

REASONS FOR FAILURE OF PHYSICAL EXAMINATION
IN BREAST CANCER DETECTION
(ANALYSIS OF 232 FALSE-NEGATIVE CASES)

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- 6 NOV 1997

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The diagnostic role of physical examination (PE) is evaluated in 1450 cases of breast cancer detected in 34,677 women controlled at the Centro per lo Studio e la Prevenzione Oncologica in the period 1974-1981. In 47 cancer cases, PE findings were normal since the neoplasm was not clinically palpable because of its size and site, and in another 185 cases the clinical diagnosis was benignancy without evidence of suspect signs. Therefore, the overall sensitivity of PE was 84%. PE errors did not involve a therapeutic delay for the patient in 75% of cases in which a biopsy was recommended for clinical benignancy or for suspicion on the basis of other diagnostic methods. The present study confirms that PE has a good diagnostic sensitivity when the examined population is represented by self-referred women, who for the most part are symptomatic, whereas it cannot be considered as the only diagnostic test for early diagnosis in mass screening, since in asymptomatic women a large number of cancers are not clinically palpable. Moreover, PE shows lower sensitivity for small lesions and in younger women. Extensive use of fine needle aspiration cytology and other diagnostic methods in association with PE is therefore recommended to reduce the possibility of errors.

The sensitivity of breast physical examination (PE) in the detection of breast cancer has been estimated between 80 and 90% by various authors (4, 6, 10). A precise evaluation of the sensitivity of such a diagnostic method is quite difficult, since very different results may be obtained in different conditions. Firstly, results may be strongly influenced by the stage of the cancer series examined. Series collected from screening experiences, with a low average stage and a high rate of pre-clinical and small cancer lesions, will lead to underestimation of PE sensitivity, whereas the opposite may happen with hospitalized patient series, thus yielding a high rate of more advanced lesions (7).

Again, the type of diagnostic protocol and particularly the diagnostic sequences adopted will influence the results. PE sensitivity will be overestimated when PE is performed after other diagnostics tests, such as mammography, because the clinician may be influenced and alerted by radiologic evidence of a suspect lesion. When large

series are involved, the degree of accuracy and experience of clinicians who perform PE may well be the cause of the difference in the results reported. Finally, as for any other diagnostic test, the method by which false-negative cases (FN) are identified will obviously influence sensitivity determination. In the absence of a tumor registry or an active follow-up of all examined women, a certain proportion of FN will be ignored. A large series of breast cancer cases, all studied with PE at least, is available at the Centro per lo Studio e la Prevenzione Oncologica of Florence. Most of the afore mentioned biases in the evaluation of PE sensitivity can be avoided thanks to the mode of data recording and the help of a histologic registry.

For these reasons, we thought it worthwhile to analyze this material, to identify the most frequent reasons for PE failure and the role of other diagnostic tests in improving the overall sensitivity when associated with PE.

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Received February 21, 1983.