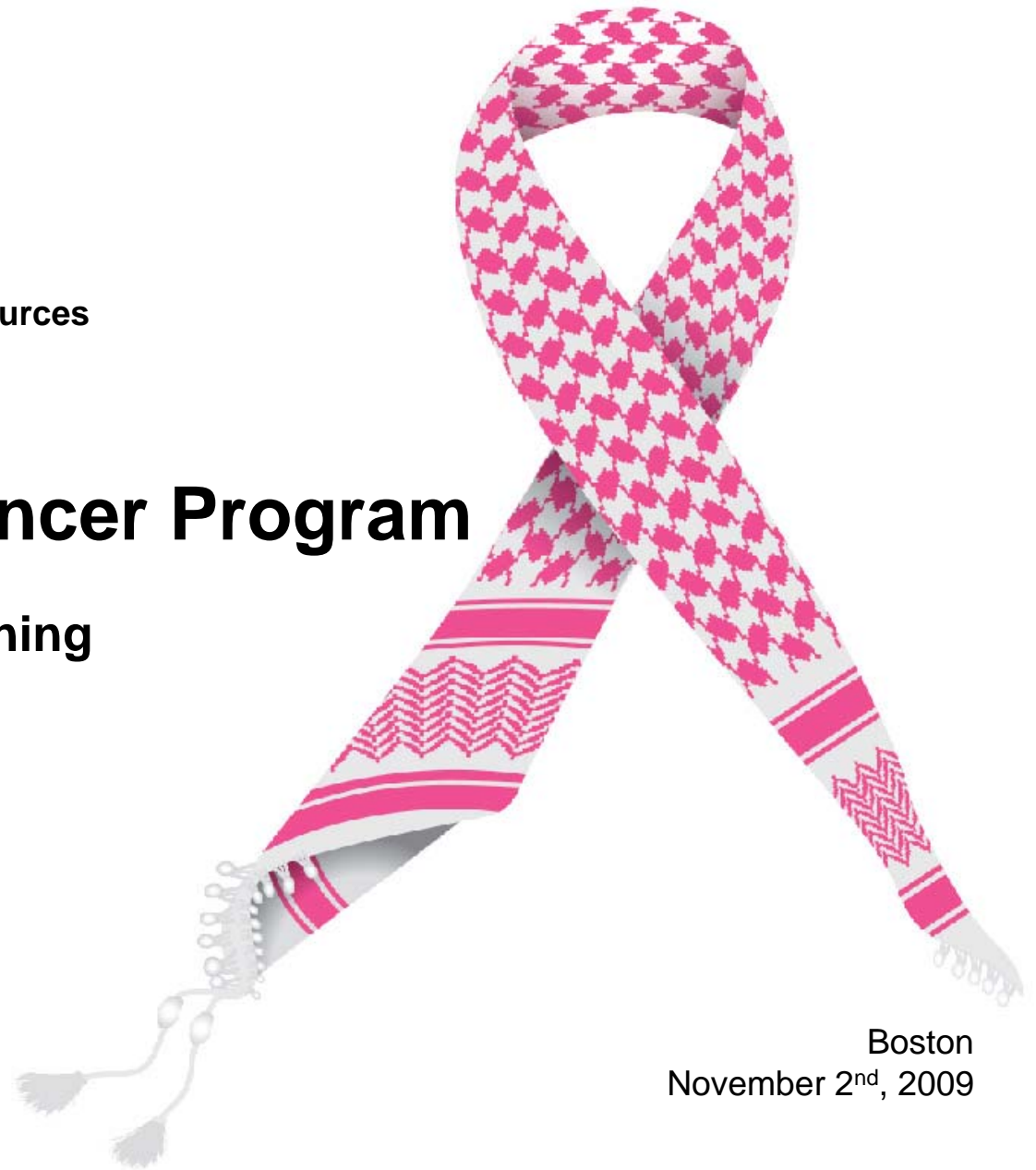


**Tailoring Strategies to Available Resources**

# **Jordan Breast Cancer Program**

**A Bottom-up Model for  
Early Detection and Screening**



Boston  
November 2<sup>nd</sup>, 2009



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- ▶ Resources and Breast Cancer In Jordan
- ▶ Inception and Governance
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- ▶ Maximizing Use of Resources through Partnerships



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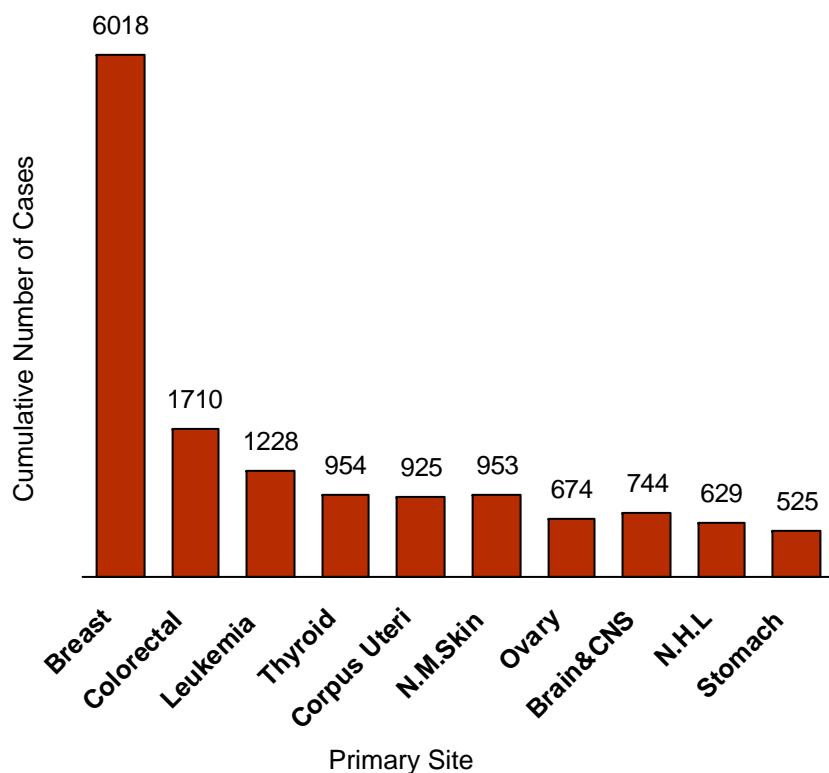
- ▶ Resources and Breast Cancer In Jordan
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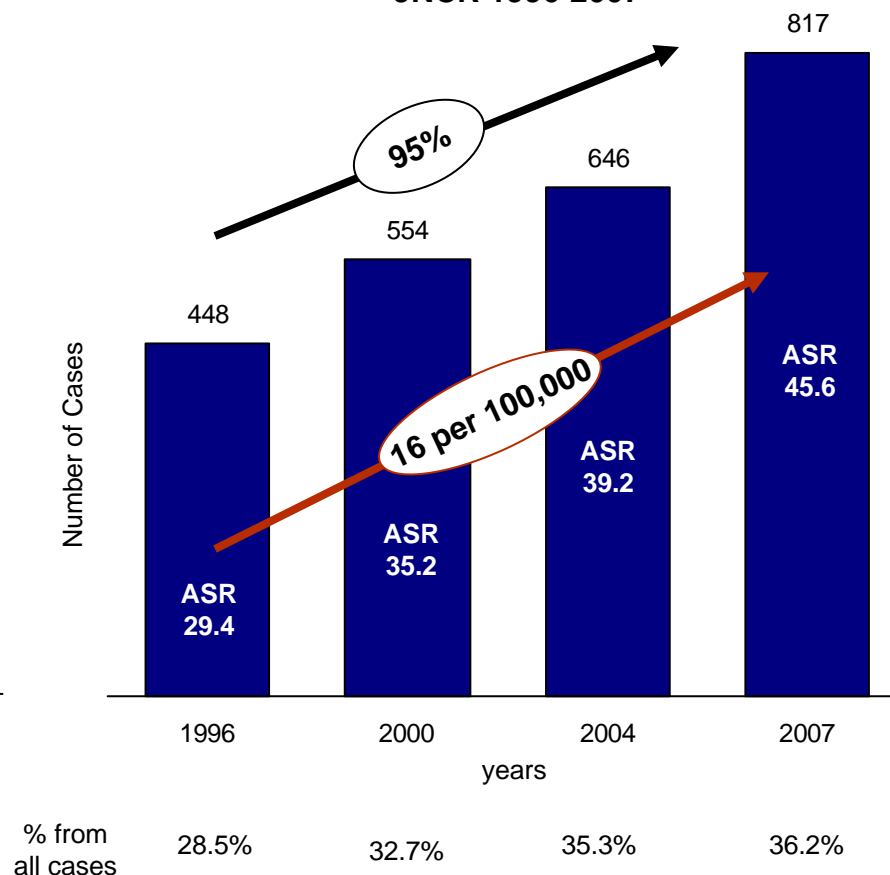


# Breast cancer is the most common cancer among females and continues to grow on a yearly basis

Ten Most Common Cancers Among Jordanian Females JNCR 1996-2006



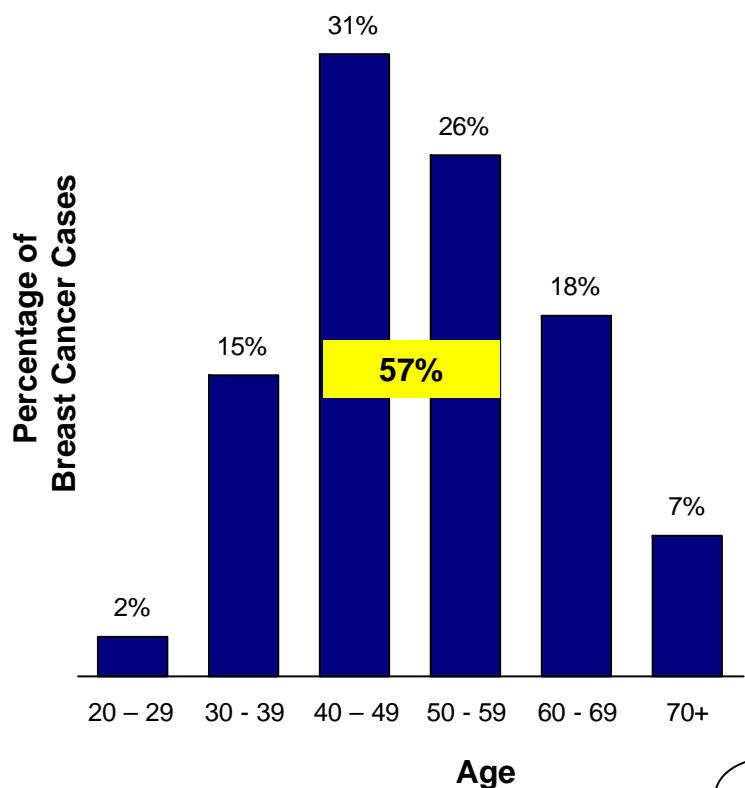
New Cases of Breast Cancer JNCR 1996-2007



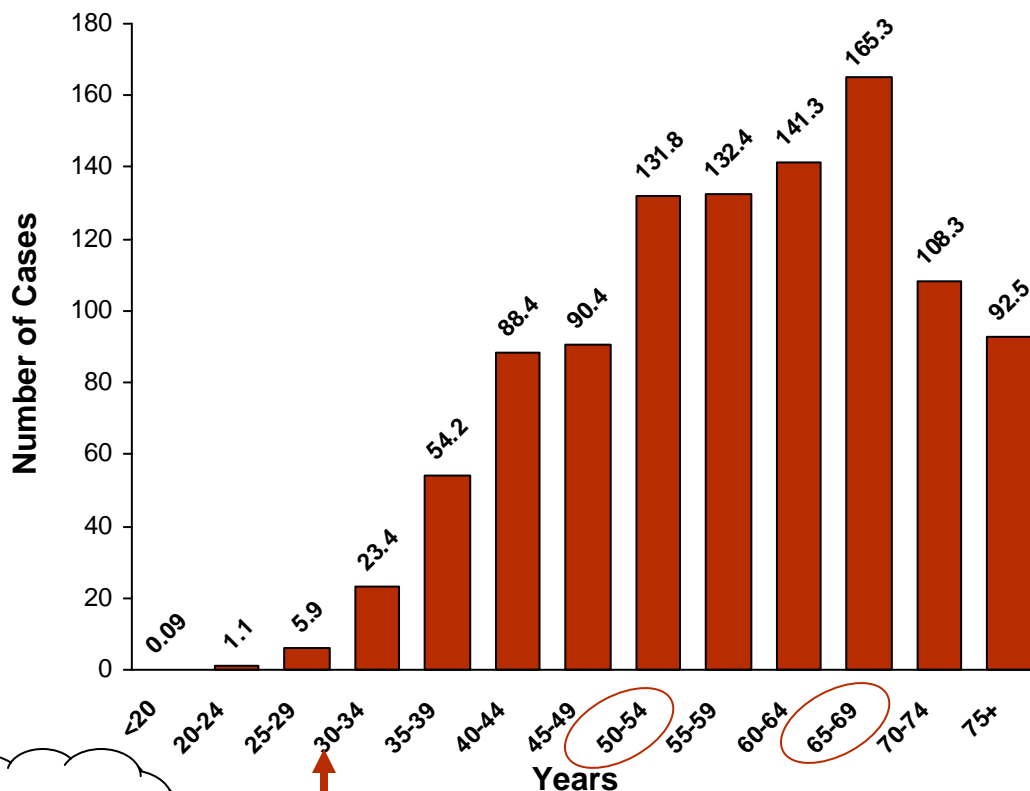


# Jordanian females are inflicted with the disease at a young age when they are at the peak of their productivity

Distribution of Breast Cancer Cases by Age Group  
JNCR 2005



Average Age Specific Incidence Rate (ASIR)  
Per 100,000 Females 1996-2006  
JNCR



\*Median age in developed countries = 65 years

70% of Jordan population under age of 30 years

Ave Crude Incidence Rate = 22.8/100,000

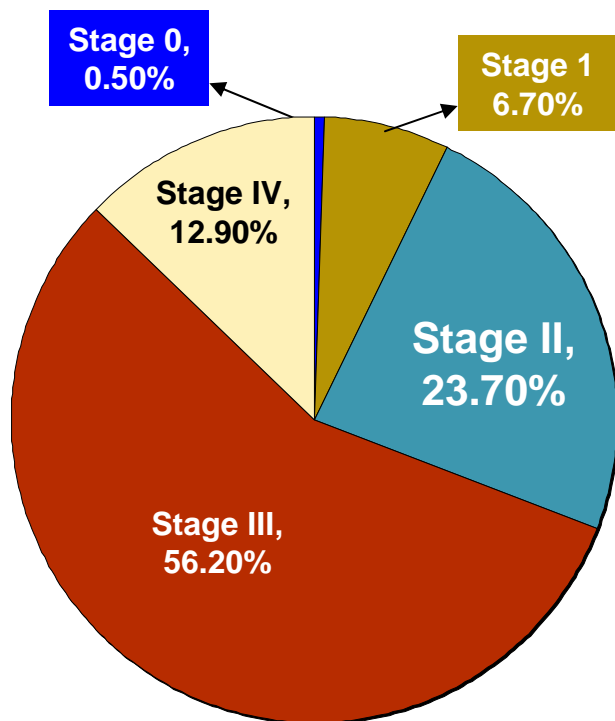
Jordan Breast Cancer Program





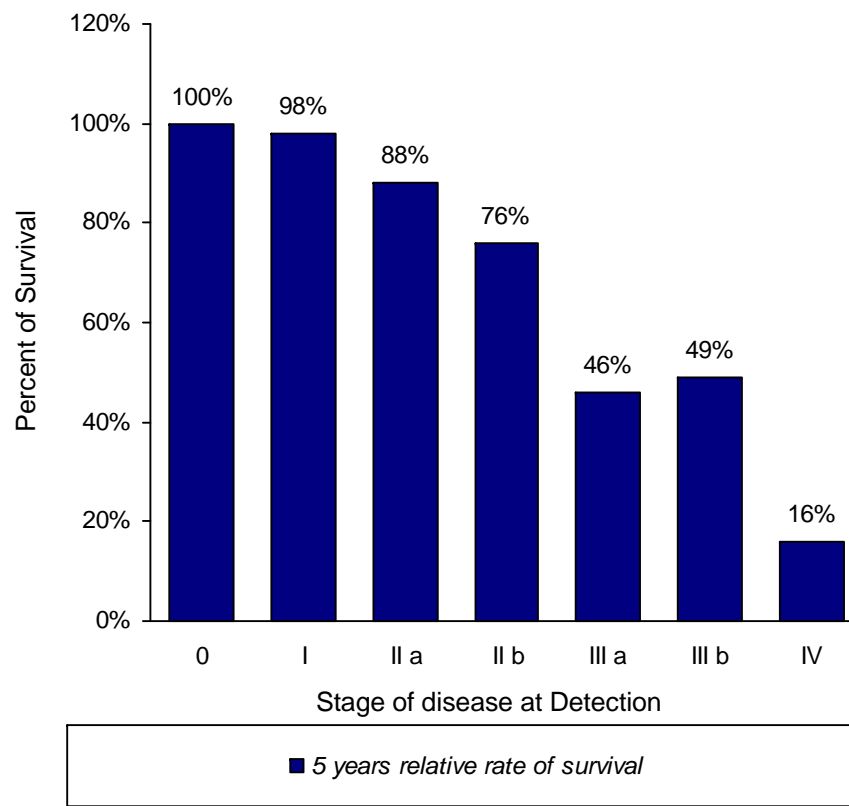
# At the onset of JBCCP, Breast Cancer used to be detected at late stages when the survival rate and treatment success are not promising

Stages of Breast Cancer in Jordan based on KHCC Experience **before JBCCP**



N=550

Direct Correlation of Survival to Stage of Detection





**There was no allocation of resources at federal, local or institutional levels to address the challenges facing breast cancer early detection**

Non-exhaustive

### Capacity Building

- ▶ Lack of female technicians trained in mammography and recruited to serve the facilities
- ▶ Absence of training facilities (other than KHCC) in Jordan to accommodate for training of technicians and radiologists
- ▶ Incomprehensive academic curricula that do not mandate mammography as a required course for technicians
- ▶ Training manuals have not yet been implemented

### Mammography Services

- ▶ Lack of availability and accessibility to screening services
- ▶ Unequal distribution of services across the Kingdom
- ▶ No asymptomatic screening policy; only referred symptomatic patients accepted
- ▶ Cumbersome regulations to screening

### Quality Assurance

- ▶ Lack of protocols and standard operating policies and procedures (SOPs) to run the units
- ▶ No certification program to set the standards for the mammography units
- ▶ No monitoring and evaluation of performance of health providers regarding guidelines for breast screening

### Public Awareness

- ▶ Negative attitudes towards subject of breast cancer (many females prefer not to know) added to cultural barriers & social taboos that extend beyond the female herself leading to fears of being ostracized by husband, family or society
- ▶ Need for more individualized and one-on-one activities in order to change behavior that require large outreach efforts
- ▶ Lack of awareness, buy-in & action of key-informant & service providers supporting screening





# The Jordan Ministry of Health is the primary arm in Jordan for healthcare services, resources and legislation

Provider	Basic Role	Description	Cancer Control
<b>Ministry of Health</b>	<b>Law, regulations, budget, health expenditure, insurance,</b>	<ul style="list-style-type: none"> <li>▶ Reactive vs. Proactive</li> <li>▶ Limited resources</li> <li>▶ Focused on service delivery</li> <li>▶ Public health influenced by Int'l arena</li> </ul>	<ul style="list-style-type: none"> <li>▶ No full plan (under consideration)</li> <li>▶ Divided activities</li> <li>▶ Strong registry</li> <li>▶ Covers all Jordanians</li> <li>▶ Mediocre qlty Rx services</li> </ul>
<b>Royal Medical Service</b>	<b>Closed Military System with Insurance Scheme</b>	<ul style="list-style-type: none"> <li>▶ Independent budget</li> <li>▶ Serves 20% of populations</li> <li>▶ Quality Services</li> </ul>	<ul style="list-style-type: none"> <li>▶ Prevention without outreach (clinic based)</li> <li>▶ Rx (not comprehensive)</li> </ul>
<b>Private Sector</b>	<b>Regulated by MoH from Quality perspective not pricing</b>	<ul style="list-style-type: none"> <li>▶ Business driven</li> <li>▶ Varied quality (perceived by population as a higher quality sector than government)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Rx focused</li> <li>▶ Not driven by unified protocols</li> <li>▶ Very expensive</li> <li>▶ Varied quality</li> </ul>
<b>Universities</b>	<b>Free of charge for enrollees or less privileged</b>	<ul style="list-style-type: none"> <li>▶ Limited budgets</li> <li>▶ Acceptable quality</li> <li>▶ Innovation limited</li> </ul>	<ul style="list-style-type: none"> <li>▶ No oncology departments</li> <li>▶ Rx available not comprehensive</li> <li>▶ Varied quality (KAH vs. JU)</li> </ul>
<b>Non-for-Profit Sector</b>	<b>Free of charge for enrollees or less privileged</b>	<ul style="list-style-type: none"> <li>▶ Limited budget</li> <li>▶ High expertise and focused expertise</li> <li>▶ Dependent on Fundraising</li> </ul>	<ul style="list-style-type: none"> <li>▶ Only player to date KHCC</li> <li>▶ Comprehensive 1<sup>st</sup> class center (2 accreditations)</li> <li>▶ Outreach, control, diagnosis, Rx and Palliative care</li> </ul>



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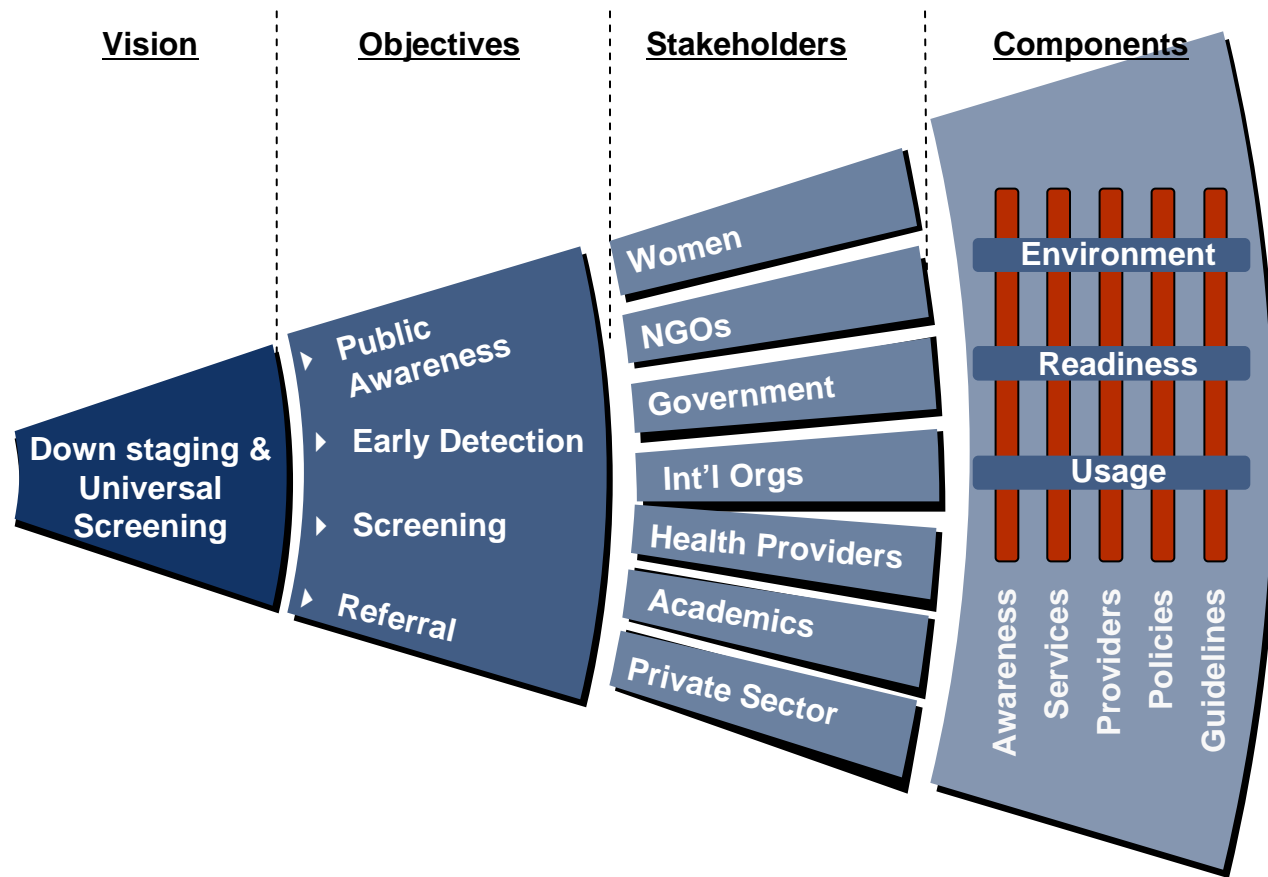




Thus the Jordan Breast Cancer Program was set up in late 2006 to down stage the disease and decrease morbidity and mortality

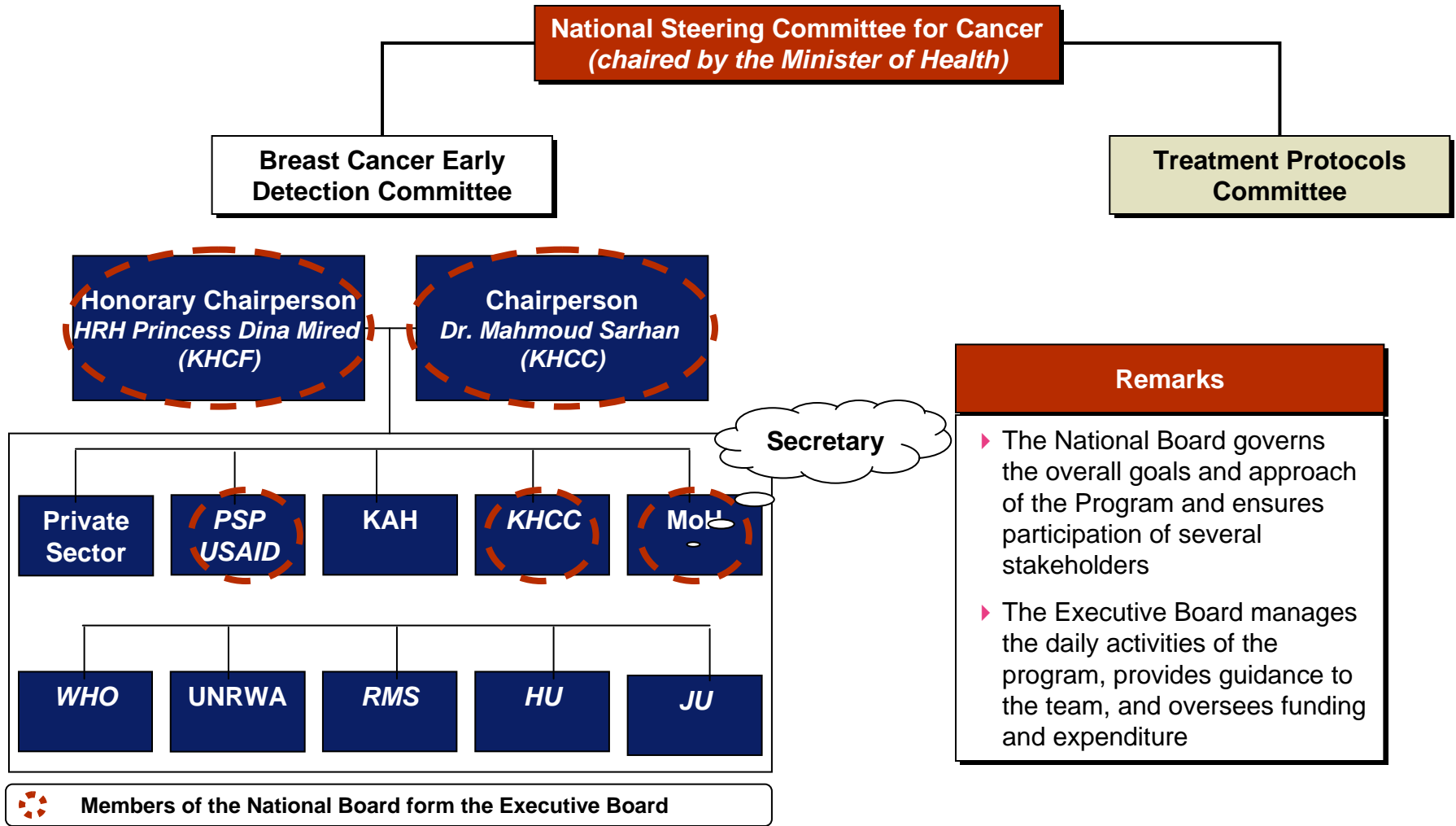
**Program Objectives**

- ▶ To improve availability and accessibility of screening services across Jordan, especially to less privileged;
- ▶ To increase the knowledge of the public on the benefits of breast cancer prevention and to change attitudes and behavior of target population to seek early detection services;
- ▶ To establish national unified protocols and guidelines that cover all processes of a comprehensive early detection and screening program including best practices & quality assurance guidelines on training, medical equipment, diagnosis, and referral systems;
- ▶ To improve healthcare personnel education and training; and
- ▶ To evaluate the impact of the program by collecting data for surveillance and epidemiological analysis to record and measure success.





# The Program is governed by a National Committee and incubated by the King Hussein Cancer Foundation



Remarks
<ul style="list-style-type: none"> <li>▶ The National Board governs the overall goals and approach of the Program and ensures participation of several stakeholders</li> <li>▶ The Executive Board manages the daily activities of the program, provides guidance to the team, and oversees funding and expenditure</li> </ul>



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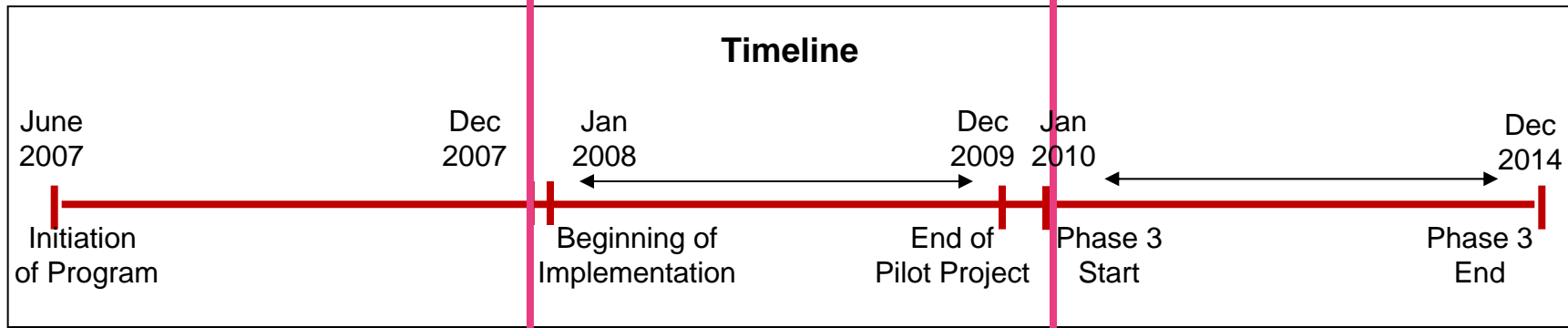




# JBCP started with the pilot areas of Amman and Balqa targeting 50% of the female population ages 40-60 years

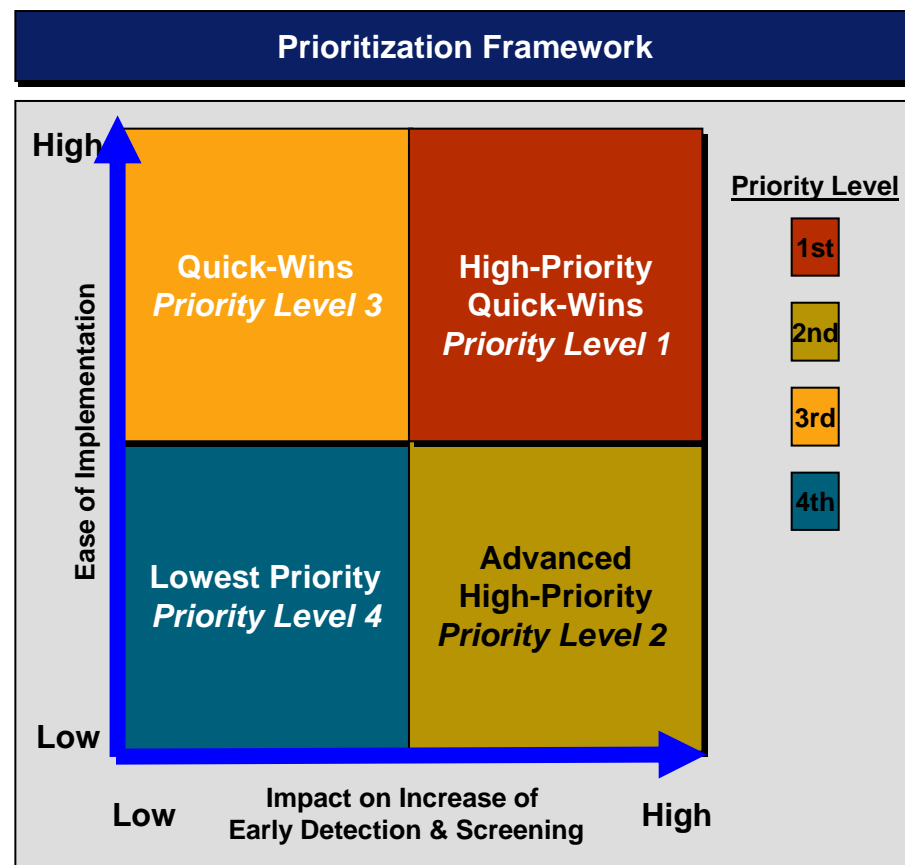
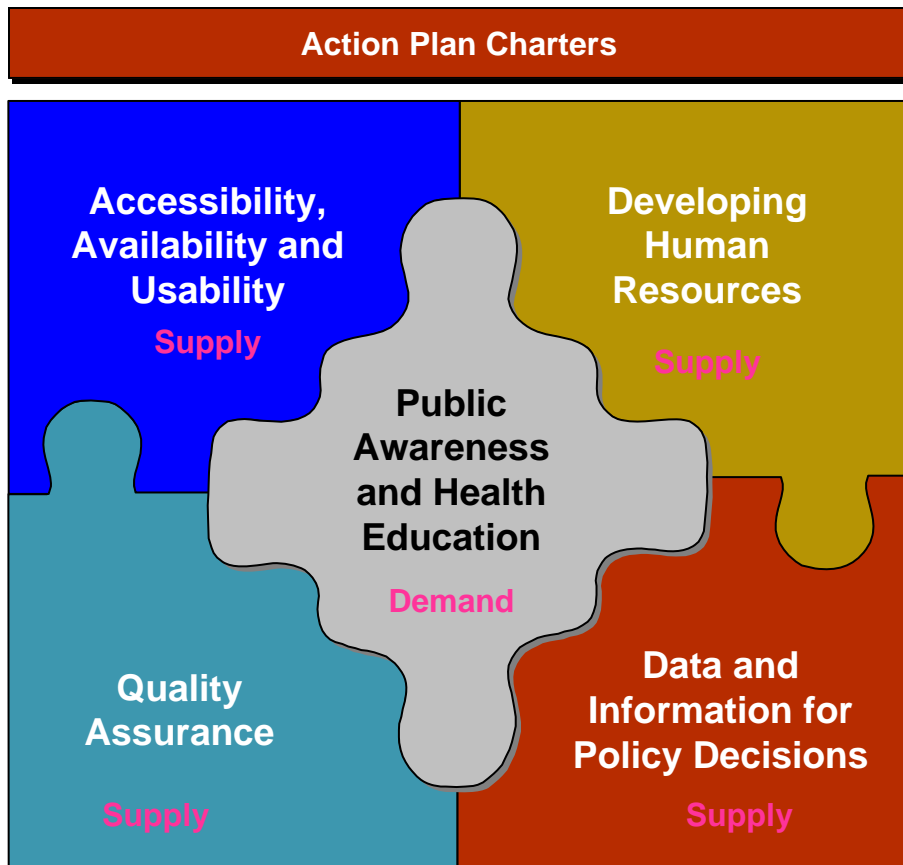
## Pilot Project Components

Inception Phase	Pilot Project	Nationwide
<ul style="list-style-type: none"> <li>▶ Starts June/July 2007</li> <li>▶ Duration 6 months</li> <li>▶ Establishment of National Coordination office</li> <li>▶ Design of implementation plan</li> </ul>	<ul style="list-style-type: none"> <li>▶ Starts January 2008</li> <li>▶ Duration 2 years</li> <li>▶ Covers Amman &amp; Balqa</li> <li>▶ Includes both down staging and opportunistic screening approach</li> </ul>	<ul style="list-style-type: none"> <li>▶ Starts January 2010</li> <li>▶ Duration 5 years</li> <li>▶ Covers the whole Kingdom</li> <li>▶ Based on learning experience from pilot areas</li> <li>▶ Includes both approaches</li> </ul>





# JBCP designed core strategic areas to work on and developed an action plan with prioritized activities





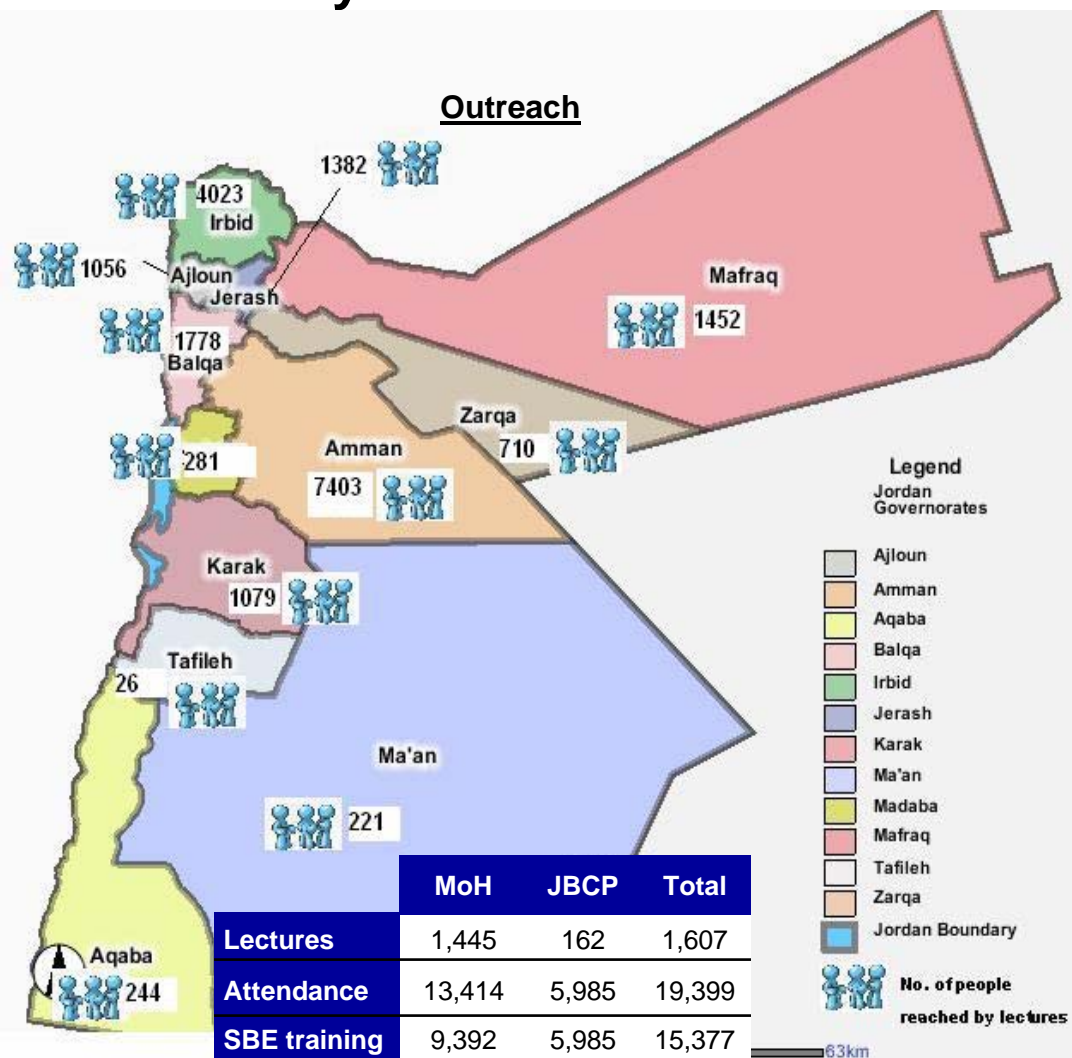
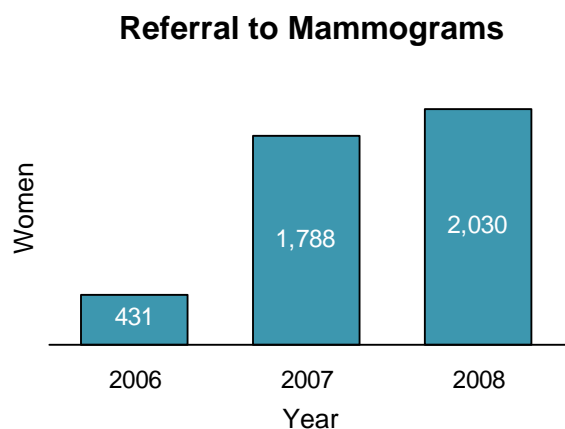
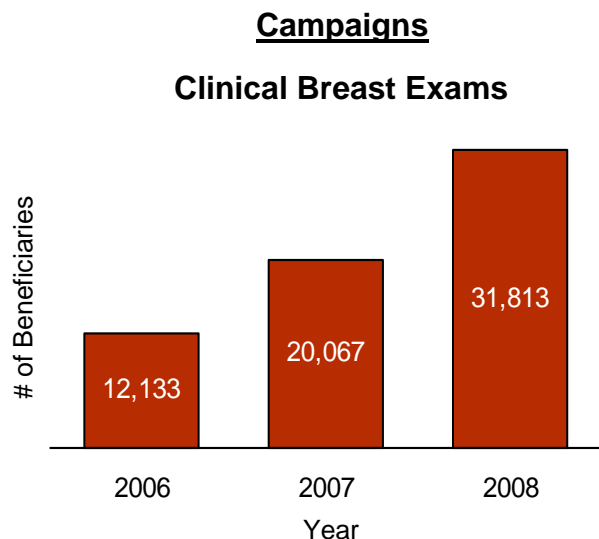
In the past 3 years, JBCP has been implementing two approaches for raising awareness – mass campaigns and targeted outreach

Objectives	Initiatives	Own	Sponsor	Support	Priority
<p>1</p> <p><b>Increasing Public Awareness</b></p>	▶ Targeted Awareness Activities	X			2
	▶ March Campaigns	X			4
	▶ October National Campaigns		X		1
	▶ Development of Information & Communication Toolkits	X			4
	▶ SUPPORT = JBCP Hotline promotion + SANAD group	X			4





# Provision of services is coupled with raising awareness among the public and driving the demand towards early detection





# JBCP works closely with all healthcare service providers to activate screening centers and improve the physical settings to suit early detection and accessibility

Objectives	Initiatives	Own	Sponsor	Support	Priority
2 Improve Availability and Accessibility of Services	▶ Activation of Existing Mammography Units		X		1
	▶ Cooperation with the Private Sector (continuation)			X	1
	▶ New Mammography Units in MoH Healthcare Centers		X		1
	▶ Acquisition of Mobile Mammography Unit	X			3
	▶ Screening of Underprivileged Women	X			2
	▶ Model Center			X	

Infrastructure and Equipment

**Before Program**



**After Program**





# JBCP has been heavily focused on improving the skills of healthcare providers at all levels from primary to tertiary

Objectives	Initiatives	Own	Sponsor	Support	Priority
<b>3</b> Developing Human Resources	▶ Capacity building of radiologists	X		X	2
	▶ Capacity building of technologists	X			2
	▶ Developing skills of media for breast cancer awareness	X			2
	▶ Developing skills of gatekeepers and first line health providers	X			4

2009

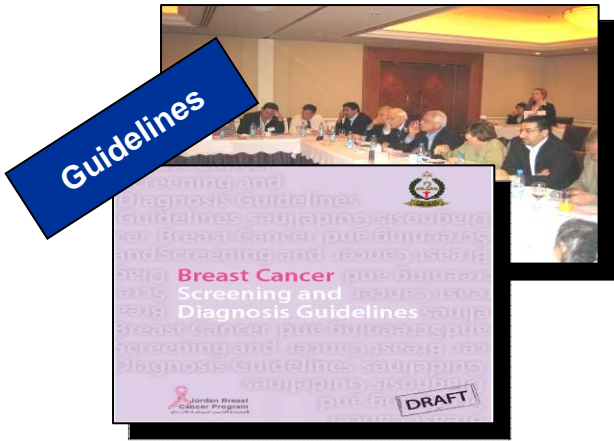
- ▶ Training of 4 radiologists with Dr. Tabar
- ▶ Oncology Nursing Training (35 nurses ToT)
- ▶ Clinical Breast Exam training for private sector
- ▶ Recruitment of RT
- ▶ Training of 4 radiologists – observer ship @ MDACC
- ▶ Training of 12 RT @ KHCC
- ▶ Training for 30 RTs with MDACC expert
- ▶ Screening Training (140 attendees)
- ▶ CBE Training ~ 1480 nurses & midwives
- ▶ Awareness Training – 148 health educators (ToT)
- ▶ Radiologist – Breast Imaging Training (150 attendees)





More importantly, JBCP has been working on developing standardized procedures and guidelines to ensure quality...

Objectives	Initiatives	Own	Sponsor	Support	Priority
<b>4</b> Setting Guidelines, Protocols and QA	▶ Disseminating & Implementing National Guidelines	X			1
	▶ Disseminating and Implementing Registry	X			1
	▶ Developing unit standard operational policies & procedures	X			4
	▶ Developing accreditation system (selecting criteria, developing process... <i>NEW</i> )	X			2
	▶ Developing referral and service monitoring system			X	4



Physical Examination	Chart-1	1
Normal Risk, Negative Physical Findings	Chart-1	1
Increased Risk, Negative Physical Findings	Chart-2	2
Symptomatic, Positive Physical Findings	Chart-3	3
Mass, Age ≥30 Years	Chart-4	4
Mass, Age < 30 Years	Chart-8	8
Nipple Discharge, No Palpable Mass	Chart-12	12
Asymmetric Thickening/Nodularity	Chart-13	13
Skin Changes	Chart-14	14
Mammographic Evaluation	Chart-15	15
Breast Screening Considerations	Annex-A	18
Clinical Breast Examination Guidelines	Annex-B	19
Mammographic Assessment Category Definitions	Annex-C	32





## ...and ensure data collection for follow up and decision making

Objectives	Initiatives	Own	Sponsor	Support	Priority
<b>5</b> Developing Research and Data	▶ Conducting 2009 KAP study		X		1
	▶ Benefit from Omnibus to assess information on campaigns and tools			X	3
	▶ Develop automated database (at least the backbone design of the software)	X			4
	▶ Data Collection & Reporting on Workload	X			1
	▶ Technical Assessment of MoH Mammography Units	X			2

- ▶ Patient Personal Data: Name, Address, Telephone, National No.
- ▶ Date of last Clinical Breast Exam & last Mammogram Exam.
- ▶ Information to cover main risk factors:
  - Age, Age of menarche, Age of menopause, Age of 1st child birth.
  - Personal & Family Medical History regarding cancer.
  - Intake of Hormonal Replacement Therapy
- ▶ Any Complaints / Symptoms / changes in the breast.
- ▶ Mammography result (According to BIRADS system)
- ▶ Any extra procedures needed / done.





# JBCP is working on policy recommendations for MOH based on results of a feasibility study conducted in September 2008

## Feasibility Study Findings

- ▶ The investment required to implement screening mammography is small when compared to overall government spending on health and considering the substantial benefits
- ▶ Lower treatment costs and higher survival rates, and significant improvement in the quality and quantity of life would be derived from the early detection and treatment that result from screening mammography
- ▶ The Ministry of Health (MOH) should adopt a policy that supports this program
- ▶ The Impact on MOH budget for mammograms investigations would be relatively minimal (< 1 million JDs per year) assuming that other sources participate in funding screening if the ministry assumes the lead in screening



- ▶ Accredited twice (the only oncology-specific)
- ▶ Comprehensive protocols and guidelines with process and outcome indicators
- ▶ 105 full-time consultants
- ▶ Affiliated with 4 international organizations
- ▶ All-spectrum services
- ▶ Sees approximately 50% of cancer cases
- ▶ Training and residency



- ▶ Education
- ▶ Provide non-comprehensive services
- ▶ In the process of upgrading
- ▶ Varied quality



- ▶ High quality
- ▶ No expansion
- ▶ No residency programs for oncology



- ▶ Plan for expansion – oncology center
- ▶ Quality services

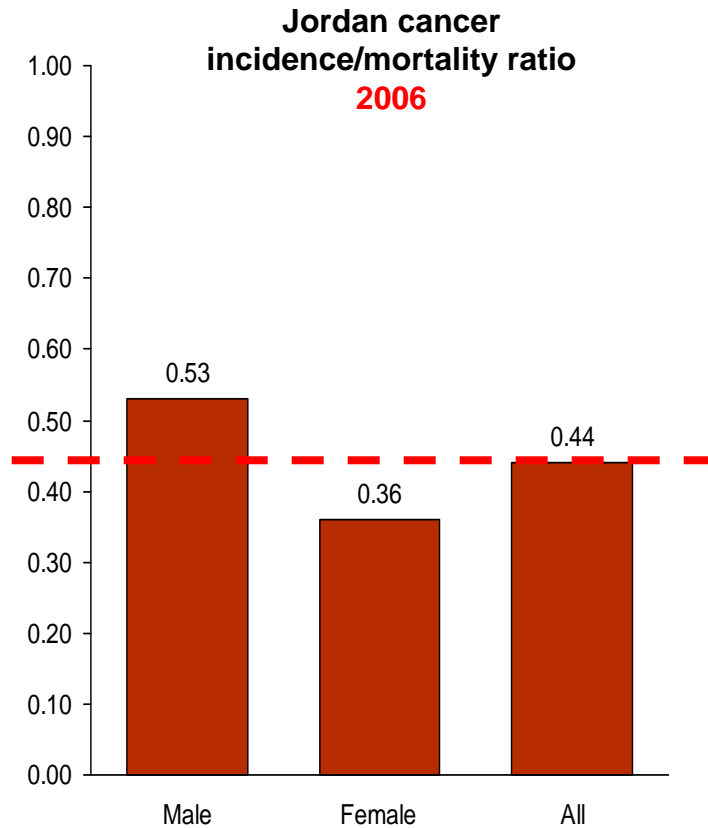
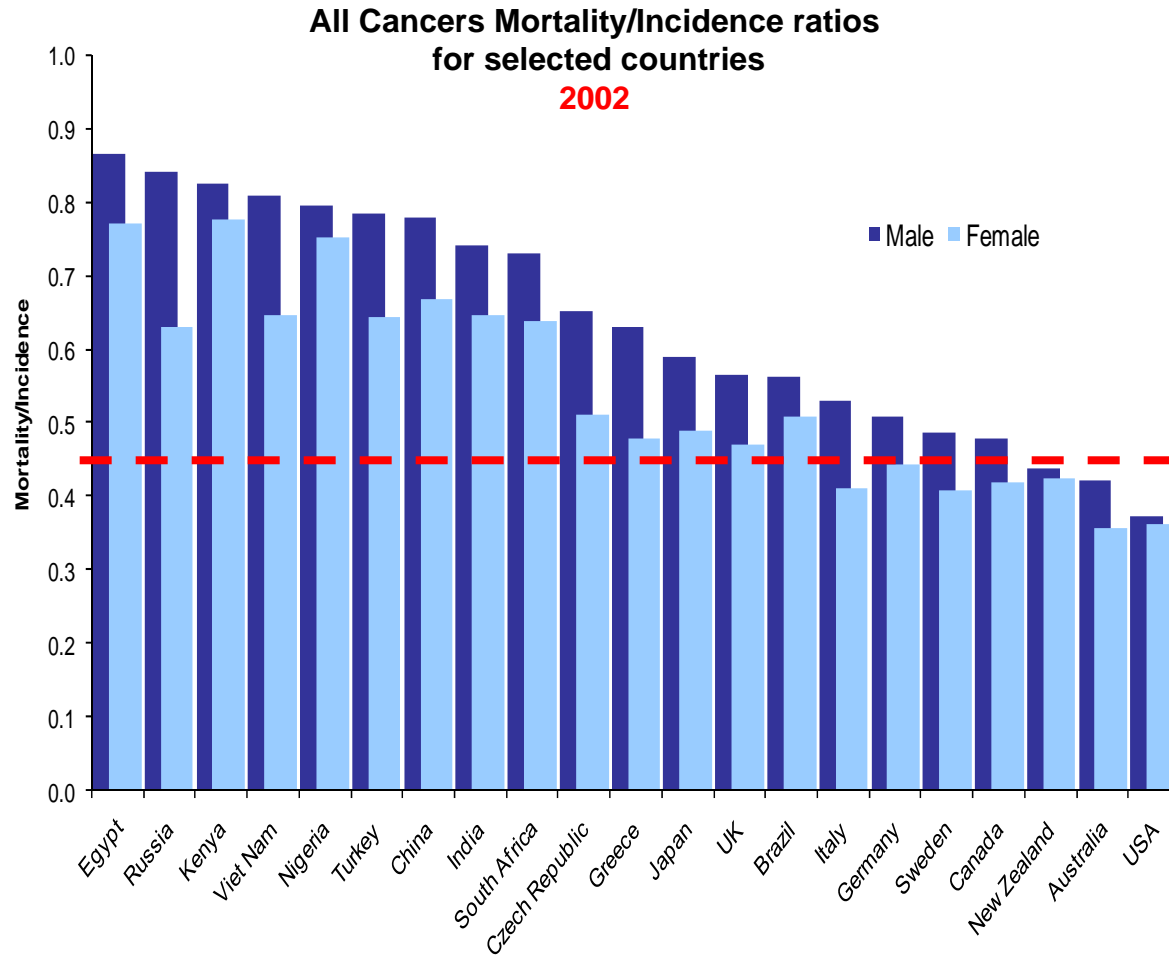


- ▶ Increased costs
- ▶ Varied quality





# Despite the varied quality of treatment, Jordan has been achieving good results comparable to the developed nations



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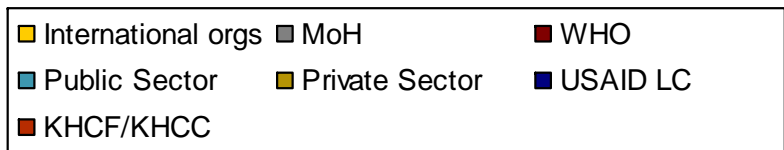
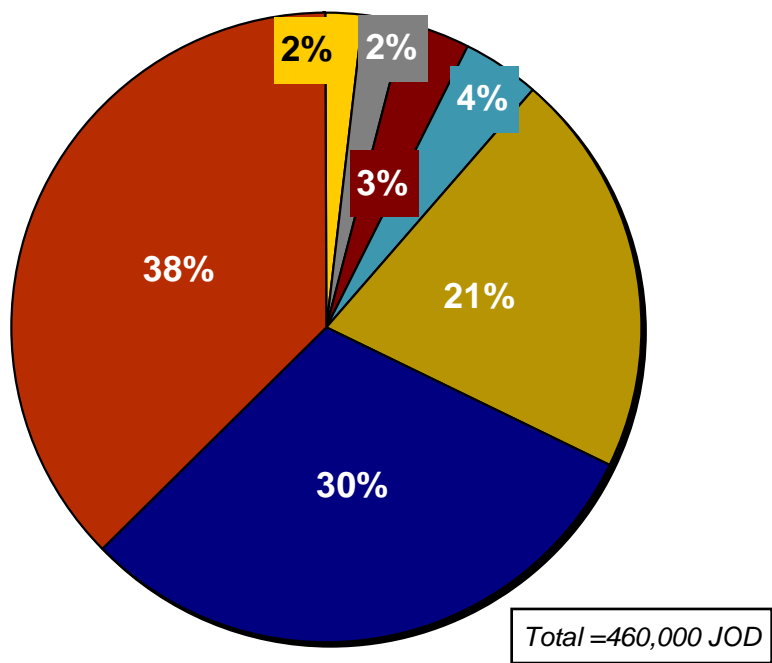
▶ Maximizing Use of Resources through Partnerships



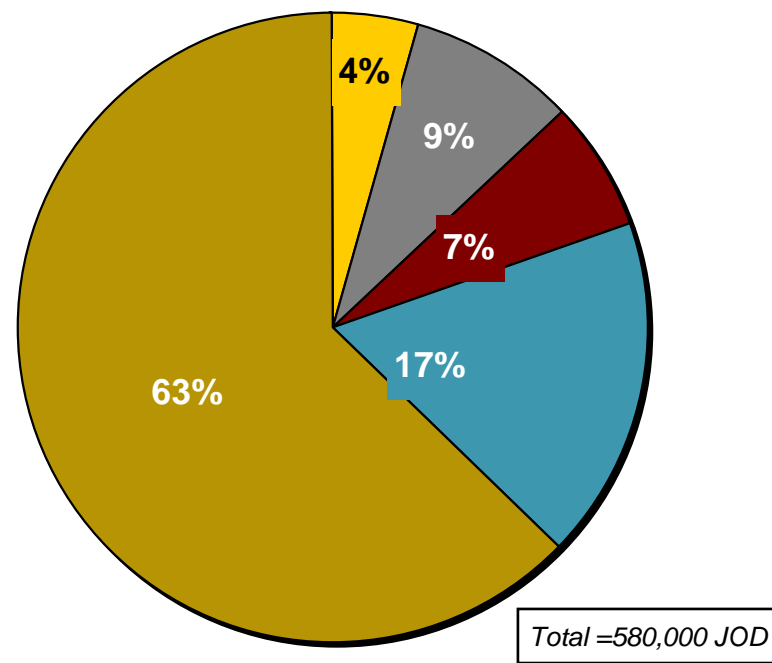


As a snapshot of JBCP's costs, in 2008, the program spent only around 1.5 million USD

Cash Expenditure 2008



In-kind Expenditure 2008



# JBCP literally orchestrates the work of all partners and stakeholders towards one goal

### الشركاء:

### القائمون على الحملة:

### القطاعات الطبية المشاركة في الحملة:

- عيادات جمعية تنظيم الأسرة
- المركز العربي الطبي
- مستشفى الأردن
- المستشفى التخصصي
- المستشفى الإيطالي
- مركز الأشعة الاستشاري د. زياد صوان
- مركز الأشعة التشخيصية د. ورد شان
- مستشفى الإستقلال
- مستشفى الإسراء
- مركز صحي جامعة العلوم والتكنولوجيا
- مستشفى الأمل للتوليد والجراحة النسائية
- كافة المراكز الطبية التابعة لوزارة الصحة

### الراعي الذهبي:

### الراعي الفضي:

### الداعمون:

- بنك إتش إس بي سي الشرق الأوسط المحدود HSBC
- شركة المحفظة الوطنية للأوراق المالية م.ع.م
- بنك الإسكان للتجارة والتمويل
- الشركة العالمية للوساطة والأسواق المالية
- شركة الباطون الجاهز والتوريدات الإنشائية م.ع.م
- شركة البطاقات العالمية
- شركة مسافات للنقل المتخصص

- ▶ Microfund for Women
- ▶ Health Care Accreditation Council
- ▶ ZENID
- ▶ Kodak
- ▶ GE



### الداعمون من قطاع الإعلام:

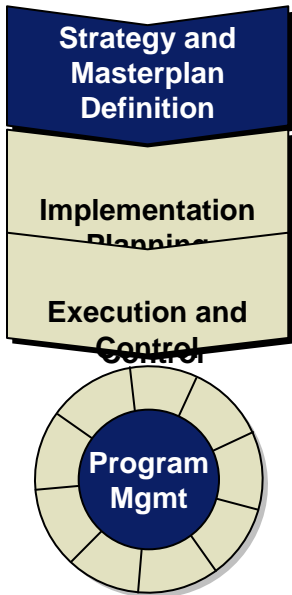
التلفزيون الأردني:	الصحف:	الانصات:	الجلات:



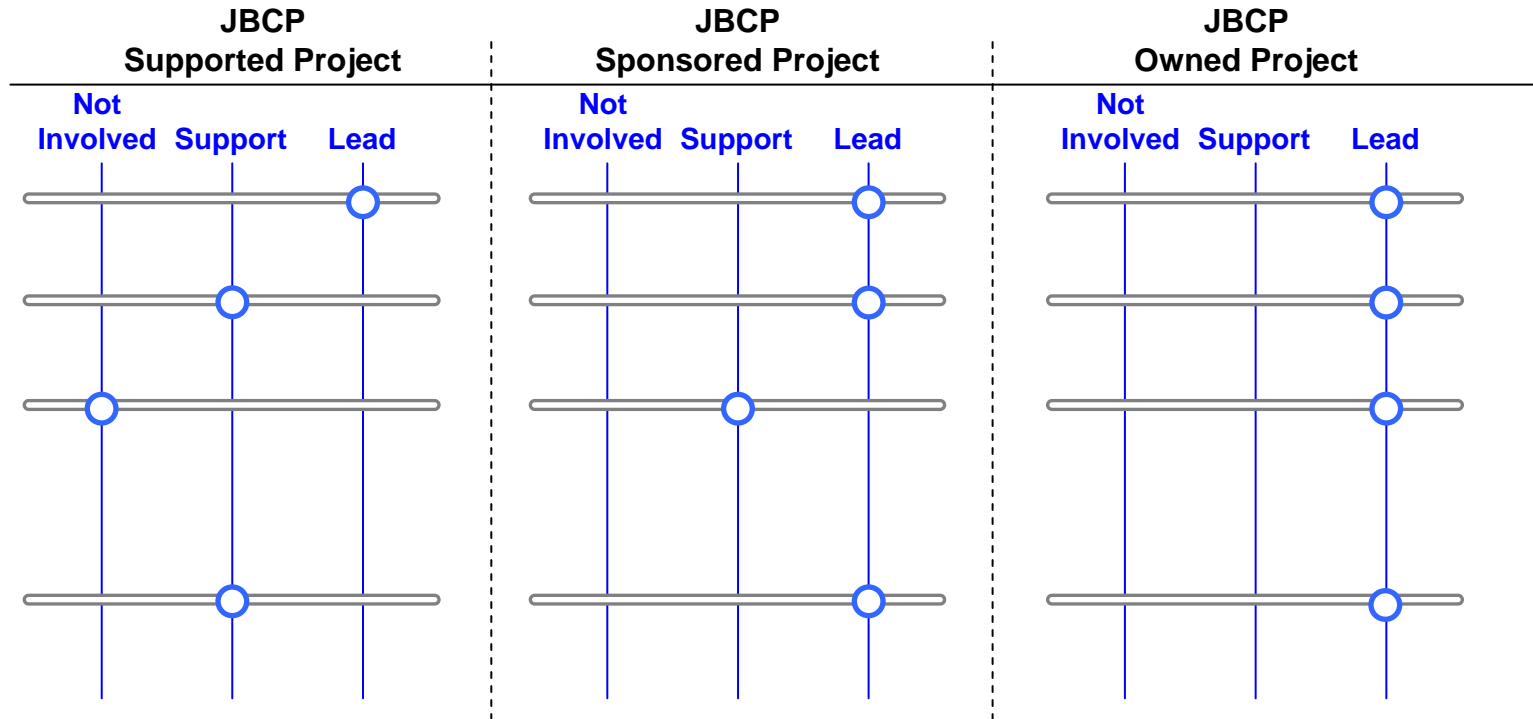
# JBCP prides on its participatory approach in its work methodology

**ILLUSTRATIVE**

## Initiatives Lifecycle



## Role of JBCP



### Type of Initiatives

- Key Role
- Varying Role

- Public awareness campaigns
- Outreach to communities through existing groups

- Activation of existing or development of new mammography services

- Development of guidelines, protocols & SOPs
- Accessibility to mobile mammography services







So although two years ago Jordan faired poorly on screening and early detection, today we are at the enhanced level

Level of resources	Public Education and Awareness	Detection Methods
Basic	Development of culturally sensitive, linguistically appropriate local education programs for target populations to teach value of early detection, breast cancer risk factors and breast health awareness (education + self-examination)	Clinical history and CBE
Limited	Culturally and linguistically appropriate targeted outreach/education encouraging CBE for age groups at higher risk administered at district/provincial level using healthcare providers in the field	Diagnostic breast US +/- diagnostic mammography in women with positive CBE Mammographic screening of target group*
Enhanced	Regional awareness programs regarding breast health linked to general health and women's health programs	Mammographic screening every 2 years in women ages 50-69* Consider mammographic screening every 12-18 months in women ages 40-49*
Maximal	National awareness campaigns regarding breast health using media	Consider annual mammographic screening in women ages 40 and older Other imaging technologies as appropriate for high-risk groups†

KHCC provides Jordan with 1<sup>st</sup> class comprehensive services across the whole spectrum

**Key**

 Before JBCP

 After JBCP

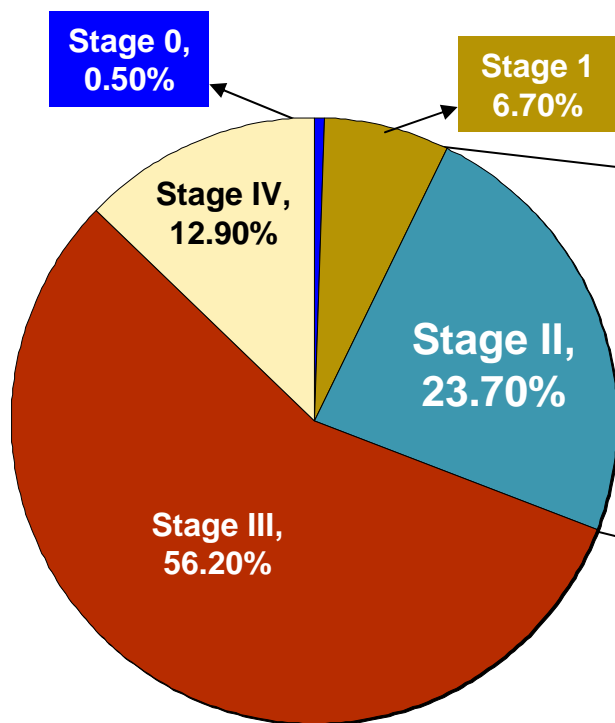
SOURCE:  
CANCER, Vol. 113, No. S8, 2008, Pages 2221-2243. Copyright 2008 American Cancer Society. "This material is reproduced with permission of Wiley-Liss, Inc., a subsidiary of John Wiley & Sons, Inc."





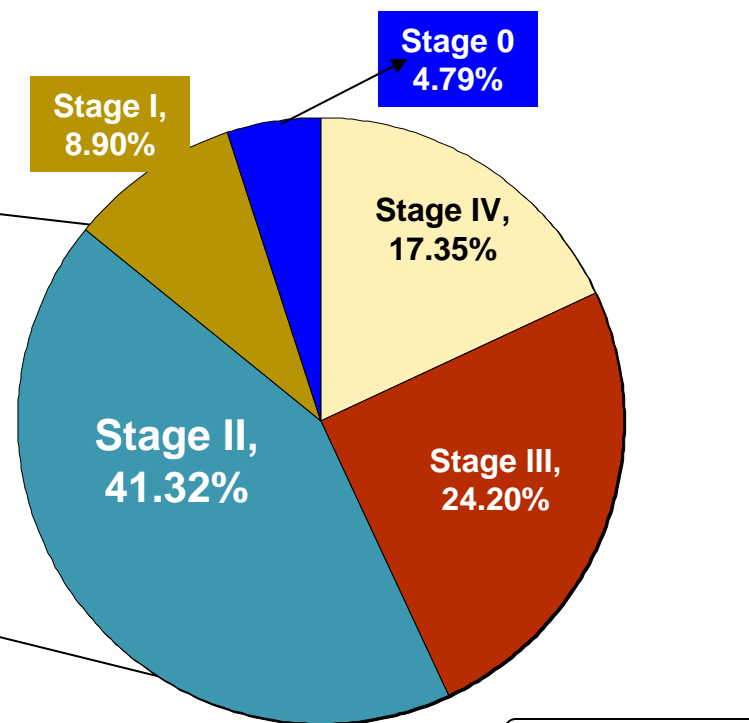
# In less than two year's experience, preliminary indications from KHCC data already show a shift in staging of the disease

Stages of Breast Cancer in Jordan based on KHCC Experience **before** JBCP



N=550

Stages of Breast Cancer in Jordan based on KHCC Experience **after** JBCP



N=438

3.42% unknown



**Pink & the Pink Ribbon are the international symbols for breast cancer awareness across the world.**

**Jordan has chosen the local hatta pattern and turned it to pink in the form of a ribbon to represent the**

***National Jordanian Symbol  
for  
Breast Cancer Awareness***

