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Re: Comparative evaluation of multidetector CT and MR imaging in the differentiation of adnexal masses

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Sir,
We read with great interest the article by Dr. Tsili and colleagues entitled "Comparative evaluation of multidetector CT and MR imaging in the differentiation of adnexal masses" in the May 2008 issue of *European Radiology* [1]. The authors compared the diagnostic accuracies of multidetector CT (MDCT) and MR imaging for characterizing ovarian masses. We would like to comment on their study in terms of methodology.

First, the authors did not perform unenhanced CT. We have a question on how they differentiated enhancing lesions from hyperdense lesions including hemorrhage, mucinous fluid, and calcification. Unenhanced CT images are essential for measuring the attenuation difference before and after administration of contrast material. Discriminating benign and malignant lesions is impossible because no enhancing lesion can be identified without unenhanced CT images.

Second, the anatomical range covered by MDCT was different from that of MR imaging. MDCT covered the whole abdomen from the diaphragm to the symphysis pubis, whereas MR imaging covered only pelvis from the iliac crest to the symphysis pubis. If a lesion had been large enough to extend beyond the pelvic cavity as shown in Figs. 1 and 4, how could the authors have evaluated the lesion by using MR imaging? Probably, they did not discover any malignant findings within the lesion extending to the upper abdomen.

Third, the authors did not show any materials or methods for receiver operating characteristic (ROC) analysis. To create the ROC curve, they should have at least five categories for diagnosing ovary cancer like the Breast Imaging Reporting and Data System (BI-RADS) for breast cancer. The authors should clearly explain how to construct a ROC curve.

Lastly, the authors reported statistical significance between two ROC curves calculated using SPSS software. However, the software program of version 9–11 for Windows cannot determine whether or not there is statistical significance between two or more ROC curves. Therefore, the authors should mention what version of SPSS was used.

In conclusion, the authors' responses to our comments are of importance for radiologists and gynecologists who want to perform a study similar to that of Tsili et al. Their appropriate responses could facilitate the use of MDCT for evaluating ovary tumors before making a treatment plan.

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References

1. Tsili AC, Tsampoulas C, Argyropoulou M, Navrozoglou I, Alamanos Y, Paraskevaidis E, Efremidis SC (2008) Comparative evaluation of multidetector CT and MR imaging in the differentiation of adnexal masses. *Eur Radiol* 18:1049–1057