

# **SCREENING FOR EARLY BREAST CANCER IN DEVELOPING COUNTRIES**

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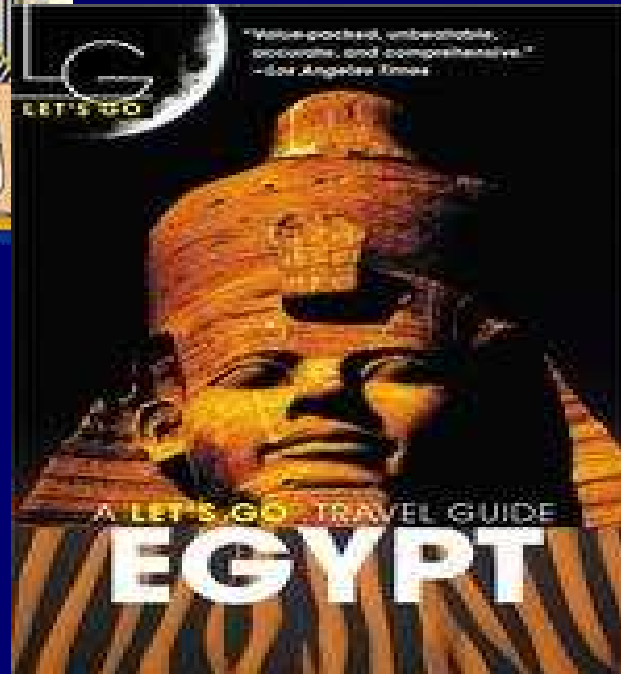
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# The Cairo Breast Cancer Screening Trial

## CBCST

A PILOT  
STUDY OF 5000  
WOMEN IN  
CAIRO



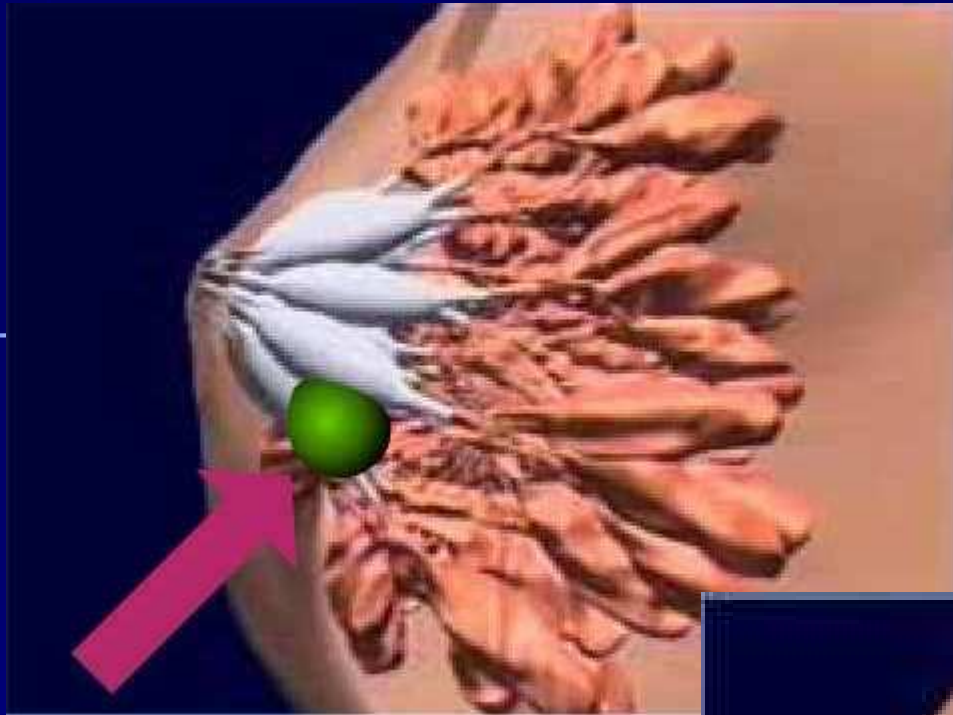
*Civilization of 7000 years*



**Breast cancer is not a disease of modern society, it was recognized by the ancient Egyptians as long ago as 1600 BC.**

(Edwin Smith Papyrus)

# Breast Lesions



# **AIM OF STUDY (CBST)**

- **To test the feasibility of conducting a Breast Cancer Screening Program in a well defined, socio-economically modest population in the city of Cairo.**
- **To pilot a Randomized Trial of Breast Physical Examination (CBE) and Breast Self-Examination (BSE)**

# MATERIAL & METHODS

- SAMPLE SIZE: 5000 women ( 35 - 65 years)
- DURATION OF THE STUDY: Started 07/05/00  
ended 28/11/02

- PHASES OF THE SUDY:

The study was conducted in 2 phases:

- Phase I
  - Phase II
- 
- ```
graph LR; P1[Phase I] --> G1[Group A]; P2[Phase II] --> G2[Group B];
```
- Group A
  - Group B

# **METHODOLOGY**

**A specialized medical center in Cairo ( The Italian Hospital ) was selected as headquarters of the study.**

**An area around the Italian Hospital was geographically defined.**

**Maps of this area were obtained and divided into 8 blocks**

# \***METHODOLOGY (Cont.):**

## **2. Door-to-Door visits**

4 Social workers were selected and trained about the objectives and methodology of the study.



## 2. Door-to-Door visits (Cont.) Questionnaire

OSPEDALO ITALIANO

KERMESSE ITALIANA

I

بحث الاكتشاف المبكر لأورام الثدي في مصر  
دراسة رائدة على سيدات منطقة العباسية - القاهرة  
" المرحلة الاولى "

اسم الباحثة: [ ]  
رقم القطعة: [ ]  
تاريخ الزيارة: [ ]  
عنوان المنزل تفصيلاً: [ ]  
رقم المشاركة: [ ]

بيانات عن السيدة / الانسة

الاسم ثلاثي: [ ]  
العمر (بالسنة): [ ]  
الديانة: [ ]  
الوظيفة: [ ]  
التعليم: [ ]  
عدد افراد الاسرة: [ ]  
اجمالي دخل الاسرة (او ايه بتصرفوا في الشهر): [ ]  
هل انت مدخنة: [ ]  
هل زوجك بيدخن: [ ]  
في حالة نعم نوع التدخين: [ ]  
بالنسبة للسيدة هل حضرتى مناقشة/جلسة للتنقيف الصحى: [ ]  
هل الدورة الشهرية منتظمة: [ ]

### 3. Women invited to attend a Health Education Session In a primary health care center (PHC)



# (a) Brief health talk by doctors.



## **(b) Clinical Breast Examination (in a private room)**

## **(C) Teaching of Breast Self Examination**



## **4- Referral to the Italian Hospital of any woman with suspicious finding for:**

**(a) CBE by Chief Surgeon. (Confirm)**



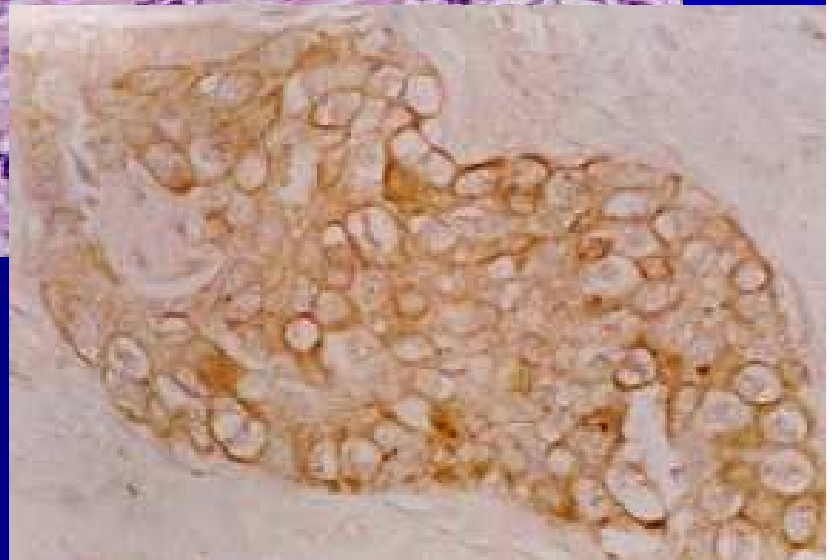
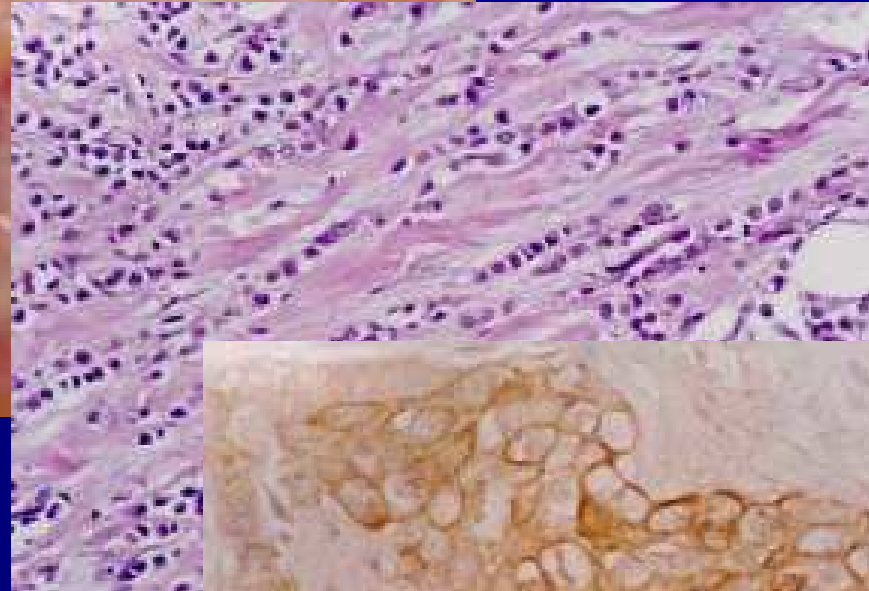
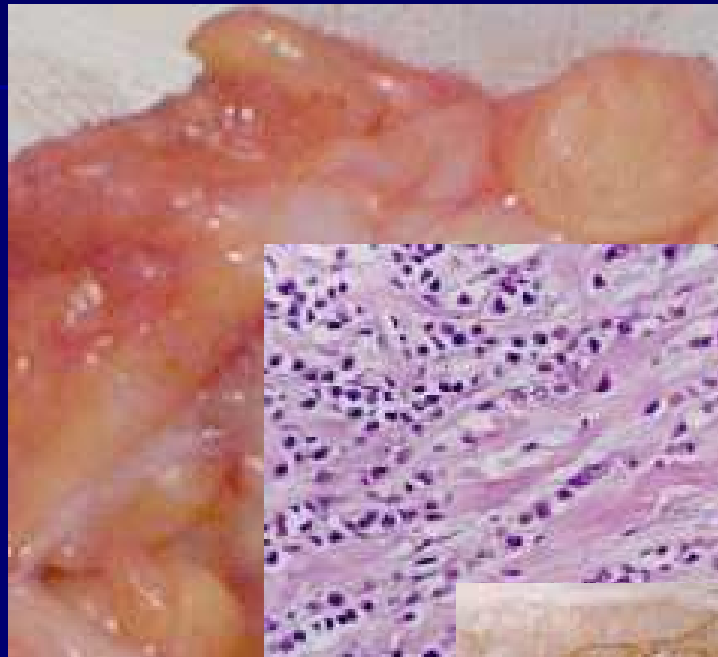
## (b) Further investigation (+/- MX and U.S.)



# (c) Further surgical treatment (free of cost).



# ***PATHOLOGICAL EXAMINATION***



- **Phase II** : Women who had previously been contacted were randomly classified into two groups (using area / block randomization) .

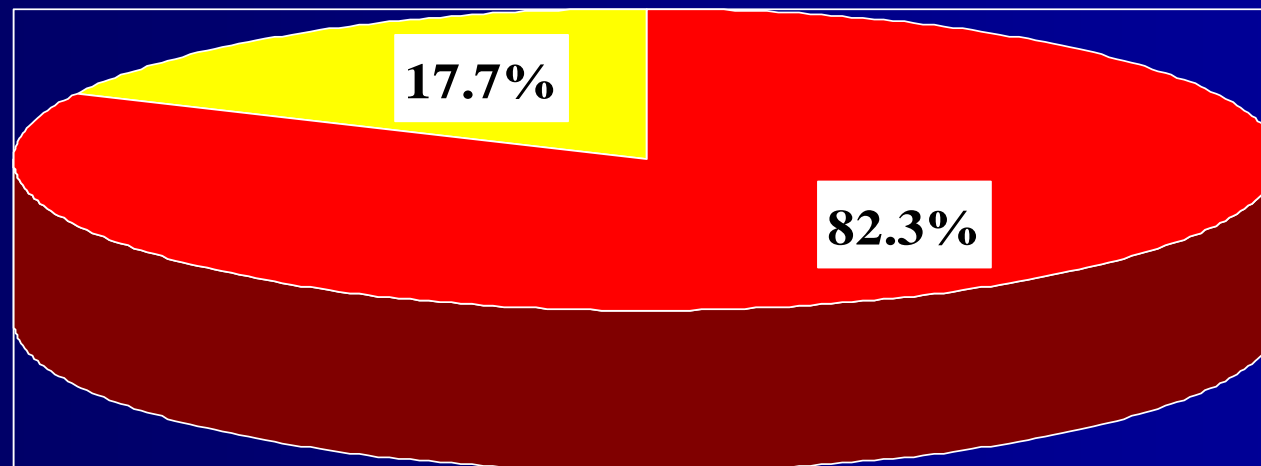
**Group A** : To be invited to attend once more the PHC for examination

**Group B** : To be visited only and asked about breast Problems

# RESULTS

# Results of phase I Field Study Rates

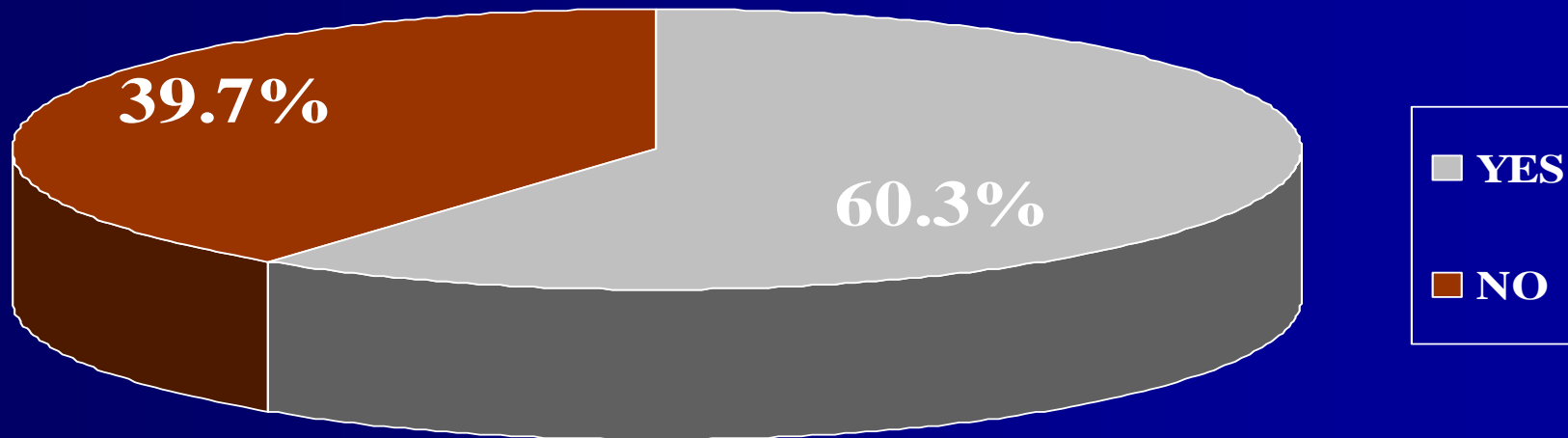
- No. of women contacted → 4116 out of 5000  
Community Acceptance Rate → **4116/5000**



# Field Study Rates (Cont.)

- Compliance Rate at PRIMARY HEALTH CARE :

2481/ 4116



# Results of CBE at PHC

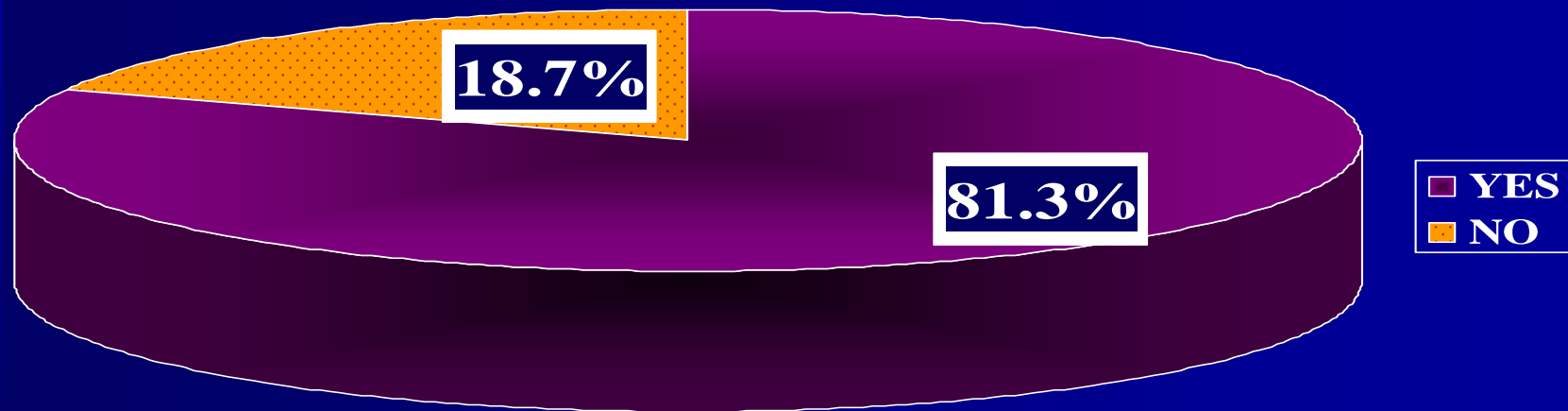
- **Total examined: 2481**
- **Number found abnormal and referred to Italian Hospital for further evaluation:**

**291 (11.7%)**

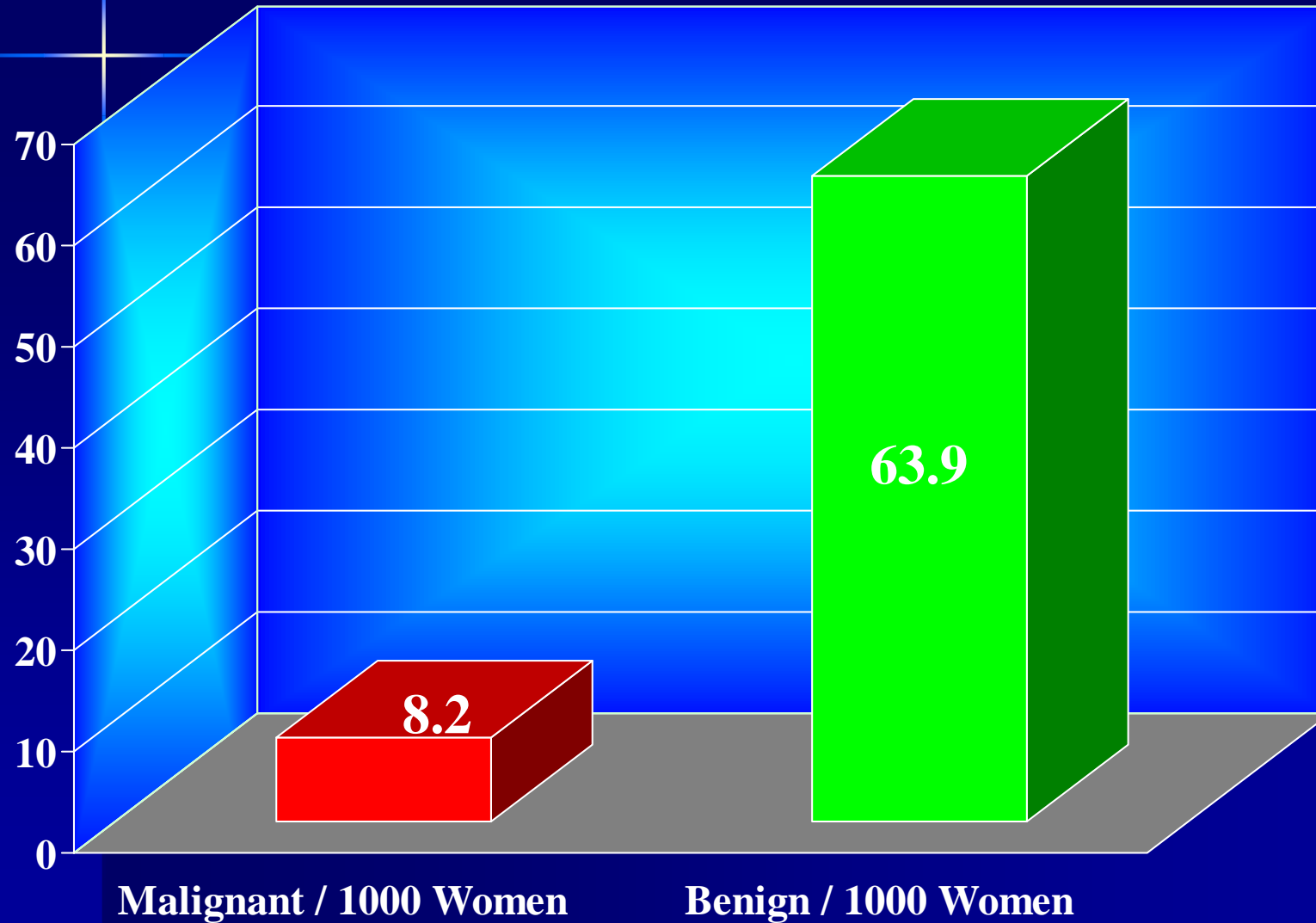
# Compliance Rate at ITALIAN HOSPITAL

*55 out of 291 (18.9%) women with abnormalities detected at PHC did not show up at the hospital for further investigation*

**236/291**

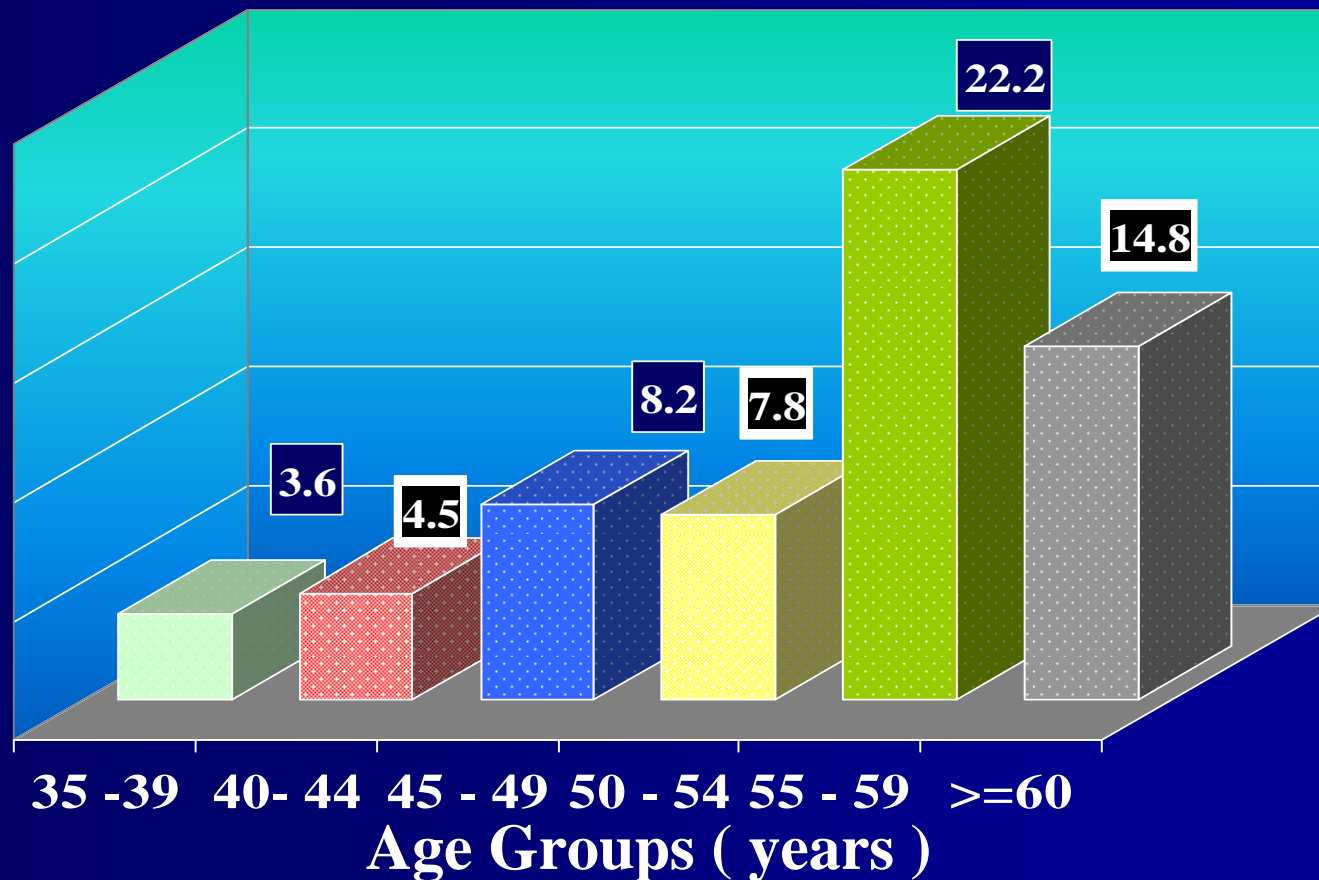


# Results Of Investigations



# variables that were significantly associated with breast cancer

## 1- Age (rate per 1000)



# **Variables that were significantly associated with breast cancer (Cont.)**

- **2- Family History.**
- **3- Gravida.**
- **4- Regularity of menstrual cycle.**
- **5- Occupation / Education.**

# Results of Phase II : GROUP A

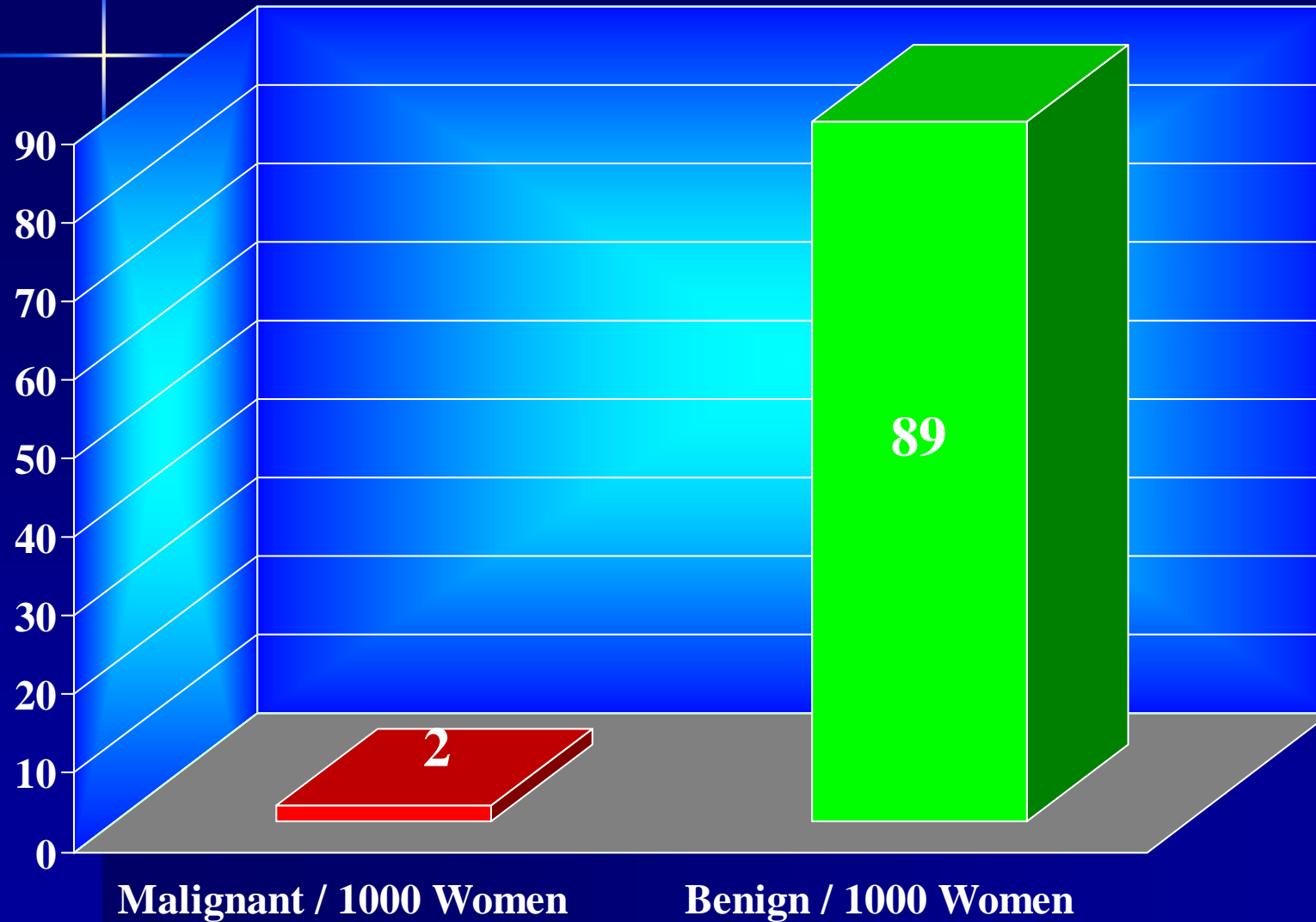
- Total No. of Women contacted

**1924**

Out of which

- **1237** Attended PHC during Phase I
- **687** did NOT attend

# Results Of Investigations



# Results of Phase II : GROUP B

- Total No. of Women contacted

**1927**

**Out of which**

- **1062** Attended PHC during Phase I
- **865** did NOT attend

# Results of Phase II : GROUP B (Cont.)

## Interval cases of breast cancer following first screen:

- Among women who attended PHC in phase I  
= **4 / 1062**

**3.7 per 1000**

- Among women who did NOT attend  
= **3 / 865**

**3.5 per 1000**

\* **Totally: 7/1927 cases**                      **0.37%**

# Staging of Malignant Tumors (pathology stage)

*Pathological Stage II was the  
predominating stage  
in all the groups [1, 2 (A&B)]*

**In the year 2003/2004, the trial has been extended in Cairo by the identification, recruitment & randomization of a second group of 5000 Women from a different district (Area no.2)**

- **From the start, women were randomly allocated into 2 groups:**

**Group A (2500) → Study arm**

**Group B (2500) → Control arm**

**Both areas of residency are quite far from each other.**

# Results – Area 2

## Study Group A

**\*Community acceptance rate**

→ **2264/2500 (90.6%)**

**\*Compliance rate at PHC**

→ **1861/2264 (82 %)**

**\*Compliance rate at Italian Hospital**

→ **77/88 (87.5%)**

**\*Cancer Detection rate**

**10/1861 (5.4 per 1000)**



# Results (Cont.)

## Study Group B:

\* No. of women contacted  **2176**  
out of 2500

\* Community acceptance rate  **87%**

\* Symptomatic cancer diagnosed as a  
result of study activities

**1/2176 (0.5 per 1000)**

# Staging of Malignant Tumors Area-2

*Pathological Stage II was also  
the predominating stage  
in Area-2*

# **May 2005, follow up (Area 2 )**

## **Group A - Study arm**

- **Total number of women accepted to participate in 1<sup>st</sup> round → 2264**
- **Total No. of women at risk for cancer in 2<sup>nd</sup> round → 2254**

# Follow up (Area 2 )

## Group A - Study arm (Cont.)

- Compliance rate at PHC

→ 1852/2254 ( 73% )

- Compliance rate at IH

→ 52/56 ( 93% )

- Cancer Detection rate

6/1852 ( 3.2 per 1000 women )

# May 2005, follow up (Area 2 ) Group B- Control arm

- Total number of women accepted to participate in 2nd round  2215

- Community Acceptance Rate

 2215/2500 (88.6%)

- Cancer Detection rate



2/2202 (0.9 per 1000 women)

# Staging of Malignant Tumors

## Follow up Area-2

- \* 50% of cases were Pathologically Stage I*
- \* 50% of cases were pathologically Stage II in the Follow up of Area-2*

# Area No. 3

- **October 2005, a third group of 5000 women from a different district were recruited and randomized as follows :**
  - **Group A (2500) → Study arm**
  - **Group B (2500) → Control arm**

# Results – Area 3

## Study Group A

\*Community acceptance rate

→ 2133/2500 (85.3%)

\*Compliance rate at PHC

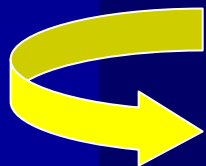
→ 1769/2133 (83 %)

\*Compliance rate at Italian Hospital

→ 89/114 (78 %)

\*Cancer Detection rate

9/1769 (5 per 1000)



# Results (Cont.)

## Study Group B

\*No. of women contacted  1937  
out of 2500

\*Community acceptance rate  **77.5%**

\*Symptomatic cancer diagnosed as a  
result of study activities:

 **6/1937 (3.1 per 1000)**

# Staging of Malignant Tumors Area-3

| Staging   | No. Of cases (%) |                 |
|-----------|------------------|-----------------|
| Stage     | Group A<br>No= 9 | Group B<br>No=6 |
| Stage 0   | 1(11.1%)         | 0               |
| Stage I   | 0                | 0               |
| Stage II  | 3 (33.3%)        | 1(16.6%)        |
| Stage III | 2 (22.2%)        | 4(66.6%)        |
| Stage IV  | 1 (11.1%)        | 1(16.6%)        |

2 cases were diagnosed by core biopsy

**December 2006 till present**

**A SECOND FOLLOW UP  
ROUND**

**Of the 5000 women from  
( Area no.2 )**