical practice. *Australas J Ultrasound Med* 2009;12:21-9.
4. Polkowski M, Larghi A, Weyand B, *et al.* Learning, techniques, and complications of endoscopic ultrasound (EUS)-guided sampling in gastroenterology: European Society of Gastrointestinal Endoscopy (ESGE) Technical Guideline. *Endoscopy* 2012;44:190-206.
5. Del Vecchio Blanco G, Coppola M, Mannisi E, *et al.* Impact of endoscopic ultrasound-guided fine-needle aspiration and multidisciplinary approach in the management of abdominal or mediastinal mass. *Eur J Gastroenterol Hepatol* 2015;27:1045-51.