

Recurrent metastatic lung gliosarcoma diagnosed by EUS-guided fine-needle biopsy

Alberto Tosoni¹, Marco Gessi², Guido Rindi^{2,3}, Alberto Larghi^{4,5}

¹Department of Internal Medicine, Gastroenterology and Hepatology, Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, Italy; ²Department of Woman and Child Health and Public Health, Section of Pathology, Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, Italy; ³Department of Life Sciences and Public Health, Section of Pathology, Catholic University, Rome, Italy; ⁴Digestive Endoscopy Unit, Fondazione Policlinico Universitario A. Gemelli IRCCS, Rome, Italy; ⁵Center for Endoscopic Research Therapeutics and Training, Catholic University, Rome, Italy

EUS tissue acquisition (EUS-TA) is rapidly shifting from fine-needle aspiration (FNA) to fine-needle biopsy (FNB), mostly because of the greater ability by the large majority of pathologists to evaluate histological samples, the easier performance of ancillary tests, and the comparable diagnostic accuracy in contrast with cytology.^[1]

Periesophageal lung lesions are usually difficult to be sampled transbronchially or under computed tomography (CT) guidance, but can be easily accessed and sampled with EUS that has been traditionally done by FNA.^[2] Only recently, two successful cases of transesophageal EUS-FNB of lung masses have been reported.^[3]

We present, herein, a 72-year-old male with a previous history of gliosarcoma in the left frontal lobe, which was resected, followed by stereotactic radiation and adjuvant therapy with temozolomide, who presented 1 year after complaining of worsening dyspnea. Chest CT showed a large paramediastinal pulmonary mass, completely occupying the superior portion of the right hemithorax, associated with multiple enlarged mediastinal lymph nodes (larger in subcarinal space 15 mm).

A EUS was performed and showed a large necrotic area in the right mediastinum with multiple lymph nodes [Figure 1]. EUS-FNB using a 22G Fork-tip needle (SharkCore™, Medtronic, Dublin, Ireland) was performed at both the mass and subcarinal lymph

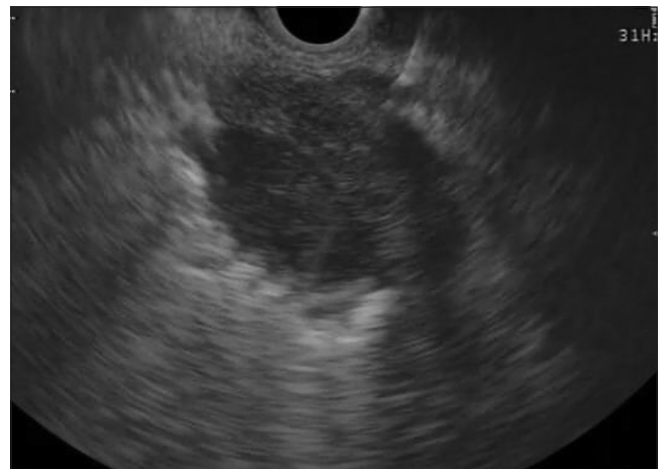


Figure 1. Ecographic view of the inferior part of the lung mass with the fine-needle biopsy needle inside

Access this article online	
Quick Response Code: 	Website: www.eusjournal.com
	DOI: 10.4103/eus.eus_78_20

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Tosoni A, Gessi M, Rindi G, Larghi A. Recurrent metastatic lung gliosarcoma diagnosed by EUS-guided fine-needle biopsy. *Endosc Ultrasound* 2021;10:147-8.

Address for correspondence

Dr. Alberto Larghi, Digestive Endoscopy Unit, Università Cattolica del Sacro Cuore, Largo A. Gemelli 8, 00168 Rome, Italy.
E-mail: alberto.larghi@policlinicogemelli.it

Received: 2020-06-16; **Accepted:** 2020-10-26; **Published online:** 2021-01-20

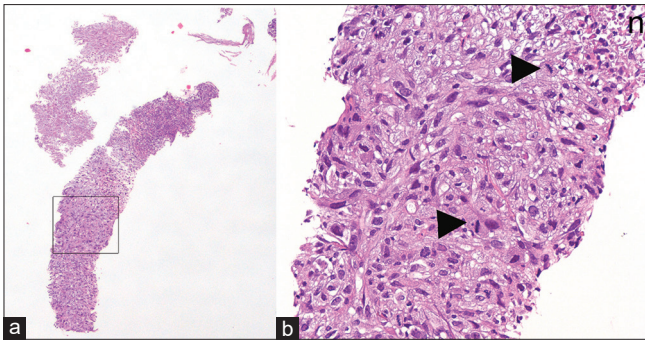


Figure 2. Lung biopsy showing a poorly differentiated neoplasm, solid in structure with necrosis (a), composed of severely atypical cells with spindle cell morphology and frequent mitoses ([b] arrowheads)

node sites. The histological examination showed the lymph node to be reactive in nature, while lung biopsy revealed a poorly differentiated neoplasm, solid in structure with necrosis [Figure 2] composed of severely atypical cells with spindle cell morphology and frequent mitoses [Figure 2, arrowheads], and negative for AE1/AE3, TTF1, GFAP, PAX 8, S100, and OLIG2. These findings were consistent with a thoracic recurrence of the cerebral gliosarcoma. Among diffuse high-grade gliomas, which may rarely metastasize outside the central nervous system, gliosarcomas may show a propensity for such behavior most commonly with distant metastases to lung, liver, and lymph nodes.^[4,5]

This case clearly showed the feasibility and significance of EUS-FNB for transesophageal sampling of lung masses, especially when an unusual diagnosis is suspected.

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.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Mitselos IV, Karoumpalis I, Theopistos VI, et al. Endoscopic ultrasonography in pancreatic diseases: Advances in tissue acquisition. *Endosc Int Open* 2019;7:E922-30.
2. Annema JT, Veselić M, Rabe KF. EUS-guided FNA of centrally located lung tumours following a non-diagnostic bronchoscopy. *Lung Cancer* 2005;48:357-61.
3. Adler DG, Gabr M, Taylor LJ, et al. Initial report of transesophageal EUS-guided intraparenchymal lung mass core biopsy: Findings and outcomes in two cases. *Endosc Ultrasound* 2018;7:413-7.
4. Beaumont TL, Kupsky WJ, Barger GR, et al. Gliosarcoma with multiple extracranial metastases: Case report and review of the literature. *J Neurooncol* 2007;83:39-46.
5. Pietschmann S, von Bueren AO, Kerber MJ, et al. An individual patient data meta-analysis on characteristics, treatments and outcomes of glioblastoma/gliosarcoma patients with metastases outside of the central nervous system. *PLoS One* 2015;10:e0121592.