Introducing a new scoring system based on her2/neu, p53 oncogenes results and Mammographic findings for prediction of tumor grade in breast cancer

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Objective: To investigate the correlation of the results of a new scoring system comprised of mammogram, P53 and her2/neu with the tumor grade in invasive ductal carcinoma.

Methods: 150 cases of pathology proven invasive ductal carcinoma of a private clinic were included. According to BIRADS system, the mammography results received the scores of 1 (benign: groups of I and II in BIRADS ), 2 (suspicious: group III in BIRADS) and 3 (malignant: groups of IV and V in BIRADS). P53 and her2/neu presence were assessed by immunohistochemical studies and the results were scored equal to 1 (negative results) and 2 (positive results). The final score of each patients was calculated by adding scores of all three studies (P53,
her2, mammography) which ranged between 3 to 7.

Results: The mean age was 48.2±11.2 years. Age between 30-50 years old. Eighty one cases had suspicious (54%) and 66 had malignant mammogram (44%). Positive P53 was seen in 59(39%), positive her2/neu in 69(46%) and high grade tumor in 77(51%) patients. On scoring, 2 patients gained 3 (1.3%), 36 scored 4 (24%), 53 patients received 5 (35.3%), 37 reached 6 scores (24.7%) and 22 patients received 7 scores (14.7%). Placing scores 3-4 in one group and 5-7 in another, the sensitivity and negative predictive value of the system for high grade tumors reached 97.7% and 89.5% respectively. By placing scores 3-6 in one group and score 7 in another, the specificity and positive predictive value of the system reached to 100%. The results of mammography, P53 and her2/neu have a good correlation with tumor grade; when all three parameters are positive, the patients' tumor is almost always high grade.