EBUS TBNA
PRACTICAL TIPS

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EBUS TBNA: MINIMALLY INTERVENTIONAL PROCEDURE BASED ON REAL TIME US-GUIDED TRANSBRONCHIAL BIOPSY
THE PASSAGE OF EBUS SCOPE IS FACILITATED THROUGH THE ANTERIOR PART OF THE VOCAL CORDS
FIGURE 1. A, The convex probe is moved from side to side perpendicularly to the long axis of the bronchus to confirm the maximal cross-sectional area of the target lymph node and its puncture site. B, Puncture site between rings of cartilage is selected using the OSM to avoid puncturing tracheal or bronchial cartilage. The OSM involves pressing the outer sheath of the puncture needle gently against the bronchial wall immediately before puncture. C, Then moving the entire bronchoscope back up the wall and performing the puncture when the tip of the outer sheath of the puncture needle is caught in a concavity between 2 rings of cartilage. Once the outer sheath of the puncture needle is firmly held between 2 rings of tracheal and/or bronchial cartilage, the puncture needle is extruded. OSM indicates outer sheath method.
Stylet Use Does Not Improve Diagnostic Outcomes in Endobronchial Ultrasonographic Transbronchial Needle Aspiration: A Randomized Clinical Trial
Chest. 2017;151(3):636-642
If the TBNA is being done for staging of NSCLC, the sampling should be started from N3 followed by N2 and N1 lymph nodes to avoid contamination and upstaging.
# of Passes

- For diagnosis: 3 needle passes
- For markers:
  - 90 patients diagnosed with adenoCA via EBUS
  - 94% adequacy for molecular analysis with 5 needle passes
EBUS-TBNA: How Many Aspirates Per Lymph Node?

- A study of EBUS-TBNA in 163 Mediastinal LN stations in 102 NSCLC patients
- Sample adequacy was:
  - 90.1% for one aspiration
  - 100% for three aspirations
  - The sensitivity for differentiating malignant from benign LN stations was 69.8%, 83.7%, 95.3%, and 95.3% for one, two, three, and four aspirations, respectively.
  - *Maximum diagnostic values were achieved in three aspirations*

Lee. H.S. CHEST 2008; 134:368-374
Performance of a Novel 19g EBUS-TBNA Needle in Patients

Anna Sczaniecka, PhD; Xavier Gonzalez, MD; Alain Tremblay, MD; Kazuhiro Yasufuku, MD
Cook also recently introduced the **25-gage EchoTip Ultra Endobronchial Ultrasound Needle**, which is 33 the percent more flexible than 22-gage needle. This flexibility allows physicians to deflect the endoscope to a greater degree than is possible with larger needles. The added flexibility can also allow physicians to reach more pulmonary target lesions.
Endobronchial ultrasound-guided lymph node biopsy with transbronchial needle forceps: a pilot study
Procedural Techniques and Results

Aspirate cytology

- Adequate/representative: in presence of frankly malignant cells, lymphocytes, lymphoid tissue, or clusters of anthracotic pigment-laden macrophages*
- Inadequate/nonrepresentative: if there are no cellular components, scant lymphocytes (defined as <40 per HPF) blood only, or cartilage or bronchial epithelial cells only** **
- A quantitative cut off value of at least 30% of cellularity composed of lymphocytes has been arbitrarily proposed by some experts***
- Higher yield may be obtained by obtaining aspirates from the periphery of nodes****

* Am J Clin Pathol 2008;130:434-443
** Chest 2008;134;368-374;
*** Chest 2004;126;1005-1006
PARATRACHEAL LYMPH NODE (4R) WITH CENTRAL HILAR STRUCTURE
EBUS- TBNA in lymph node with central hilar structure
Central Intranodal Vessels to Predict Cytology During Endobronchial Ultrasound Transbrachial Needle Aspiration

Lewis G. Satterwhite, MD, David M. Berkowitz, MD, Christopher S. Parks, MD, and Rabih I. Bechara, MD

- **Lack of CIV:** increase in the likelihood of malignancy [OR, 49.7; 95% confidence interval, 15.1-163.9]
- **Presence of a CIV for benign cytology**
  - Sensitivity: 83.0%
  - Specificity: 91.1%
- **PPV of CIV predicting nonmalignant cytology:** 88.6%
- **The presence or absence of a CIV accurately predicted cytology results in 90 out of the 103 LNs sampled (87.4%).**

*J Bronchol Intervent Pulmonol* 2011;18:322–328
EBUS

- ΑΔΥΝΑΜΙΑ ΠΡΟΣΠΕΛΑΣΗΣ ΛΕΜΦΑΔΕΝΩΝ ΟΜΑΔΩΝ 5,6,8,9
- ΕΥΑΙΣΘΗΣΙΑ 85%
- ΕΙΔΙΚΟΤΗΤΑ 100%
- NEGATIVE PREDICTIVE VALUE 87 %
Vascular Image Patterns of Lymph Nodes for the Prediction of Metastatic Disease During EBUS-TBNA for Mediastinal Staging of Lung Cancer

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Takashi Anayama, MD, PhD,*
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Hideki Kimura, MD, PhD,† Ichiro Yoshino, MD, PhD,‡ and Kazuhiro Yasufuku, MD, PhD*
ΕΝΣΩΜΑΤΩΜΕΝΟ ECHO DOPPLER
US elastography in a patient with right-sided peripheral non-small-cell lung cancer: A triangular LN is shown in the left mediastinal area 4 (4L).
CONVEX PROBE ENDOBRONCHIAL ULTRASOUND: APPLICATIONS BEYOND CONVENTIONAL INDICATIONS
ENDOBRONCHIAL ULTRASOUND-GUIDED TRANSBRONCHIAL NEEDLE ASPIRATION OF THYROID NODULES: PUSHING THE BOUNDARY TOO FAR?

MARCUS P. KENNEDY, MD, FCCP; MICHEAL BREEN, MB; KEVIN O’ REGAN, MB; JULIE MCCARTHY, MB, PHD; MARY HORGAN, MD; MICHAEL T. HENRY, MD

CHEST. 2012;142(6):1690-1691. DOI:10.1378/CHEST.12-1871
EUS-B-FNA (transesophageal bronchoscopic US-FNA)
ENDOBRONCHIAL ULTRASOUND-GUIDED TRANSBRONCHIAL NEEDLE ASPIRATION FOR THE TREATMENT OF CENTRAL AIRWAY STENOSIS CAUSED BY A MEDIASTINAL CYST.  

NAKAJIMA T¹, YASUFUKU K, SHIBUYA K, FUJISAWA T.  

AUTHOR INFORMATION

EBUS has a potential role in diagnosis, when a confident diagnosis of bronchogenic cyst cannot be made by CT. In particular, it can easily identify the cystic lesion and clearly clarify its nature as well as provide imaging guidance for therapeutic procedures.
DRAINAGE OF MEDIASTINAL CYST
ΕΚΘΕΣΗ ΚΥΤΤΑΡΟΛΟΓΙΚΗΣ ΕΞΕΤΑΣΕΩΣ

Τρίτη, 14 Ιουνίου 2016

ΕΠΩΝΥΜΟ:                      ΑΡ. ΠΡΩΤ.:  

ΟΝΟΜΑ: Ε                           ΗΛΙΚΙΑ: 71

ΥΛΙΚΟ: ΠΕΡΙΚΑΡΔΙΑΚΟ ΥΓΡΟ (ΔΥΟ ΔΕΙΓΜΑΤΑ)

ΗΜΕΡ. ΛΗΣΕΩΣ: 13-Ιουν-16

ΣΥΜΠΕΡΑΣΜΑ:

Η κυτταρολογική εξέταση δύο δειγμάτων περικαρδιακού υγρού έδειξε, σε πεδίο ερυθροκυττάρων, άτυπα κύτταρα σε συμπαγείς τρισδιάστατες ομάδες, με αρκετό λεπτοκεντοποιώδες πρωτόπλασμα και εντόνως υπερχρωματικούς, ανισομεγέθεις πυρήνες, με εμφανές πυρήνιο. 
Εικόνα συμβατή με μεταστατικό αδενοκαρκίνωμα.
PLACEMENT OF FIDUCIAL MARKER FOR CYBER KNIFE IRRADIATION OF RELAPSED NSCLC OF THE LEFT HILUM