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**Title:** Comparative efficacy of endoscopic ultrasound-guided fine-needle aspiration using different needle gauge in mediastinal lymphadenopathies

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**Body:** RATIONALE. Still there is no direct comparison of 19G vs 22G needles for EUS. METHODS. 23 patients (14 males) with mediastinal lymphadenopathy w/o pulmonary lesions undergone EUS-FNA using Olympus echobronchoscope via esophagus. Target lymphnodes (LN) in station 7 and/or 4L were punctured using dedicated 22G (Olympus) and 19 G ProCore (Cook) needles with prior randomization on which type will be used first. If EUS-FNA was nondiagnostic, patient referred to surgery. Diagnostic yield depending on disease and type of specimen (histology and/or cytology) were analyzed. RESULTS. There were no complications. Mean LN size was 2.4 cm, mean number of passes for 22G needle of 2.7, and for 19G needle of 1.5 passes. Final diagnosis was established by EUS-FNA in 19/23 (82.6%) pts: sarcoidosis in 10/23 (43.5%), non-specific inflammation in 2/23 (8.7%), tuberculosis in 2/23 (8.7%), Hodgkin's lymphoma in 3/23 (13%), B-cell non-Hodgkin lymphoma in 1/23 (4.3%), adenocarcinoma in 1/23 (4.3%). Among patients referred to surgery: 2/23 (8.7%) Hodgkin lymphoma, 1/23 (4.3%) - adenocarcinoma and 1/23 (4.3%) sarcoidosis. Efficacy of 22G by cytology for benign diseases was 11/15 (73.3%), for malignancies - 1/8 (12.5%), no samples for histology. For 19G, efficacy in benign diseases by cytology: 12/15 (80%), in malignancy 3/8 (37.5%). Histology specimens were retrieved by 19G in 19/23 (82.6%), diagnostic yield benign diseases 14/15 (93.3%), and 5/8 (62.5%) in malignancy. CONCLUSION. Diagnostic yield for 22G and 19G needle is equal by cytology in benign diseases, but it favours 19G for malignancy. For histology, 19G is more efficient vs 22G, especially for lymphoma.