

[Surg Endosc.](#) 2009 Sep;23(9):2047-52. Epub 2008 Apr 29.

## Realistic and affordable lo-fidelity model for learning bronchoscopic transbronchial needle aspiration.

[Goldberg R](#), [Colt HG](#), [Davoudi M](#), [Cherrison L](#).

Pulmonary and Critical Care Medicine, University of California, Irvine Medical Center, 101 The City Drive, Rm 119, Bldg 53, Orange, CA 92868, USA.

**BACKGROUND:** Transbronchial needle aspiration (TBNA) is used to sample mediastinal abnormalities and lymph node stations for diagnostic purposes and lung cancer staging. The procedure is underused, operator dependent, and reputed to have a steep learning curve. Other difficulties arise from a bronchoscopist's failure to insert the needle satisfactorily into the target node. The purpose of this study was to evaluate the realism and helpfulness of a lo-fidelity, easily constructed hybrid model used for learning and practicing TBNA. **METHODS:** The model is constructed by attaching a porcine tracheobronchial tree to a Laerdal Airway Model mounted on polyvinyl chloride (PVC) piping. Twelve individuals with various levels of bronchoscopy training and experience were given a 15-min introductory PowerPoint presentation on TBNA strategy and planning, execution, and response to complications. Participants then practiced TBNA alone and with guidance, aided by an assistant, as many times as individually necessary to feel comfortable with the procedure. A five-point Likert scale 8-item questionnaire was then completed. **RESULTS:** Participants were unanimously positive about their experience (mean scores 4.25-4.91). The model was realistic, provided increased comfort with TBNA techniques, and allowed practice of communication skills. **CONCLUSION:** This realistic, affordable, and easily constructed hybrid lo-fidelity airway model allows beginner and experienced bronchoscopists opportunities to learn and practice basic TBNA techniques and team communication skills without placing patients at risk.

[For PubMed Link Please Click Here:](#)

[http://www.ncbi.nlm.nih.gov/pubmed/18443859?itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum&ordinalpos=5](http://www.ncbi.nlm.nih.gov/pubmed/18443859?itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum&ordinalpos=5)