

Euro Cancer 2018: Clinical indications for mammography in men and correlation with breast cancer - Kyungmin Shin - The University of Texas.

Kyungmin Shin¹

¹The University of Texas , USA

Purpose:

To examine presenting clinical symptoms and imaging findings and correlate them with biopsy-proven breast cancer in men.

Method & Materials:

429 male patients who presented for mammography at one institution between January 2004 and December 2014 were retrospectively evaluated. Of the 429 patients, 291 presented with clinical symptoms for diagnostic mammography and 138 presented for screening mammography. The presenting clinical symptoms in 291 patients were recorded and correlated with imaging (mammography and sonography) and histopathology findings.

Results:

A total of 291 patients were included. Multiple symptoms were possible and there have been a complete of 318 clinical symptoms. 190 (60%) presented with palpable abnormalities, 44 (14%) with non-focal pain, 31 (10%) with swelling, 14 (4%) with breast enlargement, 13 (4%) with focal pain, 13 (4%) with other symptoms, 7 (2%) with skin changes and 6 (2%) with nipple discharge/ changes. 290 patients underwent mammography and 176 patients underwent sonography. A total of 41 cancers were diagnosed, most invasive ductal carcinoma. Statistical analysis of the clinical symptoms demonstrated that nipple discharge/changes and skin changes (mostly with associated palpable abnormalities) had the very best sensitivity. Analysis of mammography findings revealed that 52 patients showed either a mass or a focal asymmetry on mammography, of which 38 (73%) were diagnosed with cancer. Only three patients (1%) who had neither a mass nor a focal asymmetry were diagnosed with cancer.

Seventeen patients (85%) had tumors that were mammographically apparent. Histopathologic review confirmed 15 pure mucinous tumors and five mixed mucinous tumors having an overall mean diameter of three .4 cm. The pure-tumor group contained three incidentally detected tumors (all < or = 0.8 cm in diameter); six that had a circumscribed, lobular contour on mammograms (mean diameter, 3.6 cm); and six that had a poorly defined, irregular contour (mean diameter, 1.2 cm). One of the mammographically apparent small pure tumors contained histologically confirmed psammomatous microcalcifications. All pure tumors had microscopically evident circumscribed margins that could have accounted for the circumscribed mammographic appearance of the larger masses. All mixed tumors had mammographically and histologically evident irregular margins due to the associated fi-

brosis and infiltrative margins of the nonmucinous component (mean diameter, 5.3 cm)

Conclusion:

Correlating clinical symptoms and imaging findings can help to develop more accurate probabilities for timely and accurate diagnosis of breast cancer in men. Clinical symptoms of nipple discharge/changes, skin changes with associated palpable abnormalities and mammographic findings of masses and focal asymmetries were related to male carcinoma . Pain, breast enlargement and swelling were unlikely to be associated with breast cancer. Judicious use of breast ultrasound in men improves outcome. Our data suggest that targeted ultrasound is of limited value in symptomatic male patients where mammography is negative or reveals only gynecomastia and results in unnecessary benign biopsies in these patients. When mammography reveals concerning findings, ultrasound adds positively to clinical management. Carcinoma was evident mammographically as an uncalcified mass in 17 patients (74%) and as a mass with microcalcifications in two patients (9%). Three tumors were not evident on mammograms, including one that was obscured by gynecomastia. Tumors were largely subareolar (14/17, 82%), and every one were ductal cancers, including six pure intraductal carcinomas. There are differences in the mammographic appearances of pure and mixed mucinous carcinomas that have a histopathologic basis. Circumscribed, lobular margins on mammograms are characteristic of large pure tumors and are the result of their microscopically evident circumscribed margins and expansile growth pattern. Irregular margins on mammograms are more characteristic of mixed mucinous tumors, regardless of tumor size, and are attributable to the fibrotic and infiltrative nature of the nonmucinous component.