

**BREAST CANCER 1998-2005: The Paralimni experience.....in perspective**

Over the past 8 years, since the start of Demokritos Radiology Center, in the Lito Private Hospital, 1820 patients were examined in our mammography department, from whom we diagnosed 70 women and one male with a new breast cancer on histology. This is at a relatively constant rate of 7-12 new breast cancers per year.

These may not seem like much when talking about 1 million new breast cancers per year worldwide, or 5000 new cases /yr in Greece, or a total of nearly 300 new cases per yr in the whole Cyprus, but in a population of only 6554 females over the age of 30, the incidence per 100 000 is similar to other parts of Cyprus, and to the rest of the western world.

**Methods**

We obtained our data is from a retrospective observation of the patients who presented to us at our Private Hospital.

We have the only mammography unit in both the private and public sectors in the free Famagusta district, so it is the only representation we have of the area. This will probably change now that the new Paralimni Hospital has finally opened.

Our patients come to mammography both for screening, and for diagnostic purposes.

An important feature of our mammography dept is a good cooperation between the various specialties, so that there is correlation of the clinical and radiological findings.

We perform mammograms as well as ultrasounds on all our patients over the age of 40 yrs.

Under the age of 40y , a mammogram is only performed if there is a suspicious lesion or if there is a strong family history.

**Results and Discussion:**

**Age-distribution of patients:**

In our data mean age at presentation was **53,9yrs**.

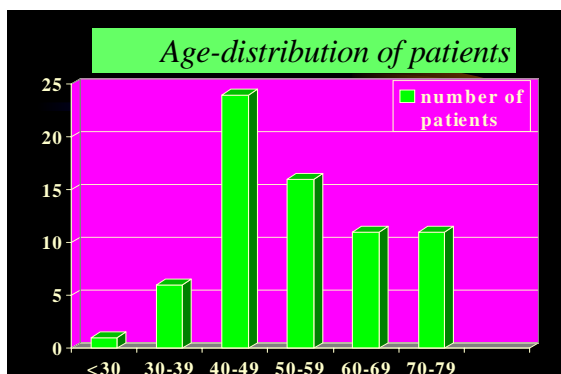
The mean age at presentation in the United States and in the United Kingdom is **61-63yrs**, but there is a trend for underdeveloped countries to have more breast cancers in the younger age groups, eventhough their total number of breast cancers is fewer.

In Asia the mean age at presentation was shown in a review study to be **47,8yrs**

This is also true in the Middle East, where a study in Lebanon (ref 6) showed the mean age at presentation to be **50yrs**, and in Saudi Arabia the mean age at presentation was found to be **44yrs**.

This difference is even more marked in Africa where some studies have shown a mean age at

presentation of **42yr**, while in America, the difference in the presenting age groups between African Americans , and white Americans was also documented.



*Age- distr. of Cancer pts as % of total*

	Canada	UK	Lebanon	Rest of Cyprus	F.Fam district
20-29y	0,4	0,3	4,7	0,7	1,4
30-39y	4,5	4,8	16,1	7,2	8,5
40-49y	19,3	13,9	28,3	22,2	34,0
50-59y	30,5	25,6	26,3	26,4	22,8
60-69y	25,1	22,2	16,9	20,1	15,7
70-79y	20,3	18 + 15	6,1	24,1	15,7

When we look at the age-distribution of breast cancer patients as a percentage of the total number of cancer cases in various parts of the world, we see that in the UK 66-70% of breast cancer patients >50yrs.

In our patients only 55% of cases are over 50 yrs, while 45%<50yrs.

The younger age-distribution of breast cancer noted in the Lebanese study which was published in the World Journal of Surgery, as well as in studies of African Americans, was thought to be due to genetic factors, as the cancers that occur in these populations at earlier ages, behave like the BRCA associated cancers, being more aggressive.

However, lifestyle also plays a role in these figures, and in our data, a selective bias related to lifestyle played a major role in the age-distribution curves observed. Since there is no screening program in our area as yet, in order to call all females over the age of 40, the patients who come to our hospital for a mammogram are those who have a certain education or socio-economic standard, and these are the younger, working women.

In support of this theory is that when studying a population of Indian women who emigrate to UK, their age-distribution curves are the same as for the rest of the UK.

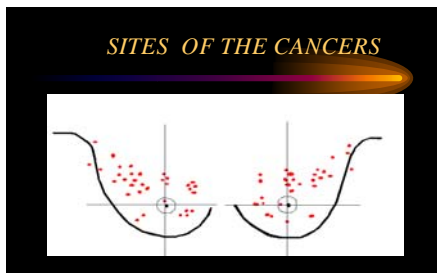
In the case of Africans who emigrated to America the difference in age-distribution of breast cancer persists, but it must be noted that the socio-economic inequalities also persist.

### Family history:

- Our patients: 15,7% had a family history of breast cancer
- Other studies show similar findings of 85% of women having a negative family history
- In a review study of women <50yrs, 34% had a family history of breast Ca
- Our patients: 10 of the 13 patients with a family history were less than 50 yrs of age, and 1 was 50yrs

### Presenting Symptoms:

- From the 70 patients,
- 29 - asymptomatic
  - 32 - lump
  - 5 - nipple discharge
  - 2 - erythema
  - 1 - dimple
  - 1 - pain



In mammography review studies, the majority of breast cancers found in upper outer quadrants and the figures quoted are between 55-60%. In our study 61% were found in the upper outer quadrants.

### Bilaterality:

In the 70 female patients, a bilateral malignancy was found in 2 patients (3,6%).

1 was metachronous

1 was synchronous

Other studies:

Finland - bilateral malignancy was found in 1,5%, Lebanon bil=5% at presentation, India 1%

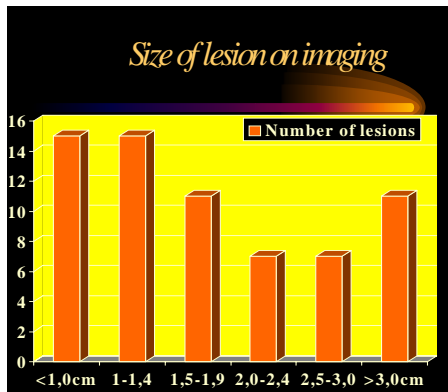
### Hormone Replacement Therapy :

Only 6 of the 70 patients were on Hormone Replacement Therapy (HRT)

-5 of these were on HRT for 5 yrs or more

-1 patient was on HRT for only 1 yr

This is mainly because of the larger number of younger patients who were diagnosed, but even our older patients are not very keen on HRT.



This graph shows that most of the lesions we found were in the under 1,5cm categories.

But since this is not just a screening program but also a diagnostic centre for palpable lesions, there are also many larger tumours.

### Histology :

- Invasive Ductal Ca -----50cases = 71,4%
- Invasive Lobular Ca-----8cases = 11,4%
- Mixed Ductal + Lobular-----2 cases = 2,9%
- Tubular Ca-----1 case = 1,4%
- Medullary Ca-----1 case = 1,4%
- DCIS-----5 cases = 7,1%
- Mixed Inv Ductal +DCIS -----2 cases = 2,9%

9 had positive lymph nodes on biopsy.

The presence or absence of suspicious lymph nodes on the mammogram or ultrasound did not correlate at all well with the histological finding of positive lymph nodes. It has been shown that ultrasonography provides better information than mammography about the axillary nodal status, than mammography. The sensitivity for detecting axillary lymph nodes has been reported as 72.7% for ultrasonography, 38.9% for axillary mammography, and 32.3% for clinical examination in other studies.

Other mammographic findings like size of tumour, malignant calcification or spiculation were better associated with nodal metastases than the appearance of suspicious lymph nodes on mammogram.

(2 of the 70 patients also had distant metastases at presentation).

### Mammographic presentation

- Stellate / spiculated lesion -----22cases
- Rounded / oval lesion -----11cases
- Undefined asymm. density-----14cases
- Architectural distortion -----6cases
- Microcalcifications only -----7cases
- (Any of the above + microCa-----16cases)
- Increase density whole breast---3cases

- Not seen on Mmg -----4cases

### **Ultrasound representation of the cancers**

55 of the lesions, that is 78%, were diagnosed as malignant breast cancers could also be seen on U/S. 4 of the lesions were only seen on U/s and were not seen on MMG – 2 of these were due to the increased density of the breasts, and 2 were due to the very posterior position of the lesion.

7 of the lesions could not be seen on U/S and most of these lesions were those with microcalcifications only on the MMG.

These findings show us that U/S has a high false negative (and that is why it cannot be used for screening), but when the characteristic features of a malignant lesion are present, the ultrasound is quite accurate.

.These characteristic features of malignancy are poorly defined, echolucent lesion with increased depth, and posterior acoustic shadowing.

Of the 59 lesions seen on u/s, 47 had these characteristic features

There are however also certain malignant lesions which may have a very benign appearance on the u/s , and we had 4 such lesions.

One of these had the appearance of a simple cyst, which turned up to be a medullary carcinoma.

The relationship between the ultrasound appearance of the lesion and the aggressiveness of the lesion has been demonstrated in several studies, but it is still an issue under debate.

### **Disadvantages of a small town practice**

- Difficulty in maintaining good technical standards for mammography
  - Not enough expert help
- Small numbers, difficult to evaluate results
- Poor feedback from the city
- Often personal involvement (patient is a friend or family) - emotional stress

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