



Clinical value of ultrasound-guided percutaneous biopsy of pulmonary lesions

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ABSTRACT. The purpose of this study was to evaluate the applicability of ultrasound-guided percutaneous biopsy for the diagnosis and differentiation of various pulmonary lesions in a Chinese population. A total of 338 pulmonary lesions were biopsied with 18-gauge cutting needles, guided by ultrasound, and sent for histopathological analysis. The ultrasonographic characteristics of these lesions, procedure complications, and histopathological diagnoses were analyzed. Sufficient specimen for histopathologic analysis was obtained in 95.64% (351/367), and mild complications occurred in 2.72% (10/367) of the patients. Accurate diagnosis was obtained in 94.03% (315/335) of the patients; 16 were lost to follow-up. Using the combination of shape and echogenicity to distinguish benign vs malignant lesions, diagnostic sensitivity and specificity were 57.39 and 95.65%, respectively. No significant difference was found between malignant and benign lesions in blood flow signals. Ultrasound-guided core biopsy is valuable for the diagnosis, management, and prognosis of unknown pulmonary lesions. Shape and echogenicity on ultrasonography correlate well with histopathology and provide useful information for distinguishing between

benign and malignant lesions. On the contrary, color Doppler is of little value for this purpose.

Key words: Pulmonary lesion; Ultrasound-guided biopsy; Color Doppler