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Title: Effectiveness and safety of endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) in the diagnosis of mediastinal and hilar lymphoadenopathy

Dr. Yuuki 24056 Tenjin tenjin.yuuki@gmail.com MD ¹, Dr. Junji 24057 Hamamoto hamamoto-jun@umin.ac.jp MD ², Dr. Shinya 24058 Sakata ssakata@fc.kuh.kumamoto-u.ac.jp MD ¹, Dr. Ryo 24059 Sato rkyxt653@yahoo.co.jp MD ¹, Dr. Sho 24060 Saeki saeshow@wg7.so-net.jp MD ¹, Dr. Hidenori 24061 Ichiyasu ichiyasu@kumamoto-u.ac.jp MD ¹, Dr. Kazuhiko 24062 Fujii k-fujii@kumamoto-u.ac.jp MD ¹, Dr. Naoki 24063 Saita saita@gpo.kumamoto-u.ac.jp MD ¹ and Prof. Dr Hirotsugu 24095 Kohrogi kohrogi@kumamoto-u.ac.jp MD ¹. ¹ Department of Respiratory Medicine, Kumamoto University Hospital, Kumamoto, Japan and ² Department of Respiratory Medicine, Kumamoto Saishunso National Hospital, Kumamoto, Japan .

Body: Endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) is used to biopsy of enlarged lymphnodes in the mediastinum and hili for staging of patients with lung cancer and definitive diagnosis of lymphadenopathy. EBUS-TBNA has been reported as less-invasive examination compared with mediastinoscopy and as high sensitivity and specifity in the diagnosis. To study the usefulness of EBUS-TBNA in diagnosis of lymphadenopathy in the mediastinum and hili, we analyzed the 90 cases of EBUS-TBNA which were performed in our hospital from August 2007 to July 2010. There were 90 cases of undiagnosed lymphadenopathy in the mediastinum and hili. They were 53 cases of suspected metastasis of lung cancer, 37 cases of suspected sarcoidosis. In the cases of suspected metastasis of lung cancer, the sensitivity of EBUS-TBNA was 85.4%, and the specificity was 100% and the accuracy was 86.5%. In the cases of suspected sarcoidosis, the sensitivity was 92%, the specificity was 90% and accuracy was 92.3%. Furthermore, we made diagnosis of EGFR gene mutation and EML4-ALK fusion gene by the specimen obtained by EBUS-TBNA. As adverse effects, one case of lymphadenitis was observed, but mediastinitis was not induced. We conclude that EBUS-TBNA is a powerful instrument for diagnosis and staging of lung cancer and for diagnosis of sarcoidosis and other inflammatory and granulomatous diseases with lymphadenopathy manifested in the mediastinum and hili, and that EBUS-TBNA is safe and less-invasive.