RE: Evaluating the Semisolid Thyroid Nodules with the Diffusion Weighted Imaging Tool

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Dear Sir,

We are pleased to read the interesting article by Park et al. (1), in the September/October 2012 issue of the Korean Journal of Radiology. The authors examined partially cystic thyroid nodules with gray scale ultrasound (US) for malignancy findings, which would definitely add to the current literature. Park et al. (1) in their retrospective study examined partially cystic nodules with gray scale US and they described only the gray scale features of nodule; it would have been interesting if they had included Doppler US features. Some authors reported different qualitative Doppler US criteria to be associated with malignancy, including rich intralesional vascularization with anarchic structure and winding vessels or the presence of a peripheral large afferent vessel (2). However they also indicated no vascularity in some malignant nodules and explained this finding by the presence of stromal fibrosis. In these situations they suggested using elastography for

further evaluation. The combination of qualitative Doppler US and elastography criteria for selecting nodules for biopsy needs to be confirmed in further prospective studies.

Since we have a special interest in the diffusion magnetic resonance imaging subject (3), we would like to contribute regarding the discrimination of benign and malignant thyroid nodules including semisolid nodules, using diffusion weighted imaging and apparent diffusion coefficient (ADC). Mutlu and colleagues (4) discussed the value of ADC in differentiation of malignant from benign thyroid nodules in their study which also included the semisolid nodules. They found that the nodule - spinal cord signal intensity/nodule ADC ratio had the highest values for sensitivity and specificity among the tests defined for characterization of nodules. This would allow quantitative evaluation of thyroid nodules rather than qualitative evaluation while being a non invasive modality.

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Received September 18, 2012; accepted after revision September 25, 2012.

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