DOI: 10.4081/monaldi.2024.3140

SUPPLEMENTARY MATERIAL

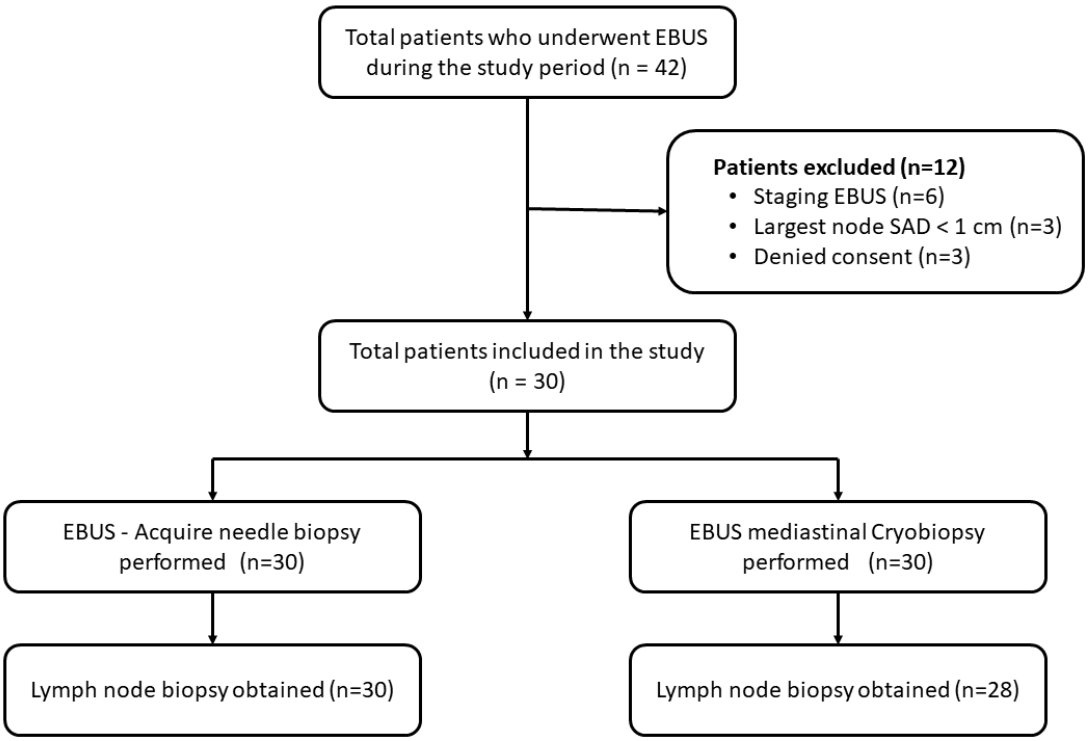
Comparison of diagnostic yield and safety of endobronchial ultrasound-guided mediastinal lymph nodal cryobiopsy and endobronchial ultrasound-guided Franseen tip needle biopsy

Venkata Nagarjuna Maturu,[1] Anand Vijay,[1] Virender Pratibh Prasad,[1] Rinoosha Rechal,[1] Vipul Kumar Garg,[1] Shweta Sethi[2]

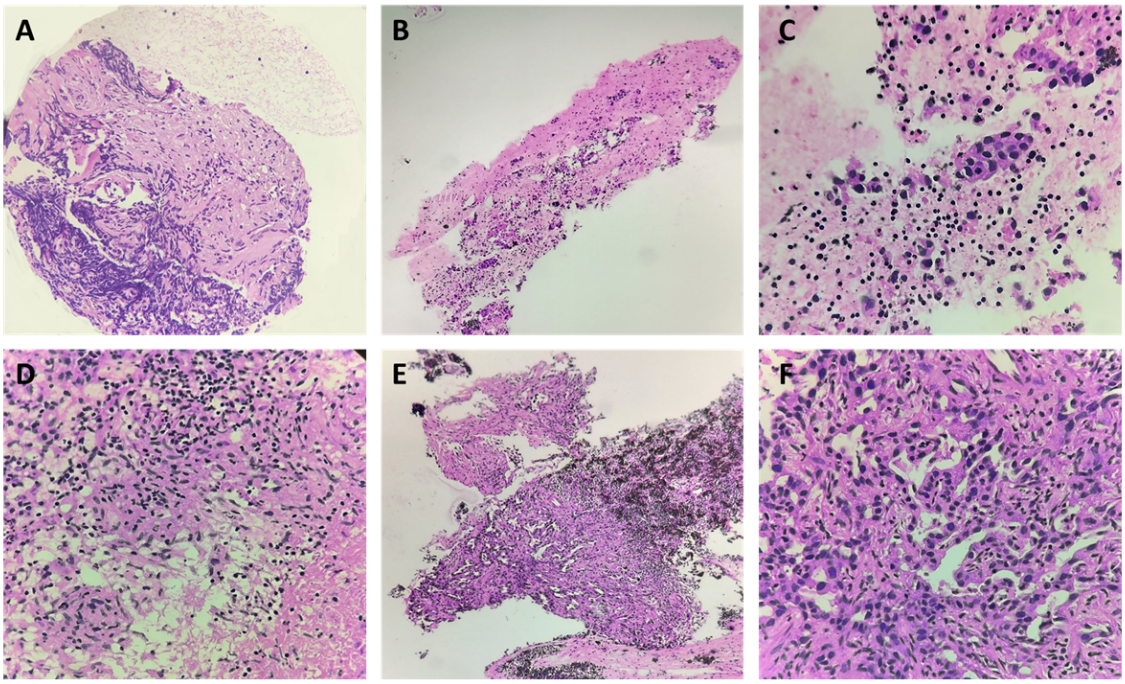
[1]Department of Pulmonary Medicine, Yashoda Super Speciality Hospitals, Hitec City, Hyderabad; [2]Department of Pathology, Yashoda Super Speciality Hospitals, Hitec City, Hyderabad, India

Correspondence: Venkata Nagarjuna Maturu, Department of Pulmonary Medicine, Yashoda Super Speciality Hospitals, Hitec City, Hyderabad, India
Tel.: +91 9100935638. E-mail: arjunjipmer@yahoo.co.in

Key words: cryobiopsy, mediastinal lymph node, endobronchial ultrasound, Fransen tip needle, granuloma.



Supplementary Figure 1. Flow of patients who underwent endobronchial ultrasonography (EBUS) during the study period. (SAD: Small axis diameter)



:

Supplementary Figure 2. Photomicrographs comparing histopathologic images of Acquire needle biopsy (A, B, C) and Cryobiopsy (D, E, F). Image showing few granulomas with focal crush artefacts with Acquire needle biopsy (3A, H& E stain, magnification 40x), and an image with several well defined granulomas with necrosis and preserved nodal architecture with Cryobiopsy (3D, H& E stain, magnification 40x). Images of Acquire biopsy showing small cores (3B, H& E stain, magnification 10x) with few scattered and clustered adenocarcinoma cells admixed with small lymphocytes and fibrin (3C, H& E stain, magnification 40x). Images of Cryobiopsy showing multiple large fragments (3E, H& E stain, magnification 10x) with metastatic deposits of adenocarcinoma with surrounding desmoplasia and preserved lymph node architecture (3F, H& E stain, magnification 40x).

Supplementary Table 1. Advantages and disadvantages of endobronchial ultrasonography-guided Franssen tip needle biopsy and mediastinal cryobiopsy.

	EBUS guided franseen tip needle biopsy	EBUS guided mediastinal cryobiopsy
Additional equipment for the procedure	Not necessary	Necessary (cryo-module, 1.1 mm cryoprobe, needle/cautery knife to create a tract into the lymph node)
Training and Expertise	No additional training necessary to perform needle biopsy	Needs additional training and expertise to perform the cryobiopsy
Ability to sample multiple nodes	Feasible	Multiple node sampling with a cryoprobe is not usually performed
Ability to sample from multiple areas within the node	Feasible	All the biopsies are obtained from the area in the tract created into the node. Multiple tracts into the node are usually not created
Need to remove scope enbloc with the probe/needle	Not necessary. Technique is very similar to a conventional EBUS-TBNA	Need to remove the EBUS scope with every actuation. Hence, some centres perform EBUS-MCB using an artificial airway.
Chance of obtaining a false core/biopsy	More likely. Studies have shown that upto 20% of cores obtained are not true cores	Less likely. Majority of cryobiosies have nodal tissue
Presence of pathologic artefacts	More likely	Less likely
Safety of procedure	Very safe. No additional complications over conventional EBUS-TBNA	Minor self-limited bleed is the most common complication.