

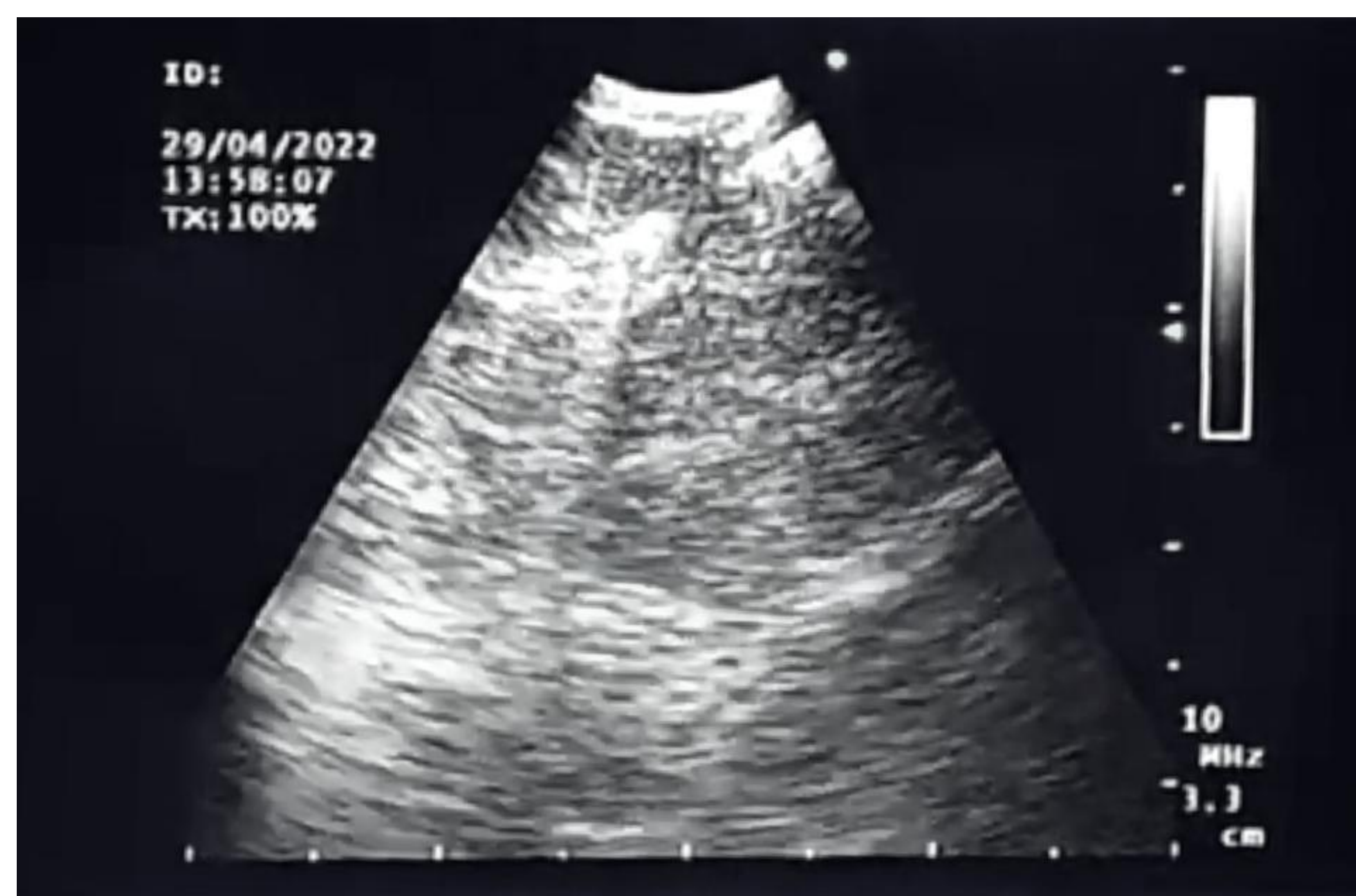
Endobronchial ultrasound-guided cryobiopsy: a new frontier?

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Background

- Endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) is a minimally invasive and safe technique, widely practiced and included in guidelines as one of the preferred strategies to stage non-small cell lung cancer (NSCLC). It is also used for the diagnosis of other diseases, such as other intrathoracic cancers, sarcoidosis and lymphomas.



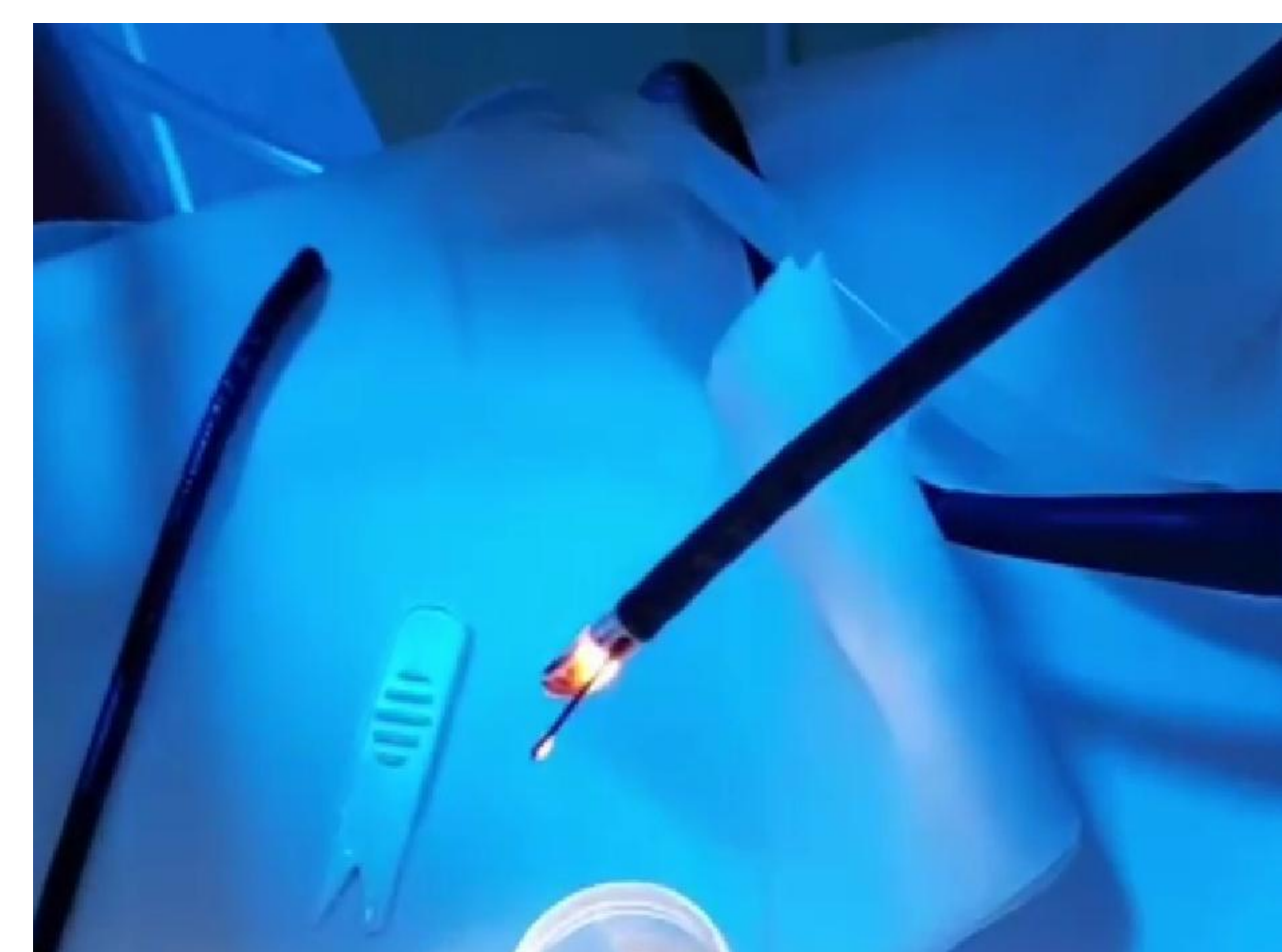
- A limitation of this technique is sample size, which can render further, often more invasive, testing necessary.
- Recently, a new approach has been suggested: EBUS-guided cryobiopsy¹.

1. Wener, R. R. L. & van Schil, P. E. *Eur Respir J* 58, (2021)

Methods

We present a case series of 10 patients who underwent sampling through EBUS-guided cryobiopsy in our unit.

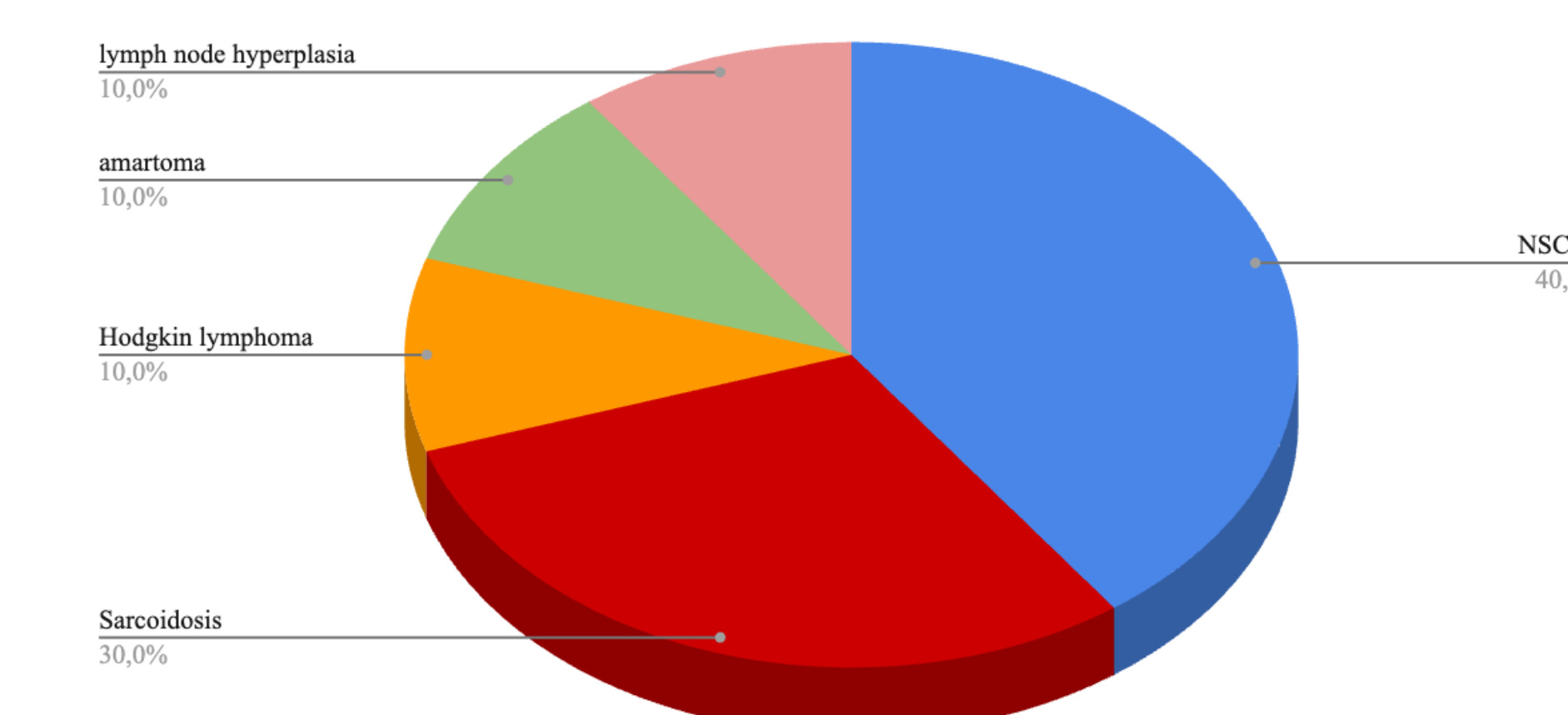
- The procedures were performed in general anaesthesia with intubation, as is standard procedure in our unit for EBUS-TBNA.
- We used a 19G needle to perform EBUS-TBNA, followed by cryobiopsies with a 1.1 mm cryoprobe through the opening created with the needle (avoiding use of needle-knife as reported elsewhere²), freezing time 3-4 seconds.
- In eight cases lymph nodes were sampled, while in the remaining two cases a peri-bronchial mass was sampled.



2. Zhang, J. et al. *Eur Respir J* 58, 1-9 (2021)

Results

- The age of the subjects ranged from 37 to 74 (average 56 years), six males and four females.
- There were no procedure-related complications.
- The procedures were all diagnostic: NSCLC in four cases, sarcoidosis in three cases, one Hodgkin lymphoma, one amartoma and one benign lymph node hyperplasia.



Diagnosis was always concordant between EBUS-TBNA and EBUS-cryobiopsy, with the larger sample size of the cryobiopsies posing a definite advantage in one case of NSCLC, as EBUS-TBNA samples were not sufficient for complete mutational and molecular testing, and in the case of Hodgkin lymphoma, as it allowed precise immunophenotyping.

Conclusion

This case-series further supports the promising new literature available²⁻⁴, suggesting that EBUS cryobiopsies are feasible, safe and a possible new frontier in the sampling not only of mediastinal lymph nodes, but also of other lesions identifiable with EBUS.

3. Genova, C. et al. *BMC Pulmonary Medicine* 22, 1-8 (2022).

4. Gonuguntla, H. K. et al. *Respirology Case Reports* 9, 9-13 (2021).