

Intraobserver and interobserver agreement of color Doppler in adnexal malignancy

S. Guerriero¹, J. Alcazar², M.A. Pascual³, S. Ajossa¹, B. Graupera³, L. Hereter³, N. Garau¹, G.B. Melis¹

¹Department of Obstetrics and Gynecology, University of Cagliari, Cagliari, Italy; ²Clinica Universitaria de Navarra, University of Navarra, Pamplona, Spain; ³Obstetrics and Gynecology, Instituto Universitario Dexeus, Barcelona, Spain

Objective: The purpose of this study was to evaluate the intraobserver and interobserver agreement for identifying adnexal malignancy using color flow location in indeterminate masses after a gray-scale transvaginal sonography.

Methods: Digitally stored color Doppler sonographic images, from a consecutive series of 130 women with an adnexal mass submitted to surgery after transvaginal sonography were evaluated by 6 different examiners with different degree of experience. Only consecutive cystic mass in which the gray-scale echo architecture was not suggestive of benign histology was included in the study. Solid excrescences or solid portions of the tumor were evaluated for vascular flow with color Doppler sonography. A mass was graded malignant if flow was shown within the excrescences or solid areas (central flow) and benign if there was no flow or only peripheral. Intraobserver and interobserver agreement according with the level of experience were assessed by calculating the kappa index.

Results: Of the 130 consecutive cases with indeterminate findings at gray-scale evaluation, definitive histologic diagnoses were as follows: 80 (61.5%) benign and 50 (38.5%) malignant masses. Intraobserver agreement was good or very good for all examiners with different degree of experience (kappa ranging from 0.721 to 0.888). Interobserver agreement was good to moderate for all operators (kappa ranging from 0.478 to 0.714), irrespective of degree of experience. A correct classification was obtained by all assessors in 52% of malignant masses. Only ten masses (7.7%) were incorrectly classified by all the assessors.

Conclusions: The use of color Doppler in the evaluation of flow location for the detection of adnexal malignancy seems to be reproducible method even in moderate experienced examiners.