



# Biopsies of Breast Lesions Evaluated in Premenopausal and Postmenopausal Women

Zeki ACUN, Alper CİHAN, Bülent UÇAN, Suat Can ULUKENT, Mustafa CÖMERT, Güldeniz KARADENİZ ÇAKMAK

Karaelmas University School of Medicine, General Surgery Department, Zonguldak, Turkey

## Abstract

**Objective:** To determine the histopathologic diagnosis of palpable and nonpalpable breast lesions in premenopausal and postmenopausal women.

**Materials and Methods:** All postmenopausal women attending for a routine breast screening and premenopausal women suffering from palpable breast lesions were included in the study. Evaluation before excisional biopsy was done by mammography for women over the age of 40, ultrasonography and physical examination. Excisional biopsies were performed in palpable and nonpalpable breast lesions of premenopausal and postmenopausal women having the possibility of malignancy in screening tests.

**Results:** Between April 2000 and January 2003, sixty-four premenopausal and twenty-nine postmenopausal women suffering from breast lesions possessing suspicion of malignancy underwent excisional biopsy for histopathologic diagnosis. The number of palpable and nonpalpable breast lesions were seventy-one and twenty-two respectively. A total number of sixteen malignancies; nine of which were premenopausal and the rest six postmenopausal were diagnosed histopathologically. All of the malignancies of premenopausal women were from palpable lesions where as one of which was nonpalpable in postmenopausal women.

**Conclusion:** Awaring of the importance of early detection for the survival in breast cancer, physician should always be attentive about the breast masses of both premenopausal and postmenopausal women. For breast lesions of malign potential, histopathologic correlation should be obtained by excisional biopsies.

**Key words:** premenopause, postmenopause, breast cancer, palpable, nonpalpable, breast screening

## Özet

### Premenopozal ve Postmenopozal Kadınlarda Meme Kitlelerinin Histopatolojik Tanılarının Değerlendirilmesi

**Amaç:** Premenopozal ve postmenopozal kadınlarda palpe edilebilen ve palpe edilemeyen meme kitlelerinin histopatolojik tanıların değerlendirilmesi.

**Materyal ve Metot:** Rutin meme taraması amacıyla başvuran tüm postmenopozal kadınlar ve memesinde palpe edilen kitle lezyonu olan premenopozal kadınlar çalışmaya katıldı. Eksizyonel biyopsi öncesi değerlendirme fizik muayene, ultrasonografi ve 40 yaşın üzerindeki hastalar için mamografi ile yapıldı. Tarama testlerinde malignite şüphesi olup palpe edilen veya edilemeyen meme kitlesine sahip tüm premenopozal ve postmenopozal hastalara histopatolojik tanı için eksizyonel biyopsi uygulandı.

**Sonuçlar:** Nisan 2000 ile Ocak 2003 tarihleri arasında 64 premenopozal ve 29 postmenopozal hastaya malignite şüphesi olan meme kitlesi nedeniyle eksizyonel biyopsi uygulandı. Palpe edilebilen ve edilemeyen meme kitlesi sayısı sırasıyla 71,22 olarak tespit edildi. 9 premenopozal, 6 postmenopozal olmak üzere toplam 16 malignite tespit edildi. Premenopozal hastalardaki malignitelerin tamamı palpe edilen meme lezyonlarında bulunurken postmenopozal hastaların birinde kanser tanısı palpe edilemeyen meme kitlesinde görüldü.

**Tartışma:** Meme kanserinde erken tanının sağkalım üzerindeki bilinen etkisi göz önünde bulundurulduğunda premenopozal ve postmenopozal kadınlardaki meme kitleleri konusunda hekimlerin çok daha dikkatli ve özenli olmaları gerektiği vazgeçilmez bir gerçektir. Bu nedenle malign potansiyele sahip meme lezyonlarında biyopsi ile histopatolojik tanının elde edilmeli mutlak gereklilik göstermektedir.

**Anahtar sözcükler:** premenopoz, postmenopoz, meme kanseri, palpabl, nonpalpabl, meme taraması

**Corresponding Author:** Dr. Zeki Acun  
Zonguldak Karaelmas Üniversitesi, Tıp Fakültesi, Genel Cerrahi AD,  
67600 Kozlu-Zonguldak-Türkiye  
Tel: +90-372-2610169  
Faks: +90-372-2610155  
E-posta: zekiacun@hotmail.com



## Introduction

Carcinoma of the breast is one of the most common cancer and is estimated to be the leading reason of death from cancer between the ages of 40 and 44 years in women (15). Breast cancer accounts for 32% of all premenopausal and postmenopausal female cancers and is responsible for 19% of deaths which is the second leading cause of cancer related mortality among females as the lung cancer surpassed it in 1985 (11,15). Each year approximately 400 000 women die because of breast cancer worldwide (11). The early diagnosis has got a great importance in breast cancer as the 5-year-survival rates in stage 1 breast cancer is reported to be 85% when it is 66, 41, 10% in stage 2, stage 3 and stage 4 respectively (15). The leading cause of delay in diagnosis is more commonly stated to be inappropriate physician reassurance that a mass is benign without a biopsy (9,10,21). Results from larger clinical trials indicates that screening can reduce breast cancer mortality. Three breast cancer screening methods are commonly employed; mammography, breast self examination and physical examination by a trained person (11). Prognosis of the breast cancer has been reported to differ according to age and menopausal status (20). Some of the factors associated with

lower breast carcinoma incidence includes later menarche, younger ages of first full-term pregnancy, multiparity and earlier menopause whereas an increased risk is reported in women with higher urine and plasma estrogen levels, postmenopausal obesity, family history of breast cancer, early menarche, later menopause, radiation to chest and history of benign proliferative lesions in breast (2,15). In respect to all of these evidences screening tests are recommended to women especially over the age of 40 years. As a result of these screening tests the histopathologic diagnosis of the suspicious breast lesions should be maintained. Excisional biopsy of the mass with histopathologic correlation is still the gold standard method in establishing the diagnosis and the treatment modality. Mammography has markedly increased the number of breast cancers detected when nonpalpable and even often noninvasive (7). The advanced breast biopsy instrumentation or stereotaxic breast biopsy for nonpalpable breast lesions are the newly developing techniques being used currently, nevertheless more series should be obtained in order to achieve their accuracy. We prefer excisional biopsies in both palpable and nonpalpable breast lesions. Histopathologic evaluations were performed and the malignancies were reported in premenopausal and postmenopausal women.

**Table 1.** The number of palpable and nonpalpable breast masses in premenopausal and postmenopausal women

	The number of palpable breast lesions	The number of nonpalpable breast lesions	TOTAL (n=93)
Premenopausal Breast Masses	50	14	64
Postmenopausal Breast Masses	21	8	29

**Table 2.** Malignancies of palpable and nonpalpable breast masses in premenopausal and postmenopausal women

	The number of palpable breast lesions	The number of nonpalpable breast lesions	TOTAL (n=16)
Premenopausal Malign Lesions	9	0	9
Postmenopausal Malign Lesions	6	1	7

**Table 3.** The number of histopathologic diagnosis of the malignant breast lesions

HISTOLOGY	The number of premenopausal malignancies (n=9)	The number of postmenopausal malignancies (n= 7)	TOTAL (n=16)
Infiltrative ductal carcinoma	7	5	12
Invasive ductal carcinoma	1	0	1
<i>In situ</i> ductal carcinoma	0	1	1
Lobular carcinoma	1	0	1
Medullary carcinoma	0	1	1



## Materials and Methods

Postmenopausal women attending for a routine breast screening and premenopausal women with palpable breast masses were included to the study. The breast screening consists of three modality; mammography for women over the age of 40 years, ultrasonography and physical examination of the breast. Excisional biopsy was organized to the suspicious palpable or nonpalpable lesions having spiculated or irregular margins, demonstrating the classical appearance of microcalcific foci suggestive of malignancy, architectural distortions, duct dilatation, asymmetry or fibronodular densities in mammography or ultrasonography after which the histopathological correlation were acquired.

## Results

From April 2000 to January 2003, 93 women underwent excisional biopsy in our clinic. 71 patients presenting with palpable breast masses and 22 patients having nonpalpable microcalcifications or solid nodular densities evident on screening that were suspicious of malignancy had excisional or stereotaxic breast biopsy. In 77 of 93 suspicious lesions histopathology showed that they were benign; including fibrocystic disease, fibroadenoma, ductal ectasia and fat necrosis. A total of 16 breast cancers were identified histopathologically. Breast carcinoma was diagnosed in 9 premenopausal and 7 postmenopausal women. The number of palpable and nonpalpable breast masses detected in premenopausal and postmenopausal women are shown in Table 1. Mean age was 38.8 and 52 years for premenopausal and postmenopausal women with breast carcinoma respectively. The proportion of malignancies presenting as a palpable or nonpalpable breast mass in premenopausal and postmenopausal women is shown in Table 2. Of the 16 malign specimens the most common histology was infiltrative ductal carcinoma as a number of 12, one of which was from a stereotaxic biopsy specimen. The other histopathological diagnosis revealed 1 invasive ductal, 1 meduller, 1 lobular and 1 *in situ* ductal carcinoma of breast. The number of histopathological diagnosis of the malignant breast lesions are presented in Table 3. 7 patients, one of which was in vasive ductal, the other *in situ* ductal, and 5 patients having infiltrative ductal carcinoma attended an other center for treatment. 5 of 7 women having infiltrative ductal carcinoma were treated by modified radical mastectomy, just like the 2 patients suffering from lobular and meduller carcinoma, the other 2 infiltrative ductal carcinomas had lumpectomy as a treatment modality. No complications were seen in postoperative period and neo-adjuvan therapy were applied to all of the patients.

## Discussion

Breast cancer is the second leading cause of cancer related deaths in women accounting for more than 46 000 deaths each year (16). Attempts to improve survival have been targeted to two areas: early diagnosis and improvements in adjuvant

therapy (16). For the early diagnosis of the breast carcinoma the breast screening tests including mammography, ultrasonography, breast self examination and physical examination by a trained personel are being used currently. Earlier diagnosis is known to result in improved survival rates (16,17,18). Prognosis of the breast cancer in women has been reported to differ according to age and menopausal status (20). A few large population-based studies and more limited analyses have indicated that women under the ages of 30-40 years have a worse prognosis (4,12,20). In addition, a few studies have found that women of extreme ages, i.e., premenopausal women younger than 33 years of age (5,20) or postmenopausal women older than 80-85 years of age (4,20,22) had a worse prognosis than other age groups. Studies have demonstrated that breast carcinomas in younger or premenopausal women are more likely to exhibit biological and prognostic features that are known to be associated with a high histologic grade, such as an absence of steroid hormone receptors (3,14,20), a high rate of proliferation (8,20) and abnormalities in p53 protein (1,20). The overall results of randomized clinical trials indicate that mammographic screening in women over the ages of 40- 50 years can reduce breast cancer mortality by about 25 % (11). A steep rise in breast cancer incidence occurs until the age of 45 to 55 years, and is followed by a less rapid increase thereafter (6,11). Additionally obesity is associated with a lower risk of premenopausal and higher risk of postmenopausal breast cancer (11). The characteristics of primary tumor are also influenced by the menopause (11). The results of breast cancer screening trials are consistent with other studies showing differences in the biology and epidemiology of premenopausal and postmenopausal breast cancer (11). Screening advances the time of diagnosis and allows for the early initiation of breast cancer therapy. While the sensitivity of mammography may be lower in premenopausal women, making mammography a less effective screening test (6,11); the mammographic screening in postmenopausal women is an effective means of reducing breast cancer mortality (11,19). For nonpalpable breast lesions of premenopausal and postmenopausal women possessing a suspicion of malignancy stereotaxic breast biopsy is indicated. To achieve a sensitivity of more than 90% for nonpalpable malignant lesions of 2 cm or less in diameter requires the presence of an experienced cytologist, allowing immediate examination of the specimen (13). For premenopausal and postmenopausal women having palpable or nonpalpable breast masses that possessing the risk of malignancy, the prior and the golden standard method for histopathologic diagnosis is excisional biopsy. As a result, one thing that should always be kept in mind is the early identification of the breast cancer acquires a vital importance for the patients survival.

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