



Breast Cancer in Egypt

A Situation Analysis

Marilys Corbex

Epidemiologist, PhD

Consultant, USAID-CHL Project
Johns Hopkins University /
Center for Communication Programs



Epidemiology of Breast Cancer in Egypt

Method

Data are lacking !

- Regional population-based registry (Gharbeia, 2000-2002 data) → • Incidence
- WHO estimates (WHOsis, Globocan) → • Mortality & incidence/mortality ratio
- Cases series (NCI-Cairo, Tanta & Fakous cancer centers, Alexandria oncology department, MoH) → • Stage and tumor size at diagnosis
- Published scientific articles → • Risk factors
- Egypt Demographic & Health Survey 2005 →

Special thanks to: Pr A. Kandill, Pr N. Mokhtar, Pr S. Omar, Pr I. Seifeldin, Pr M. Shaalan

Incidence & Mortality

Egypt (79 M inhabitants)

- Crude Incidence: **33 new cases** /100,000/year
- 12,200 new cases / year
- 8600* deaths / year (ratio=71%*)
- 52% of cases are less than 50 years old
- incidence is raising

UK (60 M inhabitants)

- Crude Incidence: **148 new cases** /100,000/year
- 45,600 new cases / year
- 12,300 deaths / year (ratio=27%)
- 20% of cases are less than 50 years old
- incidence has raised by 50% over the last 25 years

* WHO estimation

Risk factors

Effect of a risk factor in a population is function of:

- its Relative Risk (constant across populations)
- its Frequency (varies across populations)

Example:

- Age at first child (*age >30 vs <20*): **RR=2.5**
- First child at age >30: more **frequent** in western countries than in Egypt

RISK FACTORS	RR	Freq in Egypt
Being a women	Strong	
Getting older	Strong	
BRCA1 or BRCA2 gene mutation	Strong	1/200
Family history of breast cancer		
• Two or more 1 st degree relative affected	Strong	?
• One 1 st degree relative affected before 50	Moderate	
• One 1 st degree relative affected after 50	Weak	
Childbearing		
• Not having children	Moderate	Unfreq
• Having a first child late	Moderate	unfreq
Age at menopause > 55 years	Moderate	unfreq
Not Breastfeeding	Moderate	Rare
Radiation exposure or frequent X-rays during youth	Moderate	?
High breast density	Moderate	?
Age at first period < 12 years	Weak	<50%
Alcohol consumption	Weak	Rare
Birth control pills (current/recent use only)	Weak	≈ 17%
Postmenopausal hormone use	Weak	Rare
Consanguinity	Weak (?)	≈ 33%
Overweight	Weak	>70%
Lack of exercise	Weak	>50%
Abortion, pesticides, pollutions, deodorants, mobile phones...	No Effect	-

Reproductive factors

Risk factors

Breast Cancer risk factors are less frequent in Egypt than in western countries

→ Explain lower incidence

Reproductive risk factors varies according to Urban / Rural area (socio-economic status)

→ Breast cancer may be slightly less frequent in low social classes / rural regions of Egypt.

Stage at diagnosis in Egypt

Most cases are diagnosed late:

	Stage III + IV	Tumor > 2cm
Urban 4 cases series	47% - 61%	80% - 96%
Urban + Rural 2 cases series	69% , 90%	no data

Data compiled from various cases series

Causes of late diagnosis: The BCFE Barrier study

M Corbex, J Mc Ewan, M Shaalan



المؤسسة المصرية لمكافحة سرطان الثدي
Breast Cancer Foundation of Egypt (BCFE)
مشهرة برقم 5840 لسنة 2004



Objectives of the study

BACKGROUND:

- Barriers to early diagnosis :

Women's awareness ? Economic barriers ? Social stigma ? Delays due to health system shortages ?...

→ **No evidence**

OBJECTIVES

1. Identify and quantify women's barriers to diagnosis and treatment.

2. Identify and quantify barriers at health system level



Methods and population

204 breast cancer (BC) patients

- Interviewed by one sociologist according to a peer-reviewed questionnaire with 70 questions about:

1/ medical journey

2/ personal journey, socio-cultural barriers

- recruited after diagnosis, in Cairo

→ 302 variables entered in EpiData

→ Statistical analyses performed with SAS software
(multivariate logistic regressions, stepwise selection of variables)

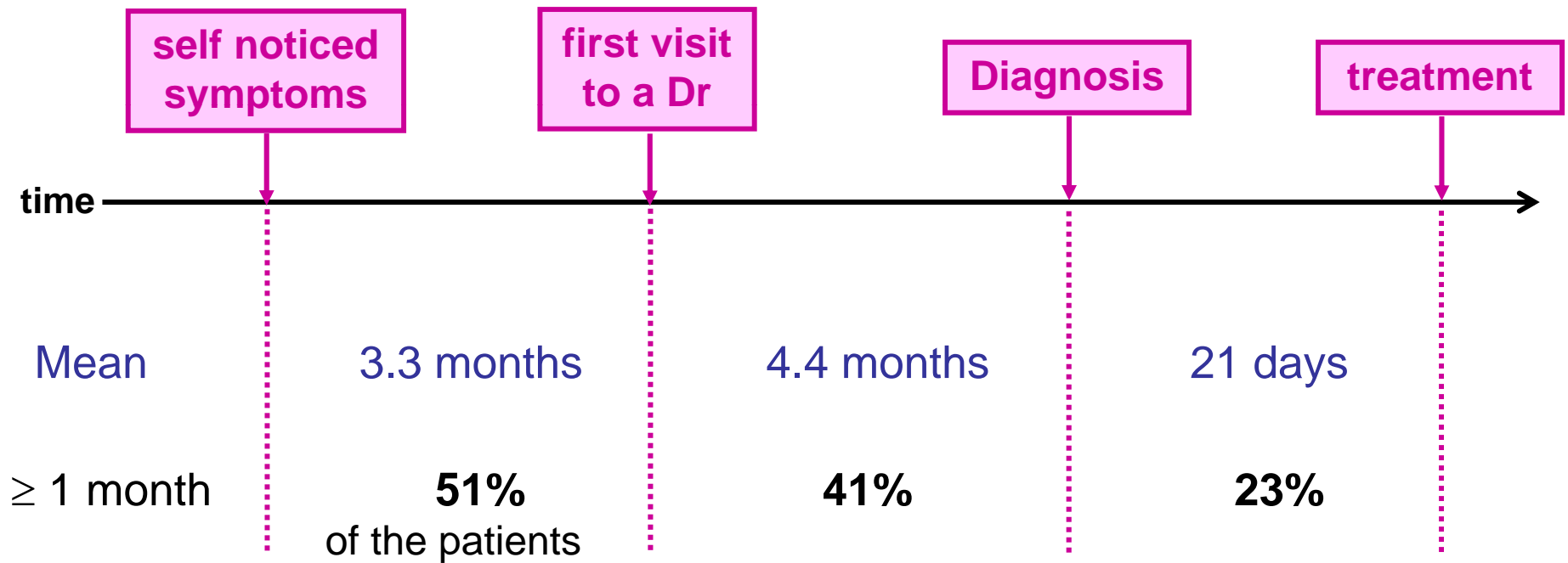
Sample characteristics

	Our sample	National figures*
Late Stage (III & IV)	58%	47%-61%
Tumor size > 2cm	85%	80% to 96%
Illiterate women	40%	57%

* See previous slide

Age: 57% patients < 50 years

Where are the problems ?





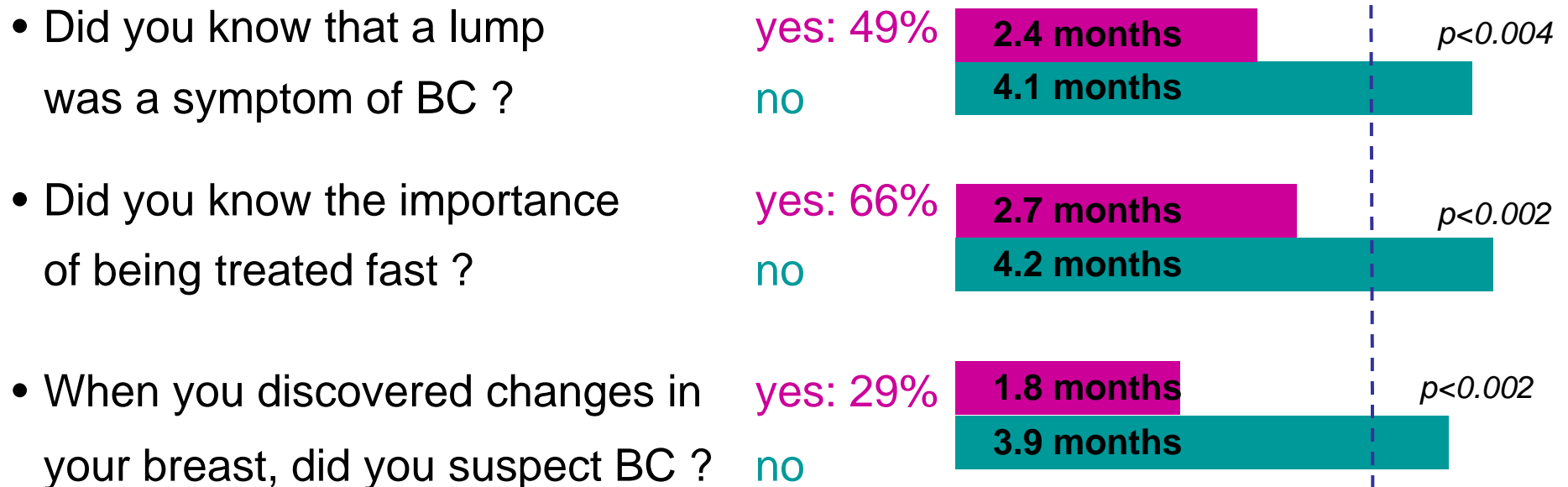
Delay between 1st symptoms and 1st visit to doctor

women's barriers

1st symptoms to 1st Doctor visit (1)

mean delay:
3.3 months

Before being concerned by BC:



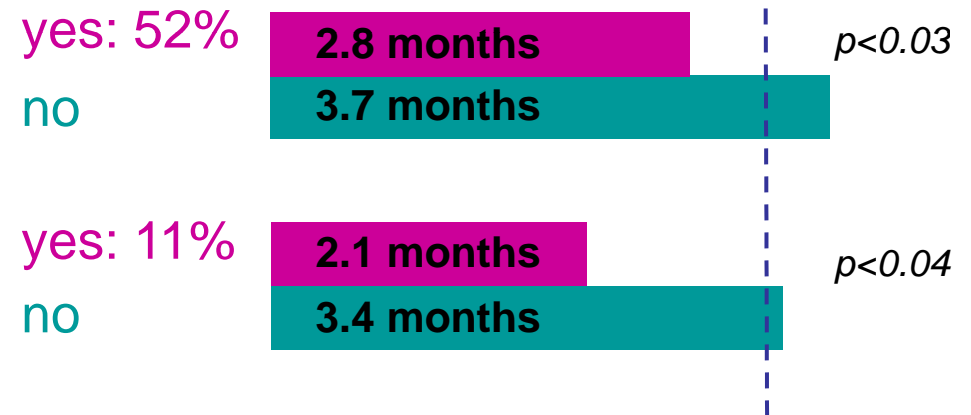
→ Knowledge about BC is the most important barrier

1st symptoms to 1st Doctor visit (2)

Before being concerned by BC:

- Had you ever seen/heard an adv about BC on TV/radio/pamphlet
- Did you ever received in-person information about BC (Dr/friends)

mean delay:
3.3 months



Seen/heard an adv about BC on TV/radio/pamphlet

yes: Only 48% thought about BC when symptoms appeared

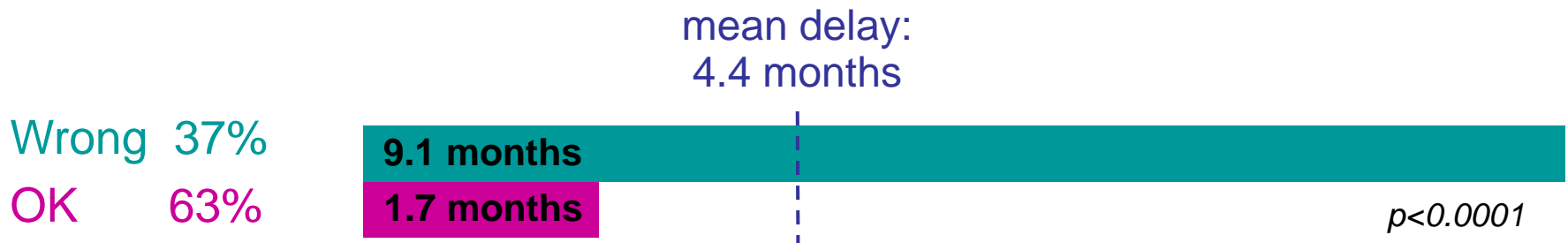


Delay between 1st visit to Doctor and Diagnosis

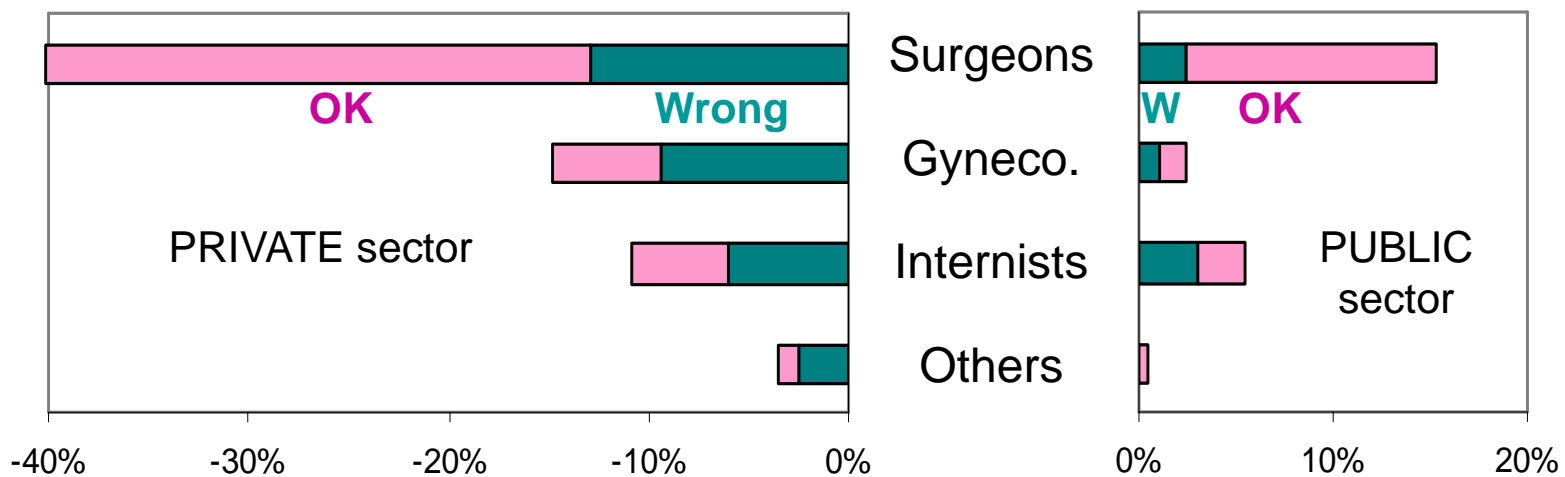
Health system related barriers

1st Doctor visit to Diagnosis (1)

Advice / referral by 1st Doctor consulted:



Type of 1st Doctor visited (all are specialists):





1st Doctor visit to Diagnosis (2)

PATIENT'S WORDS (poster by Joanne Mc Ewan)

Samia: "I went to the hospital and had a mammogram. They told me that results were good and there was nothing to worry about. Two months later I was told I needed chemotherapy."

Mervit: "They kept telling me it was benign but I knew it wasn't. I went to four different surgeons until I was diagnosed and even the fourth doctor initially said it was benign."

Wafa: "My arm became swollen so I went to an orthopaedic doctor. He put my arm in plaster. It was a woman in the street who saw my swollen arm and told me to go to the cancer hospital."

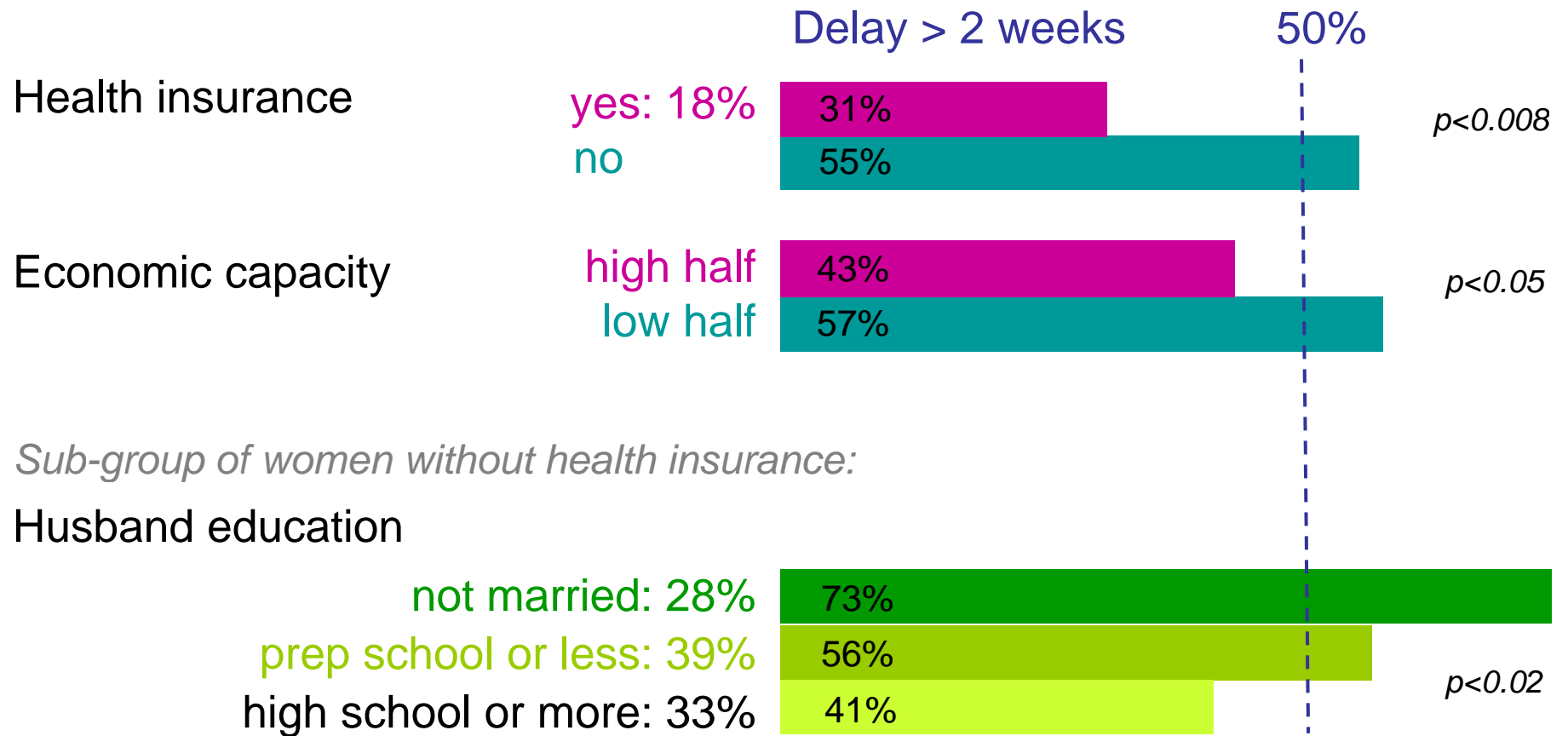


Delay between Diagnosis and treatment

Public health system barriers



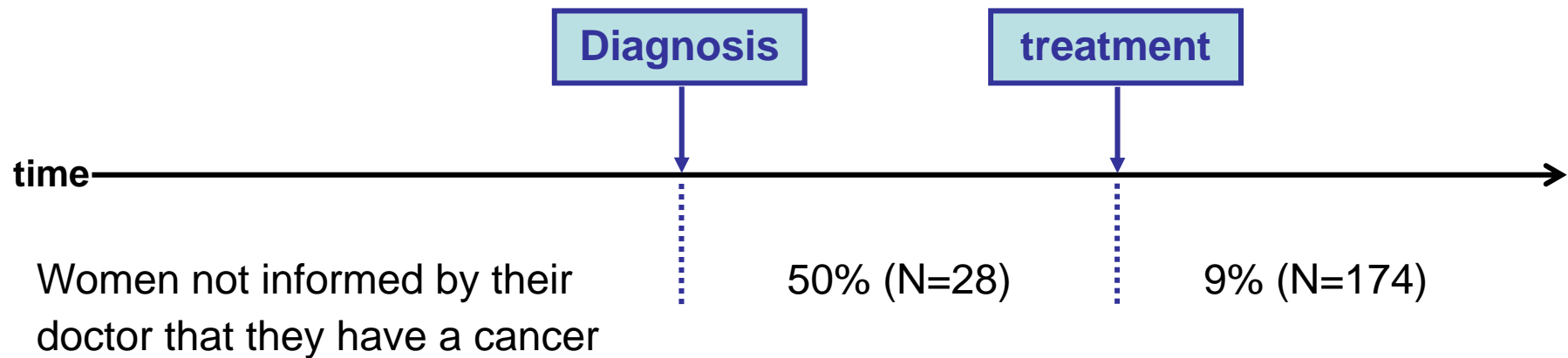
Diagnosis to Treatment



→ Low economic capacity is a major determinant of delay

→ Husband education is a determinant of delay independently of Economic capacity

Patients not informed of the nature of their disease



PATIENT'S WORDS (poster by Joanne Mc Ewan)

A young patient: "I woke up from surgery and found my breast had been removed. No one told me that it would be a possibility."

An highly educated patient: "Anytime I asked the doctors about my stage, white blood count etc, they would tell me, "do you want to become a doctor? Why do you want to know such information ?" Till now I don't know how big the lump was or what stage I was.



CONCLUSION on Barriers

Main barriers:

→ knowledge of women & doctors, economic barriers, husband absence + *other barriers & stigma*

Limitation:

- Some barriers measured, some barriers only identified.
- The study did not address the problem of patients lost during treatment



CONCLUSION on the study

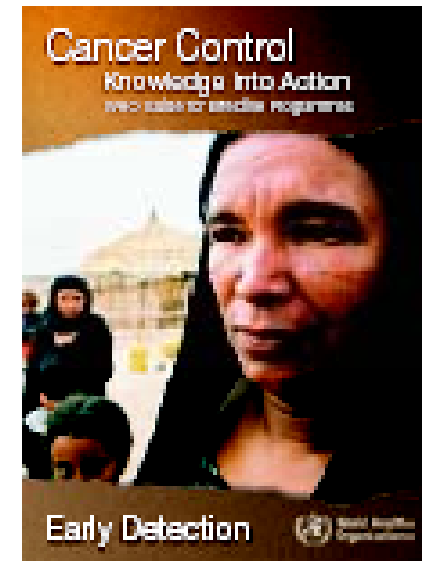
A powerful method:

- Health system users (Patients) are the best source of comprehensive information about health system shortages.
- Inexpensive study
- A way to give a voice to patients : **“statistical advocacy”**
- A way to identify and disentangle the determinants of late diagnosis and treatment. Give directions for cost-effective actions.
- **Study easy to perform in other countries**



Methods for early detection

Two approaches to early detection



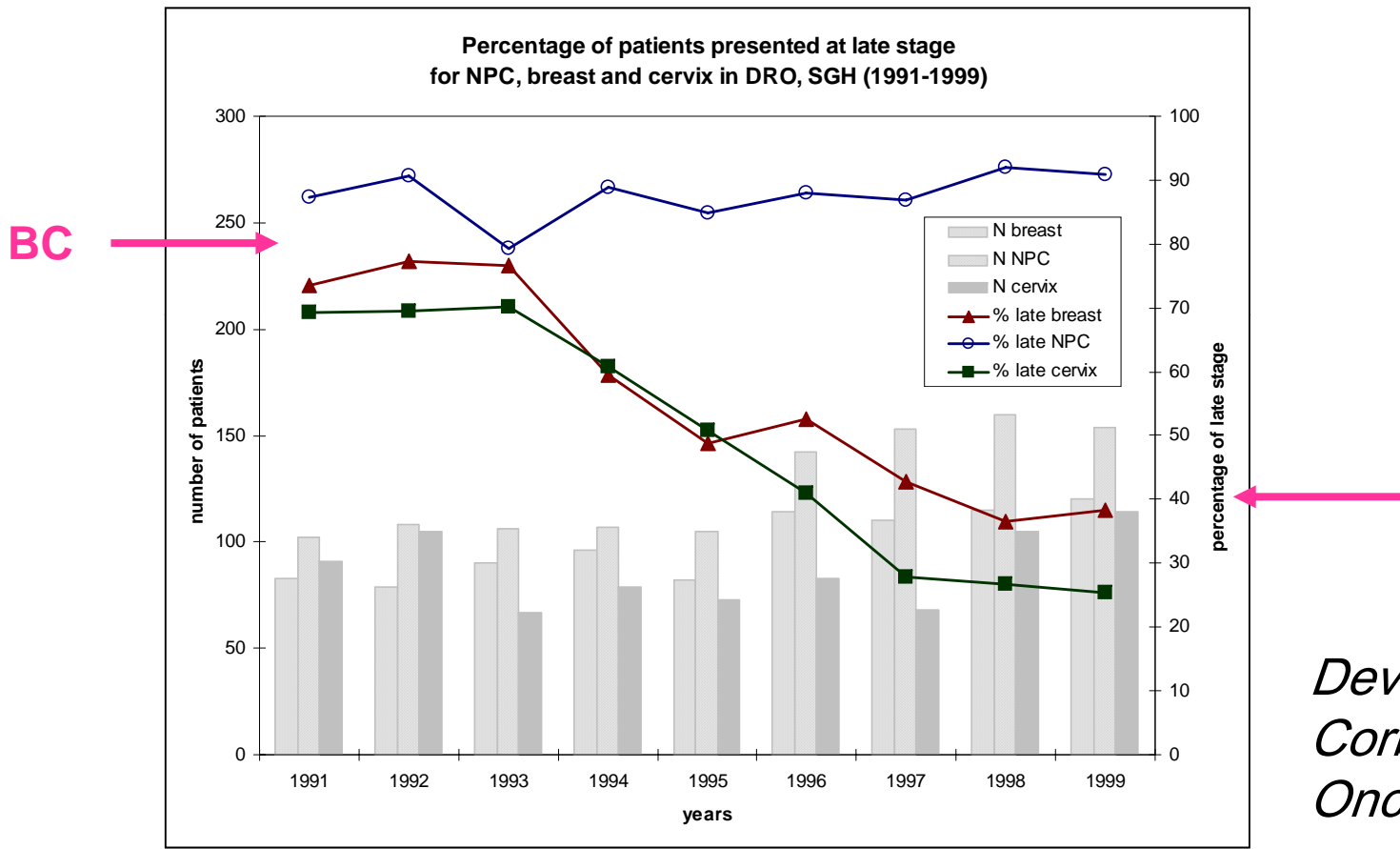
- **Screening** aim at identifying the disease before symptoms appears by applying a test to healthy populations.

The effective application of the tests to the full population at risk is critical.

- **Downstaging:** aims at identifying the disease in patients through its very first symptoms.

Only patients are concerned. Downstaging is all about education of health care provider and populations at risk.

Results of downstaging in Sarawak (Malaysia)



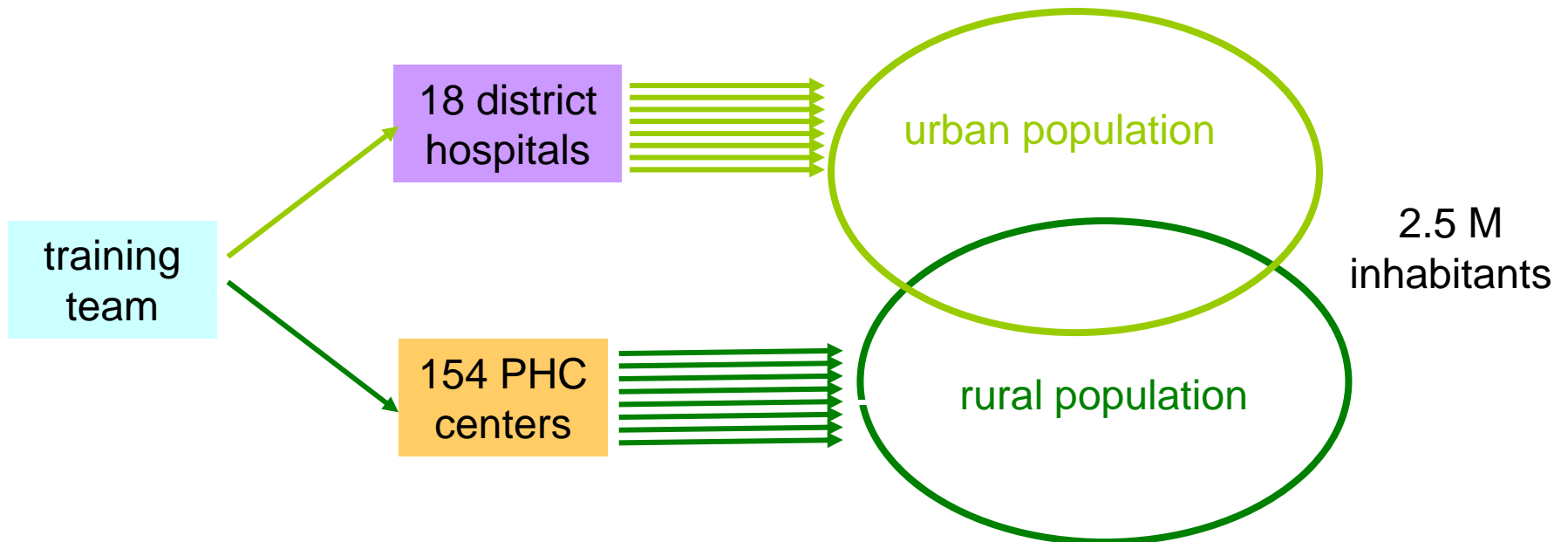
→ Percentage of late stage presentation for breast cancer was reduced from 77% to 37% over 4 years (cost <34,000\$)

Method

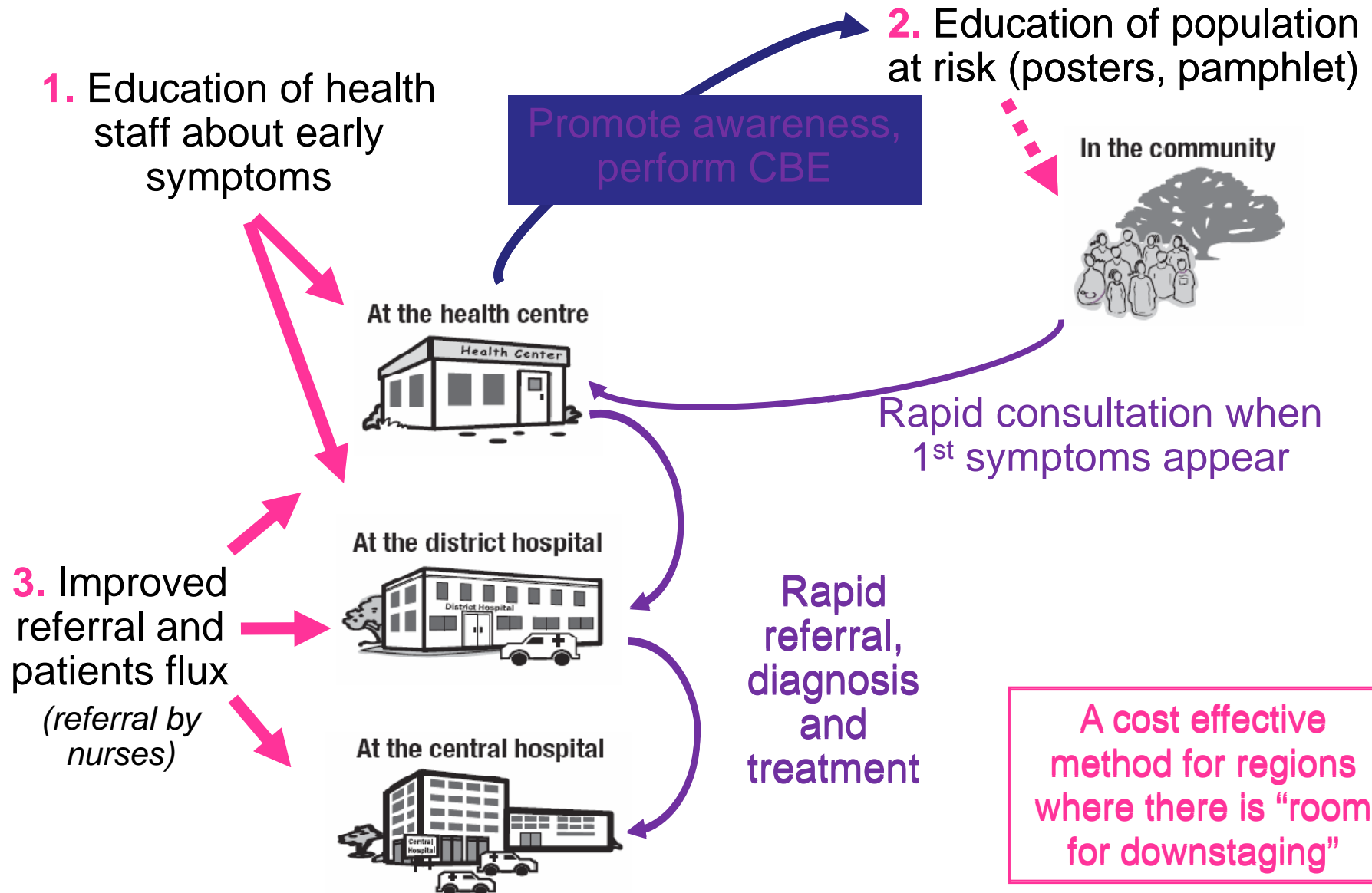
Training Programme — 2 days, delivered many times

“Teachers”: 4 doctors (oncologists), 6 female and 2 male nurses

“Students”: health staff from district hospitals (N=100) and rural clinics (PHC) (N=300)



Downstaging method





CONCLUSION

→ Other approaches than screening by mammography exists which should be considered when resources are limited.

→ To study and analyze scientifically the causes of late diagnosis and treatment give directions for actions and advocacy.

→ Incidence of BC in Egypt is lower than in western countries, but stage at presentation much more advanced. More young cases (in fact, less old cases)



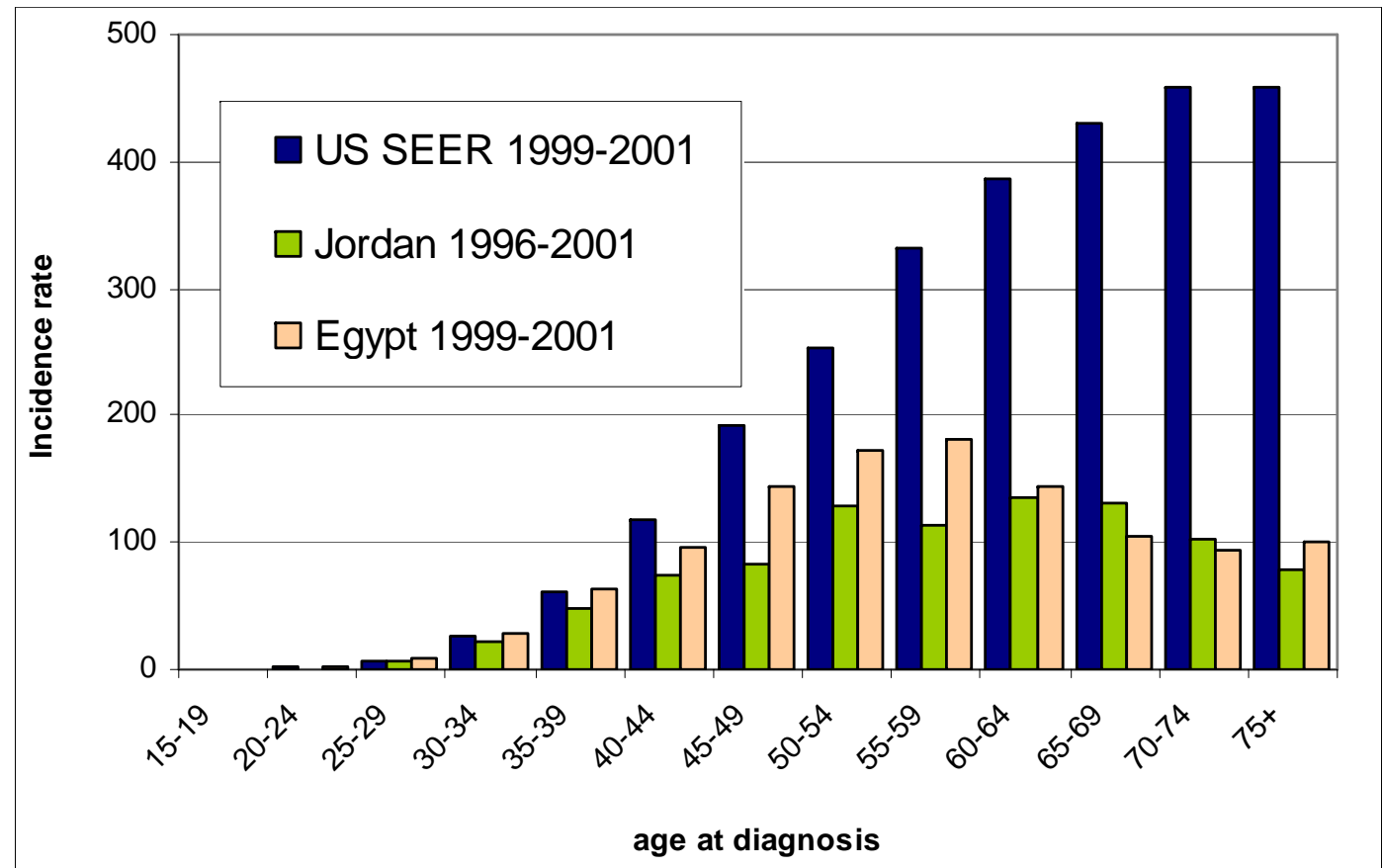
شكرا

Thank You

Why BC cases are younger in developing countries ?

Age specific incidence rates

Young cases are not more frequent in Egypt / Jordan than in USA, But old cases are much more rare.



- Cohort effect
- Specific types of BC (Inflammatory BC, familial BC)
- Specific risk factors for young BC (consanguinity ? Specific genes ?)

