

BREAST CANCER DIAGNOSIS UNDER THE AGE OF FORTY YEARS

- 6 NOV 1997

on behalf of *Qu-6*

Stefano Ciatto,¹ Andrea Herd Smith,¹ Cosimo Di Maggio,² Luigi Pescarini,²
Enzo Lattanzio,³ Antonietta Ancona,³ Clelia Punzo,⁴ Giuseppe De Leo,⁴
Paolo Burke,⁵ Mino Giorgio Bonomini⁶ and Pietro Melaranci⁶

¹ Centro per lo Studio e la Prevenzione Oncologica, Firenze; ² Istituto di Radiologia,
Università, Padova; ³ Istituto di Radiologia, Università, Bari; ⁴ Istituto di Semeiotica
Chirurgica, Università, Bari; ⁵ Servizio di Radiodiagnostica, Ospedale Maggiore, Torino;
and ⁶ Divisione di Chirurgia, Ospedale Regina Apostolorum, Albano Laziale, Roma

The authors report on a multicentric consecutive series of 382 cases of primary breast cancer detected before the age of 40 years. Physical examination (PE) was always performed, whereas other diagnostic tests were performed in selected cases, namely mammography (M) in 334, fine needle aspiration cytology (CYT) in 188 and thermography (TH) in 123 cases. Single tests showed a high rate of false-negative/benign cases (PE, 0.23; M, 0.26; CYT, 0.37 and TH, 0.50), especially when the T1 subgroup was considered (PE, 0.34; M, 0.38; CYT, 0.42 and TH, 0.78). The poor results recorded for TH make its current diagnostic use highly questionable. The policy of extensive biopsy of all «dubious» benign lesions on PE allowed for the detection of 41 of 382 cancers and reduced the PE false-negative/benign rate to 0.12 for the total or 0.15 for T1 cancers, although about 80 unnecessary biopsies for each cancer detected were performed in this way. The association of PE to one or more tests resulted in even lower false-negative rates (0.06 for the total, 0.10 for T1 cancers). The authors criticize the aggressive policy of extensive biopsy recommendation based only on a dubious report on PE alone and stress the opportunity of the routine association of M and CYT to PE, since this combination seems to achieve a higher breast cancer detection rate even in this age group.

The detection of breast cancer (BC) before the age of 40 is a relatively infrequent event, accounting for less than 7% of all incident cancers of the breast (6.98% in a retrospective survey of BC incidence in the District of Florence in the years 1977-1982) (2). The low incidence of breast cancer and the well-known reduction in sensitivity of mammography (M) at younger ages (3) are the main reasons for the exclusion of women aged less than 40 from almost all population-based mammographic screening programs in the world (6). The recommendations for BC diagnosis under 40 years of age, as suggested by most national guidelines, are limited to breast self examination and to clinical investigation of sympto-

matic cases. Unfortunately, even in clinical practice, diagnostic errors are not infrequent in this age group. Age does not affect only the accuracy of M; the physical examination (PE), even if to a lesser extent, also shows a reduction in sensitivity at younger ages (3, 7). The use of additional diagnostic tests, such as thermography (TH) or ultrasound mammography (US), has been suggested to improve the overall diagnostic accuracy.

In 1984, following a previous multicentric national review (5), the Italian National Task Force for Breast Cancer (FONCaM) promoted a multicentric study on detection modalities of BC in women aged under 40. The present report concerns the evaluation of a large series of BC

Acknowledgments: The authors are grateful to Prof. Vincenzo Oliva and Dr. Domenico Catucci for their help in data collection and discussion.

Address for reprint requests: Dr. Stefano Ciatto, Centro per lo Studio e la Prevenzione Oncologica, Viale A. Volta 171, I-50131 Firenze, Italia.

Received February 18, 1987.