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Private Sector Project for Women's Health

Survey and Assessment of Private Sector Mammogram Facilities in Central and North Jordan

Submitted to:

Dr. Basma Khraisat
Cognizant Technical Officer
USAID/Jordan

Submitted by:

Dr. Rita Leavell
Chief of Party
Private Sector Project for Women's Health
Abt Associates Inc.

Prepared By:

May Abuhamdia
BSc; eMBA/MPH

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List of Abbreviations

ACR	American College of Radiology
AUB	American University of Beirut
ESR	European Society of Radiology
KHCC	King Hussein Cancer Center
NGO	Non Governmental Organization
PSP	Private Sector Project
RSNA	Radiology Society of North America
US	Ultrasound

1.0 Introduction

Breast Cancer is a major cancer and the second most common cause of death in women in Jordan. Breast cancer accounts 35.3 per cent of all female cancers in the country^[1], with approximately 550 cases registered each year; the total cases registered between the period of 1996 – 2003 reached 4054 cases^[2].

The incidence of breast cancer is no higher than other countries, but over 70 percent of women present in the late stages when survival rates are low; only 7% of breast cancer cases are being diagnosed in early stages^[2].

Most authorities now agree that screening mammography is an effective and safe measure for reducing morbidity and mortality due to breast cancer among women. In recent years numerous efforts have been undertaken in Jordan to increase the use of screening mammography.

A recent study by the Cancer prevention Directorate addressing of Knowledge, Attitudes and Practices of Jordanian Women Towards Breast Cancer showed that while there is high awareness regarding the prevalence and severity of breast cancer amongst females, only 35% of the women knew what a mammogram is and only 5.7% actually underwent a mammogram test within the last 2 years of study^[2].

The goal of the national program is to reverse the current situation within the next 5 years, and aim to find 70 percent of cases in the early stages. This is planned to be achieved by finding symptomatic cases while building a system for screening through mammograms.

In this regard, The Private Sector Project for Women's Health (PSP) will embark on numerous projects targeting women and healthcare providers to increase the quality and quantity of breast cancer diagnosis in the private sector. One of these initiatives will be to develop in collaboration with King Hussein Cancer Center (KHCC), a training program for radiologists and technicians in Mammogram diagnosis. In parallel, PSP will work with its Physician Network to refer potential cases to private facilities.

In order to fulfill these initiatives, PSP commissioned a survey to identify existing mammogram facilities in central and northern Jordan and to assess capacities, practices and training needs of radiologists and technicians in these centers.

This report presents the findings of a comprehensive survey and assessment of all private sector mammogram facilities in central and northern regions of Jordan

2.0 OBJECTIVES

The purpose of this survey was to identify radiology facilities and hospitals that provide mammogram testing (screening and diagnostic) and to understand policies, capacities and trends prevailing in breast cancer imaging and diagnosis in the private sector, as well as

assess the training interest of facilities for radiologists and technicians through a program with KHCC. Additionally the survey aimed to identify potential facilities that may be approached for a subsidized screening referral program in collaboration with the National Screening Program.

The survey aimed to answer the following research questions

- What is the total number of existing private sector mammogram facilities in the central and northern regions of Jordan
- What are the existing mammogram technologies available in the different facilities
- What is the role of radiology facilities in breast cancer screening and diagnosis
- Do centers cater to women seeking breast cancer screening as well as those referred by physicians for diagnosis
- What is the average volume of patients tested for breast cancer in the facilities and the percentage of patients presenting with symptoms vs. asymptomatic patients
- Do testing practices and approaches conform to international guidelines
- What quality protocols for breast cancer testing are applied by facilities
- What costs are charged for various breast cancer tests (mammogram and ultrasound)
- What are the staffing levels, mammogram/breast cancer screening and diagnosis trainings of radiologists and technicians in the facilities and the degree of interest in participation in a specialized training program for these staff in cooperation with KHCC
- Which centers may be recommended for potential inclusion in a referral program, based on a physical assessment of facilities.

3.0 METHODOLOGY

3.1 Target facilities

Based on statistics and previous research by PSP, the presence of private facilities (whether hospitals or centers) providing mammogram testing was shown to be confined to the areas of Amman, Madaba, Zarka, and Irbid. Accordingly and by utilizing a list prepared by PSP stating all private facilities in these areas that provide mammogram testing, all listed facilities were contacted to verify the actual presence of a mammogram machine.

The initial list provided by PSP included 27 facilities known to have mammograms; after verification, one facility was eliminated since it did not provide mammogram testing.

Key informant feedback provided information on the remaining facilities (over and above those stated in the PSP list) that provide mammogram testing; 6 additional facilities were identified.

In total the survey included 33 facilities (16 private centers and 17 private hospitals). Table 1 provides a list of the surveyed centers while table 2 provides distribution of these centers by area. For analytical purposes, Amman was divided into 3 geographical zones; Amman West, Amman East and Amman Center.

Table 1: list of facilities with mammogram testing

Facility Name	Location
Ahli Hospital	Amman Center - Abdali
Diagnostic Radiology Center مركز الاشعة التشخيصية	Amman Center - Abdali
Islamic Hospital	Amman Center - Abdali
Amal Hospital	Amman Center – Jabal Hussein
Istiklal	Amman Center – Jabal Hussein
Istishari Radiology center مركز الاشعة الاستشاري	Amman Center – Jabal Hussein
Italian Hospital	Amman Center - Muhajireen
Madar Center	Amman East – Jabal Hussein
Radiology Diagnosis Center (مركز الاشعة التشخيصي)	Amman East – Jabal Hussein
Specialty Center for Radiology المركز التخصصي للاشعة	Amman East – Jabal Hussein
Jameel Farraj Center	Amman East - Wehdat
Ibn Al Haytham	Amman West - Madina Mounowara
Arab Medical Center	Amman West – Fifth Circle
Amman X ray Center (مركز عمان للاشعة)	Amman West – Jabal Amman
Jordan Center	Amman West – Jabal Amman
Jordan Hospital	Amman West – Jabal Amman
Jubilee Center	Amman West – Jabal Amman
Khalidi Hospital	Amman West – Jabal Amman
Radio Diagnostic Consultation Center (مركز الاشعة الاستشاري التشخيصي)	Amman West – Jabal Amman
X-ray imaging center (الاشعة التخصصي)	Amman West – Jabal Amman
Philadelphia Hospital	Amman West – Prince Rashed District
Specialty Hospital	Amman West Shmeisani
Rosary Sisters Hospital	Irbid
Jordan University of Science and Technology Medical Center	Irbid
Mahaba Hospital	Madaba
Hikmah Hospital	Zarka
Jabal Al Zeitoun	Zarka
Additional facilities identified through survey	
Modern Radiology Center	Amman East – Nazzal
Israa Hospital	Amman West - Jubeiha
Tala Ali Hospital	Amman West – Tala Ali
Arab X ray Center العربي للاشعة المركز	Irbid
X ray and Ultrasound center مركز الاشعة و السونار	Irbid
Jordan Radiology Clinic (عيادات الاردن للاشعة)	Zarka

Table 2: Distribution of mammogram facilities by area

Zone	Total Number of Facilities	Number of Private Centers	Number of Hospitals
Amman West	13	5	8
Amman East	3	2	1
Amman Center	9	5	4
Zarka	3	1	2
Irbid	4	3	1
Madaba	1	0	1

3.2 Research tool and approach

Structured face to face interviews were conducted with key informant staff from the target facilities. The key respondent was identified by the interviewer as the person most familiar with the organization of mammography services in the practice.

In some cases, multiple respondents were identified to ensure the most accurate completion of the entire interview.

The interview utilized a questionnaire based on the research objectives and comprising 2 parts.

Part I focused on assessing the average patient volumes, technical capacities and trends prevailing in the mammogram facilities based on feedback from the interviewee(s). In all cases a radiologist was interviewed for Part 1 and where possible a technician as well from each facility. Part II was a researcher’s assessment of the mammogram facility in terms of overall appearance, set up, technical and physical appeal, patient “friendliness” and presence of Information Educational material.

Part I was comprised of 17 questions, while part II comprised 7 evaluation aspects for the facility; the full survey tool is provided in Annex A:

3.3 Data analysis

Data entry utilized Microsoft Office Excel and Statistical Package for Social Sciences. All data was entered twice for consistency. Cross tabulations were performed in an attempt to check for inconsistencies in coding as well as in data entry. No problems were found.

Statistical analyses included all but one of the surveyed facilities – Jordan University of Science and Technology (JUST) Medical Centers – due to the differences in set up, management and patient profiles of this center; details of the findings of JUST center are provided in the Facility Profile Section of this report in Annex B.

4. Results

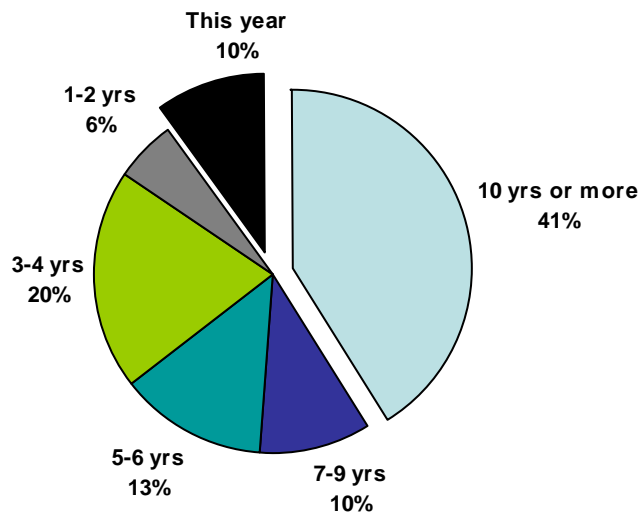
4.1 General Facility and Staffing Characteristics and Practices

In Jordan, mammograms are situated solely in radiological facilities whether affiliated with a hospital radiology department or within a radiology diagnosis center. These facilities cater to a wide variety of diagnostic radiology tests.

Radiology services include general radiography, breast imaging, bone densitometry, and general ultrasonography (US); while not all have the same mix of services.

A little less than half of the surveyed facilities have been conducting mammogram testing for at least 10 years; only 3 facilities have initiated mammogram testing during 2007 (JUST medical center, Jordan Radiology clinic and Tala Ali Hospital). Figure 1 provides breakdown of service initiation of the surveyed facilities.

Figure 1: Mammogram Service Initiation in the surveyed facilities.



Compared to the other radiology tests provided by these centers, mammogram testing is not a priority as it does not constitute a large percentage of the revenues accrued by the centers. The low interest in mammogram testing is largely due to domination of market by KHCC owing to its lower prices and reputation.

In some cases, the very low loads will lead to referral to another facility in case the mammogram is out of order as opposed to maintenance.

There are no radiologist dedicated solely to the screening and diagnosis of breast cancer, albeit there is was only one center specializing in breast cancer detection and diagnosis

owned by Dr Nuwwar Fariz (Radio-Diagnostic Consultation Center”. This facility is the market leader in volume of patients and also considered the reference by other radiologists. Leadership is augmented by the presence a female radiologist.

The market is dominated quantitatively by male radiologists; there were only 4 facilities headed or owned by a female vs. the other 29 headed or owned by males. While on the other hand the presence of female technicians dominated for this sector; only 2 facilities had male technicians.

The presence of a full time radiologist was not universal in all the facilities; in these cases the radiologist would either usually own a private facility and be holding a day time position in a hospital, or some hospitals testing would be done by technicians and a part time radiologist is called on case by case basis and for issuing of reports; table 3 shows facilities lacking a full time radiologist.

Table 3: Facilities lacking a full time radiologist

	Location	Comments
Radiology Diagnosis Center	Amman Central	Dr. Munir Jadallah - Attends clinic at 12:30 and 6:00 - other time committed to Philadelphia Hospital, Muwasat Hospital and Marka Islamic Hospital
Madar	Amman Central	Attends clinic at 5:00; during the day works as Head Radiology at Jabal Zeitoun Hospital in Zarka
Ahli Hospital	Amman Central	Covered by Dr Ziyad Suwwan from Istishari Rad Center - cases are performed by hospital technician and reports done by the Dr
Philadelphia Hospital	Amman West	Covered by Dr Munir Jadallah
Rosary Sisters Hospital	Irbid	Covered by Dr Yousef Wardat - on call basis

The absence of a full time technician or absence of one altogether was more prevalent than that of the case of radiologists in the surveyed centers as shown in table 4.

Table 4: Facilities lacking technicians - full time or totally - for mammogram testing

	Location	Comments
X-ray imaging center (الاشعة التشخيصي)	Amman West	No technician - Radiology conducts all tests
Amman X ray Center (مركز عمان للاشعة)	Amman West	No Technician for mammogram specifically - on call basis
Tala Ali Hospital	Amman West	No technician - Radiology conducts all tests
Diagnostic Radiology Center (مركز الاشعة التشخيصية)	Amman Central	No technician - Radiology conducts all tests
Specialty Center for Radiology (المركز التخصصي للاشعة)	Amman Central	No technician - Radiology conducts all tests
Italian Hospital	Amman East	No Technician for mammogram specifically - Radiologist personally conducts MMG tests
Modern Radiology Center	Amman East	No Technician for mammogram specifically - on call basis
Arab X ray Center (العربي للاشعة المركز)	Irbid	No technician - Radiology conducts all tests
Rosary Sisters Hospital	Irbid	No Technician for mammogram specifically - Radiologist personally conducts MMG tests
X ray and Ultrasound center (مركز الاشعة و السونار)	Irbid	No technician - Radiologist conducts all tests

With regards to practices, it was found that radiology facilities are “service providers” where they execute radiology tests ordered by referring physicians; facilities are not sought by patients for first line diagnosis. In some cases, execution of physician requests is literal to the extent where confirmatory ultrasound testing is not instituted unless patient returns to physician for a request, or in other cases the breast cancer testing approach requested by physician is instituted even if not warranted (e.g. mammogram for a patient less than 35 years).

While radiologist regard themselves solely as “service providers” for diagnostic tests, the lack of accompanying patient history data with a mammogram test has lead some facilities to develop a brief patient history form for the patient to complete prior to testing; unfortunately no record of this form is kept at the facilities nor are any copies of the mammogram test that was performed. Six facilities indicated that they conduct a clinical breast examination for the patient prior to testing.

Radiologists opt not to have communication with the patients and prefer to have the referring physician communicate test results. In all cases physician referred patients are sent back to the referring physician, and in case the patient is a walk-in, 90% refer to a surgeon and 10% refer to an oncologist; albeit the walk-ins usually prefer to go back to their gynecologist for further advise on management.

Many radiologists indicated that some gynecologists in the market do not send the patient to a specialized surgeon in case of positive findings, but rather opt to perform the necessary surgery themselves.

Vast differences were found between facilities in terms of technology (Digitization and new vs. refurbished machines), knowledge and investment in mammogram testing. Only 6 centers had new machines, while the remaining facilities have refurbished machines. The leading mammogram brand in the market is Philips with different makes of the same brand prevalent.

Table 5 provides an account of the various mammogram brands found in the surveyed facilities.

Table 5: Mammogram Machine Brands in Mammogram Facilities

Machine Brand	Number of Facilities
Philips	11
Planmed Sophie	4
Siemens	4
General Electric	2
Giotto	1
Hologic	1
Mamex DC	1
Bennett	1
Fisher	1
Villa	1
SGR	1
Shimadzu	1
IMS	1
Lorad	1
Continental	1

None of the centers possessed digital mammograms. Khalidi Hospital was the only facility to possess electronic archiving system with a capacity of up to 10 years of records.

4.2 Prevailing Breast Cancer Testing Policies and Practices

4.2.1 Patient Referral Policies

Respondents (radiologist in charge) were asked to provide information regarding the facility policy towards referrals by type – i.e. if a center accepts self referrals (walk-ins) for breast cancer screening and if applicable the extent of such patients undergoing breast cancer screening. The majority of facilities (24) accept walk-ins in addition to the usual physician referred patients. Four facilities have a strict “Physician Referral” Policy (Hikmah Hospital,

Jabal Zeitoun Hospital, Philadelphia Hospital and Madar Center). To this end, one facility indicated that acceptance of walk-ins is contingent to age over 40 for breast cancer screening (Diagnostic Radiology Center). While 3 facilities indicated that they “prefer” physician referrals (Istiklal Hospital, Amman X ray Center, Arab X ray Center)

4.2.2 Patient Breast Cancer Testing Approaches

Standard guidelines indicate the use of ultrasound for patients less than 35 years and its use post mammogram for confirmation if needed. Only one center (3%) indicated that ultrasound is performed for patients less than 35 years, 74% indicated that they perform it for patients less than 30; 18% indicated warranting an ultrasound for patients less than 40 (Figure 2). For mammogram testing patient profile, the majority (15 centers) will conduct mammogram followed by ultrasound if needed, while 11 centers always perform mammogram followed by ultrasound as “package” (figure 3) ; in these centers there is no pricing for a mammogram alone. It is of interest to note that age alone was not the warranting factor for ultrasound testing for 47% of respondents who indicated that they institute it according to case presentation rather than age (e.g. suspicion of cyst). For those indicating “As per Dr Request” they execute physician request literally and conduct the written test.

Figure 2: Breast Cancer Testing Practices – Patient Profiles for Ultrasound

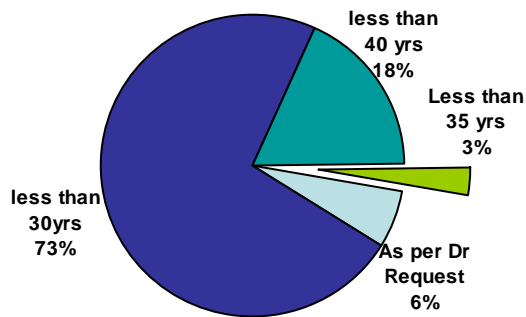
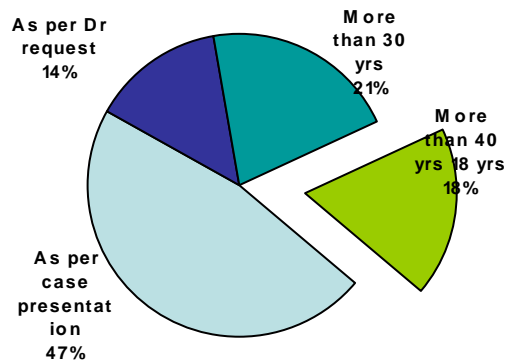


Figure 3: Breast Cancer Testing Practices – Patient Profiles for Mammogram



4.2.2 Breast Cancer Testing Patient volumes, presentations and referral sources

➤ Patient Volumes

Seventy five percent of the surveyed centers do not keep systematic and organized records of the volumes of patients undergoing breast cancer detection testing. In cases where there are records, they are located and responsibility of the accounting department.

Accordingly, when asked about patient volumes, presentation and referral sources, crude estimates were provided.

The average monthly patient volumes for breast cancer testing across all surveyed centers amounted to 25 patients per month with a low of 1 patient per month vs. a high of 180 patients a month. The facility with the highest volume of breast cancer testing patients is the

Radio-Diagnostic Consultation Center, where it leads the number 2 position by two fold (Table 6).

Average patient/month volume analysis was performed for area (table 7) and by facility type (table 8), where the variation by area was much more prominent than that by facility type.

Amman West has the highest volume of patients and Irbid the lowest. The difference by facility type was almost non-existent; the Radio-Diagnostic Consultation Center leads in private facilities and the Islamic Hospital leads hospitals in volume of patients undergoing breast cancer testing; tables 9-10 provide details of patient load for facilities by type.

Table 6: Average Number of patients/month undergoing breast cancer testing in all centers

Facility	Area	Average Number of MMG patients/Month
Radio Diagnostic Consultation Center	Amman West	180
Islamic Hospital	Amman Central	75
Amal Hospital	Amman Central	60
Amman X ray Center (مركز عمان للاشعة)	Amman West	50
Khalidi	Amman West	45
Arab Medical Center	Amman West	40
Diagnostic Radiology Center (مركز الاشعة التشخيصية)	Amman Central	35
Jabal Al Zeitoun	Zarka	30
Jordan Hospital	Amman West	30
Jordan Radiology Clinic	Zarka	30
Specialty Hospital	Amman West	25
Italian Hospital	Amman East	22
Ibn Al Haytham	Amman West	20
Istiklal	Amman Central	17
Jordan Center	Amman West	15
Israa Hospital	Amman West	15
Jameel Farraj Center	Amman East	15
Radiology Diagnosis Center	Amman Central	15
Istishari Radiology center (مركز الاشعة الاستشاري)	Amman Central	12
Jubilee	Amman West	10
Madar	Amman Central	10
Modern Radiology Center	Amman East	10
Rosary Sisters Hospital	Irbid	8
Tala Ali Hospital	Amman West	8
Mahaba Hospital	Madaba	7
X-ray imaging center (الاشعة التشخيصية)	Amman West	5
Hikmah Hospital	Zarka	5
Specialty Center for Radiology (المركز التخصصي للاشعة)	Amman Central	5
Arab X ray Center (العربي للاشعة المركز)	Irbid	5
X ray and Ultrasound center (مركز الاشعة و السونار)	Irbid	5
Ahli Hospital	Amman Central	4
Philadelphia Hospital	Amman West	1
Average All		25

Table 7: Average Number of patients / month undergoing breast cancer testing by area

Area	Average BC testing patient load/month
Amman West	34
Amman Central	26
Amman East	16
Zarka	22
Madaba	7
Irbid	6

Table 8: Average number of patients undergoing breast cancer testing by facility type

Facility type	Average BC testing patient load/month
Hospital	24
Private Center	27

Table 9: Average number of patients/ month undergoing breast cancer testing – Private Centers

Facility	Area	Average Number of MMG patients/Month
Radio Diagnostic Consultation Center	Amman West	180
Amman X ray Center (مركز عمان للاشعة)	Amman West	50
Diagnostic Radiology Center (مركز الاشعة التشخيصية)	Amman Central	35
Jordan Radiology Clinic (عيادات الاردن)	Zarka	30
Radiology Diagnosis Center	Amman C	15
Jordan Center	Amman West	15
Jameel Farraj Center	Amman East	15
Istishari Radiology center (مركز الاشعة الاستشاري)	Amman Central	12
Modern Radiology Center	Amman East	10
Madar	Amman Central	10
Jubilee	Amman West	10
X-ray imaging center (الاشعة التشخيصي)	Amman West	5
X ray and Ultrasound center (مركز الاشعة و السونار)	Irbid	5
Specialty Center for Radiology (المركز التخصصي للاشعة)	Amman Central	5
Arab X ray Center (العربي للاشعة المركز)	Irbid	5

Table 10: Average number of patients / month undergoing breast cancer testing – Private Hospitals

Facility	Area	Average Number of MMG patients/Month
Islamic Hospital	6Amman C	75
Amal Hospital	6Amman C	60
Khalidi	1Amman W	45
Arab Medical Center	1Amman W	40
Jordan Hospital	1Amman W	30
Jabal Al Zeitoun	3Zarka	30
Specialty Hospital	1Amman W	25
Italian Hospital	2Amman E	22
Ibn Al Haytham	1Amman W	20
Istiklal	6Amman C	17
Israa Hospital	1Amman W	15
Tala Ali Hospital	1Amman W	8
Rosary Sisters Hospital	4Irbid	8
Mahaba Hospital	5Madaba	7
Hikmah Hospital	3Zarka	5
Ahli Hospital	6Amman C	4
Philadelphia Hospital	1Amman W	1

➤ Patient Presentation and Referral Sources

One of the key aspects the survey aimed to identify was the extent of self – referrals for mammogram screening. For screening mammography, the term “self-referred” is defined as a woman who refers herself for medical services and who does not have an identified referring physician or other healthcare provider. Quantification of self referrals, provides an idea on the extent of impact on the target audience of breast cancer awareness campaigns for early detection as well as a reflection of self –efficacy in the population.

While most centers accept walk-ins (self referrals), these patients constitute a very minute portion of the total number of patients who undergo breast cancer testing in facilities (Figure 4). However, screening facilities that elect to accept such patients do not have systematic procedures for referral to a qualified healthcare provider.

Specialists whether from the private clinics or from the private hospitals are the main source of referral for mammogram testing; the former constituting the bulk. Very few referrals come from GPs and other sectors like NGOs and Mother and Child Clinics. The two latter referral sources are confined in specific areas where there are no public mammogram facilities (Madaba) and where the facilities have networks with NGO clinics (Amman East and some in Jabal Hussein).

Figure 4: Types of patients by referral seeking breast cancer testing

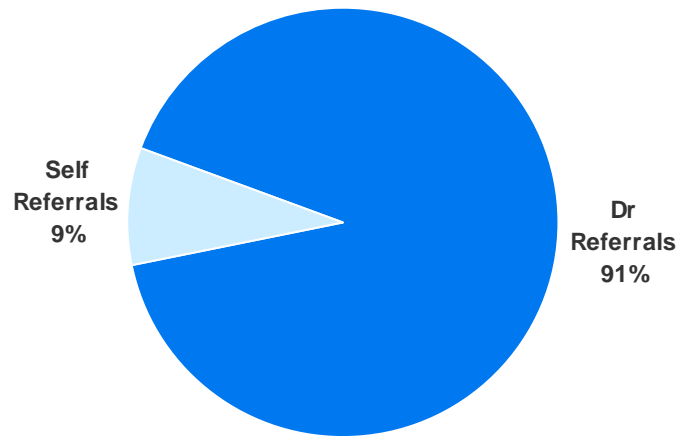
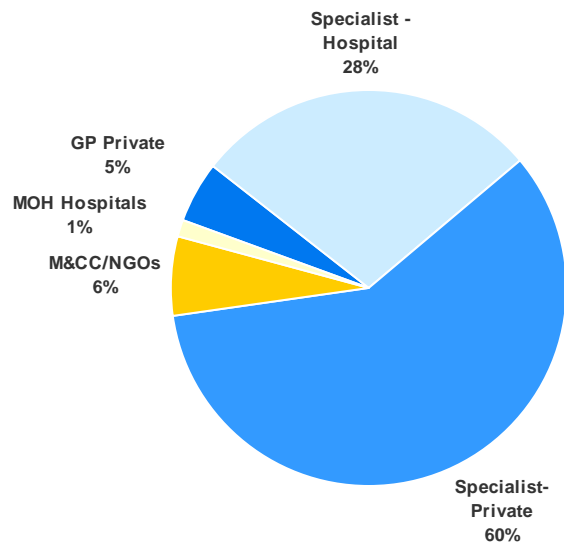


Figure 5: Sources of physician referred patients



4.2.3 Breast Cancer Testing Charges

Facilities were probed for the cost of conducting mammogram, ultrasound and both together for the process of breast cancer screening and diagnosis.

Most centers conduct bilateral mammogram testing regardless of the presentation of case or physician order, but some facilities will conduct unilateral testing in case the order indicated

suspicion in only one side of the breast. Accordingly in these centers there is a price for unilateral and bilateral mammogram testing as well a varied package test accordingly. These facilities that have varying charges are Istiklal, Hikmah and Jordan Hospitals. No private facilities have varying unilateral/bilateral testing charges.

On the other hand some facilities only provide breast cancer testing through a mandatory mammogram plus ultrasound testing; these do not provide the option of a separate mammogram testing (table 11).

One facility (Ahli Hospital) only provides mammogram testing and in case there is a need for ultrasound they are referred to the overseeing radiologist in his own clinic (Dr Ziyad Suwwan – Istishari Radiology Center).

Table 11: Mammogram facilities with a mandatory mammogram + ultrasound testing policy

Facility	Area	Ultrasound Cost	MMG + Ultrasound package cost
Jordan Radiology Clinic	Zarka	15	30
Jameel Farraj Center	Amman East	25	40
Jubilee	Amman W	30	50
Jordan Center	Amman West	25	50
Radio Diagnostic Consultation Center	Amman West	30	60
Mahaba Hospital	Madaba	20	35
Italian Hospital	Amman E	25	35
Jabal Al Zeitoun	Zarka	25	40
Hikmah Hospital	Zarka	25	40

Accordingly the average prices of various breast cancer testing methods are provided in table 12 (averages are based on bilateral testing charges).

Table 12: Average Breast Cancer Testing Charges – All Centers

	MMG (JD)*	U/S (JD)*	MMG+U/S (JD)*
Average	33.4	25.3	48
Minimum	30	15	30
Maximum	50	35	70

The highest charge for a separate mammogram test is at Khalidi hospital while the lowest charge (30 JDs) is charged 14 facilities.

As well, the highest charge for a “package test” is at Khalidi Hospital while the lowest charge of 30 JDs is at Ahli Hospital and Jordan Radiology Clinic.

Average price are similar for “package” test between private centers and hospitals while there is a big difference in the average of separate mammogram or ultrasound testing (table 13)

Table 13: Average breast cancer testing charges – Private Centers vs. Hospitals

	MMG (JD)	U/S (JD)	MMG+U/S (JD)
Private Centers	32	24	48
Private Hospital	35	26	48

Amongst the private clinics, Amman X-ray Centers charges the highest and Jordan Radiology Clinic charges the lowest (table 14).

Table 14: Charges of Breast Cancer Testing methods – Private Centers

Private Center	Area	Bilateral MMG Cost	Ultrasound Cost	MMG + Ultrasound package cost
Jordan Radiology Clinic	Zarka		15	30
Specialty Center for Radiology المركز التخصصي للأشعة	Amman Central	30	25	40
Modern Radiology Center	Amman East	30	25	40
Jameel Farraj Center	Amman East		25	40
Istishari Radiology center مركز الأشعة الاستشاري	Amman Central	30	30	40
Diagnostic Radiology Center مركز الأشعة التشخيصية	Amman Central	30	25	40
X-ray imaging center (الأشعة التشخيصية)	Amman West	30	20	50
Jubilee	Amman W		30	50
Jordan Center	Amman West		25	50
Arab X ray Center العربي للأشعة المركز	Irbid	30	25	50
X ray and Ultrasound center مركز الأشعة و السونار	Irbid	30	25	55
Radiology Diagnosis Center	Amman Central	30	25	55
Radio Diagnostic Consultation Center	Amman West		30	60
Madar	Amman Central	40	25	60
Amman X ray Center (مركز عمان للأشعة)	Amman West	40	20	60

While amongst the hospitals, Tala Ali Hospital has the lowest charges for all testing approaches, and Khalidi the highest charges for separate mammogram testing and package test (table 15).

Table 15: Charges of Breast Cancer Testing methods – Private Hospitals

Private Hospital	Area	Bilateral MMG Cost	Ultrasound Cost	MMG + Ultrasound package cost
Ahli Hospital	Amman C			30
Tala Ali Hospital	Amman W	30	25	35
Mahaba Hospital	Madaba		20	35
Italian Hospital	Amman E		25	35
Jabal Al Zeitoun	Zarka		25	40
Islamic Hospital	Amman C	30	25	40
Hikmah Hospital	Zarka		25	40
Rosary Sisters Hospital	Irbid	30	20	40
Ibn Al Haytham	Amman W	30	30	50
Amal Hospital	Amman C	40	30	50
Philadelphia Hospital	Amman W	30	25	55
Israa Hospital	Amman W	30	25	55
Istiklal	Amman C	35	35	58
Specialty Hospital	Amman W	35	30	60
Jordan Hospital	Amman W	35	25	60
Arab Medical Center	Amman W	40	25	65
Khalidi	Amman W	50	25	70

Differences in charges were not vast when comparing governorates (table 16)

Table 16: Charges of Breast Cancer Testing methods – Comparative by Governorate

	MMG	U/S	MMG+U/S
Average Amman**	34.3	26.3	49.9
Average Madaba	35.0	25.0	35.0
Average Irbid	30	23	48
Average Zarka	-	21	36.6

** Difference exist in average price within Amman by Zone

→ All facilities in Zarka do not conduct MMG alone

4.2.4 Breast Cancer Testing Quality Protocols applied by Facilities

Specific questions in the survey were administered to identify the tasks and protocols making up the quality management activities of a typical radiology department/facility. The roles and responsibilities of all parties contributing to the quality management effort were included. Tools, procedures and evaluation criteria used in the performance assessment of imaging modalities and image processing were included as well as maintenance protocols. Special attention was given to the possible application of American College of Radiology (ACR) guidelines for mammography.

In addition issues relating Quality Protocol applied to Interpretation, Patient Information Management and reporting were addressed in the survey; application of the basic concepts of patient information management like medical records management including privacy and regulatory issues and reporting utilizing the Bi-Rad system.

It was found that none of the facilities fully applied any of the Standard Quality Protocol Modalities. None of the facilities had documentation relating to such or a reference manual. Whilst some facilities did apply some form of quality protocols – these were related to the testing procedure itself by applying procedures to minimize repeat testing but none were referenced with a written document (table 17). Although ACR was stated as the reference for the quality practices of some facilities – these did not include any relating to Machine Testing, Processor/Dark room testing, Personnel Qualifications or Quality Control Tests.

Maintenance was the weakest area in quality protocols, only one center applied a routine maintenance schedule but not a protocol (Arab Medical Center).

Only one center applied BI-RAD reporting system (Khalidi Hospital).

None of the centers had a protocol for interpretation; all interpretations are done by one radiologist.

None of the facilities had protocol for patient information management; there is no regulatory body for setting and overseeing implementation of Quality Protocols.

Table 17: Mammogram Facilities that apply some form of Quality Protocols for Breast Cancer Testing

<i>Facility Name</i>	<i>Quality Protocol Reference</i>
Amman X ray Center (مركز عمان للأشعة)	European Society of Radiology
Khalidi	ACR
Radio Diagnostic Consultation Center	ACR
Istiklal Hospital	Internal
Israa Hospital	Internal
Islamic Hospital	Internal
Arab Medical Center	Internal

4.3 Mammogram Staff Statistics and Training and Certification

4.3.1 Staff Statistics

As reported in earlier sections of this report, the number of male radiologists is higher than that of female ones with a ratio of 7:1. On average the average number of radiologists interpreting mammograms was 1.5 with some facilities having up to 4 radiologists (table 16). In almost all the facilities any of the present radiologists are responsible for interpretation based on availability; only 2 facilities had specific radiologists for mammogram interpretation (Arab Medical Center and Khalidi Hospital).

On the other hand female technicians were much more prevalent than male technicians (table 18). In some cases there were technicians specifically responsible for mammogram procedure; this was mainly in large hospitals but these technicians were not solely dedicated to mammogram testing. In one facility, the radiologist performed the mammogram test despite the presence of a female technician (Farraj Center).

Turn over in female technicians was high in private centers mainly and small hospitals, while lower in large hospitals – where the average rate of employment span was steady. High turn over did not pose a problem for facilities due to low focus on mammogram testing and presence of vast pool of potential employees. In addition in some private facilities loss of a female technician is some times compensated by in – house training the secretary to assist or even conduct the mammogram test altogether . All in all the average employment span of female technician was 2.9 years.

Table 18: Mammogram Staff Statistics

Personnel type	Average /facility	Minimum	Maximum
Radiologists interpreting MMG	1.5	1	4
Male Radiologists interpreting MMG	1.2	1	2
Female Radiologists interpreting MMG	0.3	0	1
Technicians working on MMG	1.5	0	6
Male Technicians working on MMG	0.2	0	1
Female Technicians working on MMG	1.3	0	6

4.3.2 Staff Mammogram Training and Certification Details

Only a small number of facilities had specifically trained personnel in mammogram testing and breast cancer screening and diagnosis.

When respondents (radiologists) were asked about specific mammogram training credentials, many may have answered with reference to the training they received during their fellowship but such feedback was taken as breast cancer diagnosis training as no one. Only 3 radiologist actually provided reference to specific content and training details pertaining to breast cancer screening and diagnosis; the overall number of radiologist indicating training was 8 whether referenced or not. The trained radiologists were mainly concentrated in Amman, and none of the facilities in Zarka had trained radiologists.

Eight radiologist indicated that they had in their background mammogram training (table 19).

Table 19: Mammogram Facilities with Radiologists Trained in Breast Cancer Detection

Facilities with MMG trained/certified radiologists	Location	Trained Rads	Gender	Training Details	
				Training Body	Year
*Diagnostic-Radiology Center مركز الاشعة التشخيصية	Amman W	1	Female	USA-Cleveland/one month rotation	2000
Arab Medical Center	Amman W	1	Male	Austria	1998
Ibn Al Haytham Hospital	Amman W	1	Female	AUB - Ultrasound in BC	2002
Jordan X ray Center	Amman W	1	Male	England	1990's
Radio-Diagnostic Consultation Center	Amman W	1	Female	USA/RSNA	1995/2003
Istiklal Hospital	Amman C	1	Male	USA	1990's
Jordan Hospital	Amman W	1	Male	Germany	1980's
Arab X ray Center المركز العربي للاشعة	Irbid	1	Male	USA	1996

* Dr WardShan Abbasi is also part time radiologist at the Specialty Hospital

The number of trained female technicians was even smaller; only 5 centers had a trained technician in mammogram testing (table 20). All the trained technicians were in Amman area – none of the facilities in other governorates had technicians trained in mammogram testing.

Table 20: Mammogram Facilities with Technicians Trained in Mammogram Testing

Facilities with technicians with specific training	with MMG	Location	Trained Techs/ female	Training Details	
				Training Body	Year
Speciality Hospital		Amman W	1	KHCC – training course and rotation	2004
Arab Medical Center		Amman W	1	KHCC – 6 credit hours	1998
Madar		Amman C	1	At another center	2000
Amal Hospital		Amman C	1	Princess Basma Hospital	2002
Islamic Hospital		Amman C	1	JUH/KHCC – training course and rotation	1992/2005

4.3.3 Mammogram Training Interests and Availability and Commitment means

➤ Interest and availability for Training for Radiologists

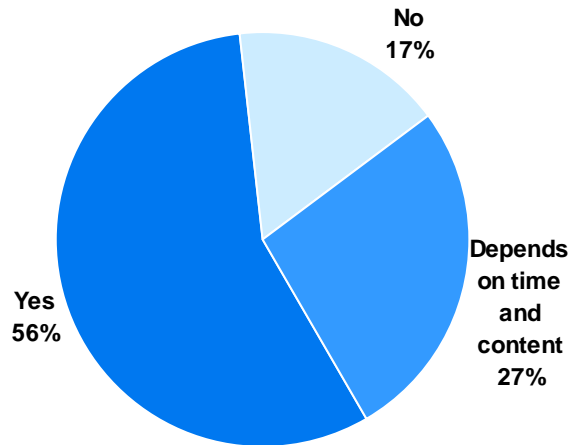
When radiologists were advised of the possibility of development of a training program in the form of a 5 week rotation at KHCC for breast cancer screening and diagnosis – only 3 facilities indicated their interest in the concept (Specialty Hospital, Khalidi Hospital and Diagnostic Radiology Center); they did have reservations on the length of the program.

Only 17% of the facilities were not interested in any form of training (Figure 6), while 27% indicated that actual interest and commitment would be contingent to content and timing .

All other facilities and radiologists were not interested in such a concept – rather a preferred a conference or lecture format (elective course design); 56% percent indicated interest in training if it took such a format.

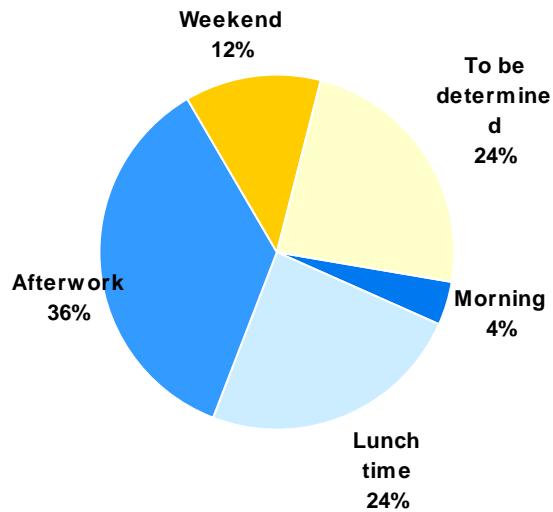
Accordingly none of the centers can spare radiologists for full time training of any form for 5 weeks.

Figure 6: Radiologists general interest in training in breast cancer screening and diagnosis at KHCC



For those indicating preference of a conference or lecture format – the majority indicated their availability for very short periods of the day – either in the evening after work or during the lunch break (Figure 7).

Figure 7: Preferred Training times for Radiologists



➤ **Interest and availability for Training for Technicians**

For the 21 facilities that have a technician for mammogram most indicated their interest in training for the technicians; four facilities indicated no interest in technician training (Jubilee, Philadelphia hospital, Farraj Center and Jordan Radiology Clinic).

While there was interest in principle in training for technicians, reservations were voiced by many radiologists that training of the technicians would lead to their possible loss to KHCC since it constantly seeks good trained technicians and at the same time training of the technicians would give a higher chance of being employed by KHCC if they apply.

Again none of the facilities are able to spare a technician for full time training.

It is to be noted that the general enthusiasm for training was higher for technicians vs. Radiologists.

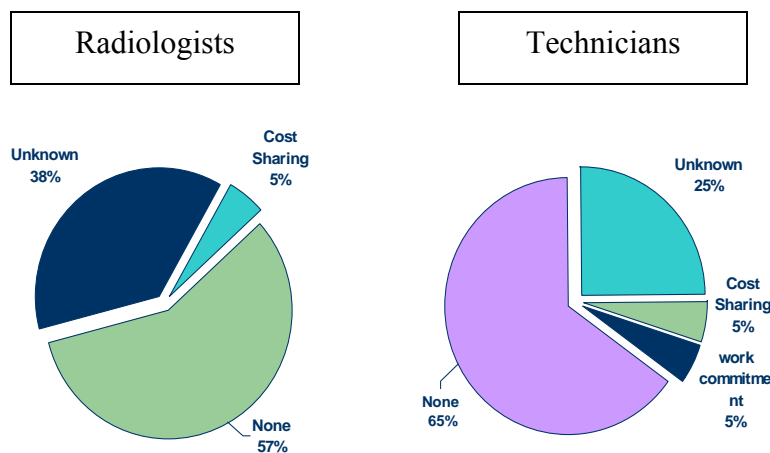
➤ **Possible form of commitment by facilities for mammogram training**

In general, the concept of a means of commitment to training was alien to most facilities; the healthcare profession is usually accustomed to training charges being covered by companies. Commitment to a work contract for a training course is not common.

It is to be noted that in some cases the respondent was not the actual decision maker for such matters –so the actual position of their facility on such a matter is not known (Figure 8).

Only 2 facilities expressed the possibility of considering of cost sharing and/or work commitment for a training course.

Figure 8 Possible Commitment forms from Facilities to training of staff on mammogram at KHCC



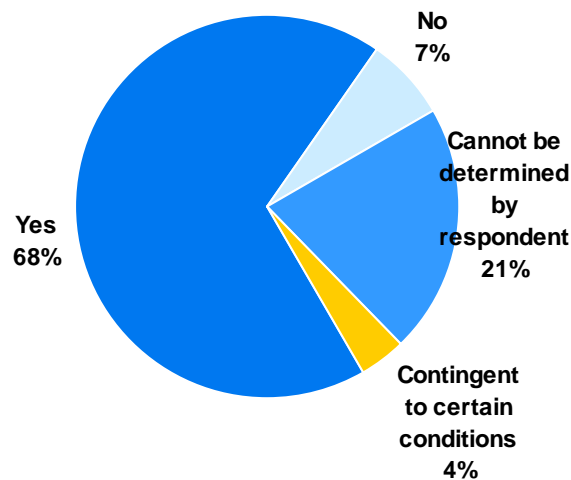
4.4 Mammogram Facilities interested in providing discount for a patient referral program.

The purpose of probing centers for possibility of discount for patient referred for breast cancer screening and diagnosis through the PSP referral network was preliminary as such matters require a formal process, but it served to provide an idea on the degree of interest of centers in such a concept.

It is to be noted that for some centers the respondent was not the decision maker and therefore the preliminary possibility for these centers was not known.

Overall, the majority of facilities expressed possibility for a discount for network referred patients (figure 9). Two centers expressed lack of interest in this concept (X-ray and Ultrasound center in Irbid and Specialty Radiology Center in Amman); the Radio-Diagnostic Consultation Center, although the market leader had reservations on the concept due to the impact such a program may have on “income” generating customers – the concern here was more that the radiologist here usually gives more than 1.5 hours to each patient and a referral program will also minimize the time provided to patients.

Figure 9: Interest of surveyed centers in providing discount for a patient referral program



The 23 centers expressing interest in the patient discount and referral program are listed in table 21.

Table 21: Centers expressing interest in providing Mammogram discount through a referral program

	Location	Comments
Amman X ray Center (مركز عمان للاشعة)	Amman West - Jabal Amman	
Jordan Center	Amman West - Jabal Amman	
Khalidi	Amman West - Jabal Amman	
Radio Diagnostic Consultation Center	Amman West - Jabal Amman	Contingent to amount of time consumed by referrals
X-ray imaging center (الاشعة التشخيصية)	Amman West - Jabal Amman	
Specialty Hospital	Amman West -Shmeisani	
Arab Medical Center	Amman West -5th circle	
Israa Hospital	Amman West - Jubeiha	
Tala Ali Hospital	Amman West- Tala Ali	
Jabal Al Zeitoun	Zarka	
Amal Hospital	Amman Central - Jabal Hussein	
Diagnostic Radiology Center (مركز الاشعة التشخيصية)	Amman Central - Jabal Hussein	
Istiklal	Amman Central - Jabal Hussein	
Madar center	Amman Central - Jabal Hussein	
Istishari Radiology center (مركز الاشعة الاستشاري)	Amman Central - Jabal Hussein	
Radiology Diagnosis Center	Amman Central - Jabal Hussein	
Ahli Hospital	Amman West- Tala Ali	
Islamic Hospital	Amman Central - Abadali	
Jameel Farraj Center	Amman East - Wehdat	
Modern Radiology Center	Amman East - Nazzal District	
Italian Hospital	Amman East - Downtown	Referrals have to be limited to a certain number
Arab X ray Center (العربي للاشعة المركز)	Irbid	
Jordan Radiology Clinic	Zarka	

Some these centers have either previously participated in a discount program with either KHCC or another party sponsoring patient referrals (Table 22) or have been approached for a discount for Breast cancer screening and diagnosis.

Table 22: Centers previously participating/ approached for a patient discount program

	Comments
X-ray imaging center (الاشعة التشخيصي)	Approached by KHCC for referrals at 22JDs
Arab Medical Center	Approached by KHCC for referrals at 22JDs - Can do MMG for lower
Khalidi	Approached by KHCC for referrals at 22JDs
Istiklal	Approached by KHCC for referrals at 22JDs
Amal Hospital	A Special Discount program by the hospital
Diagnostic Radiology Center مركز الاشعة التشخيصية	Approached by KHCC for referrals at 22JDs
Islamic Hospital	Conduct awareness lectures and provide discount vouchers for attendees
Jameel Farraj Center	Approached by Women's Union
Radiology Diagnosis Center مركز الاشعة التشخيصية	Proactively sought collaboration with some JAFPP centers for a referral discount

4.5 Assessment of Mammogram Centers by Researcher

In Jordan there are no physical standards for mammogram facilities nor are their Quality Control inspections, and there are is no reference authority to set guidelines. The lack of such hindered establishing quantifiable reference criteria by which the surveyed facilities could be evaluated. According, the researcher's assessment was based on issues that revolved around parameters that addressed basic patient needs when seeking such testing.

Accordingly, facilities were assessed on a 5 point scale addressing parameters of center design and patient comfort.

1	2	3	4	5
Very poor	Poor	Acceptable	Very Good	Model
Run down, gloomy, lacking any form of appeal and in great need of maintenance	Gloomy, in need of painting and aesthetic upgrade	Basic set up, aesthetically acceptable, good maintenance	Testing area separate, patient friendly	Testing area separate, very relaxing atmosphere
Very small area, protection questionable	Area small	Good space	Spacious, contains IEC posters	Spacious, contains IEC posters, US and MMG in adjacent private areas
Lacks any type of patient necessities	Has few patient necessities	Has basic patient necessities	Has basic patient necessities	Investment in patient necessities

The facilities were evaluated based on the following aspects:

- The design of the center is such that the clinical space is free flowing from one area to the next. Each component and area of the center is patient focused, with all staff understanding clearly and supporting that goal.
- The mammogram area is in a separate room rather than being situated with other radiology diagnostic devices
- The design of the department allows for separate areas for patient dressing booths and waiting rooms.
- Set up of mammogram area ensure privacy for the patient during testing
- The overall ambience of the testing area is refreshing and relaxing physically and psychologically for the patient
- The radiology services area is highly efficient and productive.
- A comprehensive radiology service provides additional procedures beyond screening mammography. Breast US can be performed at the same time if needed, and the patient leaves the radiology area with the results of her evaluation.
- The facility has Information education material for the patient

The most striking finding through the observation of mammogram facilities was that only few facilities recognize and invest in patient comfort and “friendliness”. Overall, radiology facilities as whole are gloomy with focus on rendering the service rather than appealing to the patient; as a whole radiology facility, the average rating of all facilities was 2.7 indicating a less than acceptable status. The waiting rooms were usually the least acceptable within radiology facilities; the average rating of waiting rooms for all facilities was 2.8 indicating an assessment of poor. None of the facilities had separate waiting rooms for mammogram patients.

As for overall the assessment of the actual mammogram area, the overall average rating was 2.9 indicating poor status. Only one facility achieved “Model” score for the mammogram area; in 9 facilities the mammogram area was rated as very good (table 23). On the opposing end of the scale, assessment of the mammogram area was rated as either poor or very poor in 8 facilities (table 24).

Ten facilities had separate mammogram testing areas (table 25); in the remaining facilities the mammogram was situated in an area with other radiology devices.

Adequate space within the mammogram area was a key short coming for almost all facilities; in most cases the area dedicated to the mammogram was not more 2X2 meters. The ambience of the mammogram area was usually depressing – where the walls were usually an opaque or gray color or in some instance peeling.

Only 3 facilities had a changing room for patients but the status of these areas was rated as very poor for all the three facilities that had such. Despite the absence of changing rooms for patients in almost all of the facilities, the majority did not provide a hanger for patients garments, or a mirror for patient to adjust themselves after the procedure.

Table 23: Facilities with “Top rating” Mammogram areas

	Rating of MMG area
Amman X ray Center (مركز عمان للاشعة)	Model
Speciality Hospital	Very Good
Khalidi	Very Good
Istiklal	Very Good
Diagnostic Radiology Center (مركز الاشعة التشخيصية)	Very Good
Italian Hospital	Very Good
Radiology Diagnosis Center	Very Good
Radio Diagnostic Consultation Center	Very Good
Amal Hospital	Very Good
Islamic Hospital	Very Good

Table 24: Facilities with “unacceptable” mammogram areas

	Rating
Mahaba Hospital	Poor
Madar	Poor
Jabal Al Zeitoun	Poor
Ibn Al Haytham	Poor
Hikmah Hospital	Poor
Speciality Center for Radiology (المركز التخصصي للاشعة)	Poor
Rosary Sisters Hospital	Very Poor
X ray and Ultrasound center (مركز الاشعة و السونار)	Very Poor

Table 25: Radiology Facilities with separate mammogram areas.

Amman X ray Center (مركز عمان للاشعة)
Khalidi
Istiklal
Italian Hospital
Radiology Diagnosis Center
Radio Diagnostic Consultation Center
Amal Hospital
Islamic Hospital
Jordan Hospital
Israa Hospital

5.0 Discussion and Conclusions

The past 2 decades have shown a clear focus on early detection of all cancers in Jordan; the emphasis is larger for early detection of breast cancer in women. Early detection rates have been associated with a clear reduction in morbidity and mortality in breast cancer.

Many efforts and initiatives have been put in action to increase the awareness on breast cancer as a whole and the benefits of early detection specifically.

This survey comes as part of efforts of PSP in this area. While the Cancer Registry provides statistics on incidence of cancers in Jordan, there are no formal studies or statistics on the market situation of the front line sector involved in early detection - mammogram facilities.

The findings of this study provide a “snapshot” of the prevailing trends, practices and screening and diagnosis approaches in mammogram facilities, as well it provides preliminary idea on the volume of patients seeking breast cancer testing whether physician or self referred.

Of greater importance is that the survey provides a comprehensive reference on private sector facilities providing mammogram testing in areas of central and northern Jordan. Results and implications of this study of the private sector coupled with that of similar studied of the governmental sector would provide a broad understanding of the situation of breast cancer screening and diagnosis in Jordan as a whole.

In this study it was found that overall there is low emphasis and interest in breast cancer testing in all facilities due to the low turn out of patients for such in these facilities. High volume is focused in one center in the private market.

The low rates of self referrals found in this study parallels findings of a Breast cancer KAP study conducted in women ages 20 and above. This low rate indicates that there is a need to focus more in campaigns and communications to ensure that women understand when and

under what circumstances they should seek a mammogram and what conditions of service delivery (model, personnel, equipment) are optimal. This information should be available to all women of applicable ages, regardless of their income category or location. Although the national screening program has been launched with full force, the turnout of the target population seems to be still very low and presenting at a progressive stage. Women presenting to mammogram facilities are reaching in the symptomatic stages where it is so in almost 90% of the cases as evident from this survey.

Since this survey did not include patients seeking/referred to KHCC, it cannot be confirmed if there is overall low turn out of patients for breast cancer screening and diagnosis. If the rate is higher at KHCC then the price factor may be a key inhibiting factor for proliferation of mammogram testing in the private sector. The average price of a package test of mammogram plus ultrasound in the private market is 60% higher than its counterpart in KHCC; only one center provide mammogram + ultrasound testing at the price level of KHCC and 3 others at a closer range, all others charge at least 30% more than KHCC.

There is little involvement of front line physicians in the referral of women for breast cancer screening and diagnosis; referral is mainly concentrated with gynecologists.

Key gaps were found with regards to a consensus on testing approaches for breast cancer screening and diagnosis, levels of technology in the testing modalities and levels of training and continuing education of the relevant staff.

There was no standard reference to age profile for mammogram vs. ultrasound testing. As well, a significant percentage of facilities mandate ultrasound testing regardless of the necessity for such referenced to outcome of mammogram result. A major obstacle in having a uniform approach is an inconsistent message on when (what age), how often and where screening mammography should be sought. There is no "voice of authority" that would provide consistent information to physicians, other health care workers or women.

The absence of digital machines in any of the centers further confirms the low focus on mammogram testing in radiology facilities in the private sectors; presence of digital screening would significantly increase the already perceived high cost of mammograms as opposed to the lower yet digital testing provided at KHCC.

The greatest gap was in the area of presence and application of quality protocols, where none of the centers had documented manuals for such.

Less than 10 centers had specifically trained personnel in mammograms and breast cancer diagnosis. To obtain quality mammograms, it is essential that a set of standards must be used that include technical, physical and staff parameters.

Due to the rapid advances which continue to be made in mammography, both film/screen and digital, staff at all levels must continuously update their skills and knowledge but the interest in a comprehensive training program was limited due to time and possibly funding restrictions if facilities were required to pay or share costs for such.

Low interest in mammogram testing was reflected in an overall poor status of mammogram facilities. Investment in upgrading facilities was contingent to an increased patient volume.

A key finding of this study was that that there was interest with the majority to provide discount for patients in a referral program. The interest in this aspect was more than in training as it was seen as an opportunity to recap on investments made in mammograms in these facilities – a discount patient is better than no patient at all.

In order to address areas of weaknesses and gaps in breast cancer screening and detection and in mammogram facilities in the private sector, there is a need to promote cooperation,

collaboration and sharing of information, promote public awareness of mammography to increase the volume of patients seeking these centers which would have a positive effect on addressing and management of problem and gap areas identified.

6.0 Recommendations

The end point of this study was to provide recommendations regarding potential facilities for mammogram training for radiologists and technicians as well as identification of potential facilities for a patient referral discount network. The potential facilities recommended for further evaluation for a referral program are listed in table 23.

The findings of this survey render as well, the need to provide some recommendations that address some gaps and problem issues and feedback on needs of the “Mammogram Sector” in the private market.

- Extensive effort needed to be done to upgrade MMG facilities to international QC/QP standards
- To achieve uniform application of standards, it is recommended that an umbrella professional body be delegated with the authority
- Building strong collaborative ties within all components involved with mammography:
 - Radiation Protection Agencies
 - Jordanian Association of Radiologists
 - various Associations of relevant Physicians & Surgeons
 - various Patient awareness and support societies
 - National Cancer Registry
- Further investigation is needed regarding need for repeat testing to identify extent of actual QA application by facilities
- Identification and choice of referral facilities should be based on both discount possibility and in-depth assessment of technical/professional capacity of facilities and personnel
- Training for Radiologists may be of more benefit if designed in the form of a CME curriculum rather than a 5 week rotation – due to time restraints and professional interests of radiologists
- Training for technicians may be of more use to facilities than that of radiologists – hospitals more likely to be able to benefit from a comprehensive training for technicians due to possibility to dispense of technicians for a certain period.

Table 26: Potential Mammogram Facilities for review for Patient Referral Network

		Comments
X-ray imaging center (الأشعة التشخيصي)	Amman West - Jabal Amman	Approached by KHCC for referrals at 22JDs
Arab Medical Center	Amman West - 5th Circle	Approached by KHCC for referrals at 22JDs - Can do MMG for lower
Khalidi	Amman West - Jabal Amman	Approached by KHCC for referrals at 22JDs
Istiklal	Amman Central - Jabal Hussein	Approached by KHCC for referrals at 22JDs
Amal Hospital	Amman Central - Jabal Hussein	Provide on occasions Special Discount program by hospital
Diagnostic Radiology Center مركز الأشعة التشخيصية	Amman Central - Abdali	NSP for referrals for 22JDs - Female Radiologist with MMG training
Islamic Hospital	Amman Central - Abdali	Conduct awareness lectures and provide vouchers for attendees and can provide discount - has trained Technician with extensive experience on MMG
Jameel Farraj Center	Amman East - Wehdat	Approached by Women's Union - only center in South East Amman
Radiology Diagnosis Center	Amman Central - Jabal Hussein	Proactively sought collaboration with some JAFPP centers - very good facility but no female technician
Modern Radiology Center	Amman East - Nazzal	
Italian Hospital	Amman Center - Down town	No technician at all
Arab X ray Center العربي للأشعة المركز	Irbid	Only acceptable MG facility in Irbid
Amman X ray Center (مركز عمان للأشعة)	Amman West - Jabal Amman	The only facility with MMG area rated as "Model" in survey
Tala Ali Hospital	Amman West - Tala Ali	Female Radiologist - very good approach and experience - lowest price in survey
Israá Hospital	Amman West - Jubeiha	Good MMG facility - interest in development

References

1. National Cancer Registry, Cancer incidence in Jordan, 2004.
2. Cancer Prevention Directorate, Knowledge, Practice, Attitude of Jordanian Women Towards Breast Cancer: A Cross-Sectional Study, 2006.

Annexes

Annex A:

- Mammogram Survey Questionnaire and Tool

PSP Mammogram Center Assessment Survey

Facility Name	
Affiliation	
Governorate	
Location	
Contact Details	<i>Telephone:</i> <i>Fax:</i> <i>Email:</i> <i>PO Box:</i>
Radiologist in Charge	
Decision Maker	

1. How long has this facility been offering Mammogram services

2. What type of Breast Cancer Screening patients do you cater to (specify percentages for each category as well) :

- Physician Referrals (%)
- Self Referrals (%)
- Other (specify) (%)

3. What are the types of Physician Referrals that you receive (specify percentages for each category as well) :

- Hospital Primary Care Physician (%)
- Private Sector Primary Care Physician (%)
- Hospital Specialist Physician (%)
- Private Sector Specialist Physician (%)
- NGO Sector Physician (%)
- MOH Health Center Physician (%)

4. Statistics and Profile of patients provided with Mammogram test during the previous month at the facility:

4a. Does the Mammogram center/department keep regular and documented statistics on the patients undergoing the test:

- Yes No

4b.

Total undergoing Mammogram in the previous month at facility	
Number – of Symptomatic patients	
Number – of Asymptomatic patients	

5a. What is the Breast Cancer Screening approach that is followed in this facility
Note ; probe on frequency of screening removed as it is not determined by radiologists

APPROACH	PROFILE OF PATIENT SCREENED	CHARGE
Mammogram Screening		
Ultrasound Screening		
Mammogram + Ultrasound Screening		

5b. Would the facility be willing to consider/provide a discount on the mammogram procedure as part of the network referral program:

Yes No Respondent cannot determine

6. Description of the Mammogram Machine present in facility

Machine brand	
Year of Manufacture	
Type (Digital or not)	

7. Does the facility have computer aided detection

Yes No

8. Quality Protocols applied/utilized by facility in the screening of breast Cancer:

8a. For processing of patients receiving mammogram

No Yes: Reference _____

8b. For staff working on mammogram

No Yes: Reference _____

8c. For the mammogram procedure

No Yes: Reference _____

8d. For the interpretation of mammogram

No Yes: Reference _____

8e. For the QC and maintenance of mammogram machine

No Yes: Reference _____

9a. Where are patients referred to upon presence of suspicious findings

Back to referring Physician

To Breast Surgeon

To Oncologist

Other (Specify) _____

For Facilities affiliated with a hospital (Question 9b - 9b):

9b. Is there a Breast Surgeon at the hospital

Yes No

9c. Is there an Oncologist at the hospital

Yes No

9d. Is there a specific Breast Health/Cancer Clinic at the hospital

Yes No

10a. What is the number of Radiologists at the facility who are responsible for Mammogram interpretation

10b. Profile of Radiologists at facility

Radiologist	Gender	Years in Profession	Years at facility	Mammogram Specific training or certification	Training - certification details
Radiologist 1					
Radiologist 2					
Radiologist 3					
Radiologist 4					
Radiologist 5					

11a. What is the number of Technicians at the facility who deal with Mammogram Screening:

11b. Profile of available technicians

Technician	Gender	Years in Profession	Years at facility	Mammogram Specific training or certification	Training - certification details
Technician 1					
Technician 2					
Technician 3					
Technician 4					
Technician 5					

12. If a skills improvement training for Mammogram technicians were offered, would you be willing to send a technician from your facility

- Yes (Go to Q#13) No (Go to Q#15)

13. Would a technician from your facility be available for 1 month (full day) training as per KHCC guidelines.

- Yes No

14. What kind of commitment can you as facility provide towards such training:

- Cost sharing
- Work commitment by trainee for facility for a certain period
- Other
- None

15. If a Radiologist specific course for interpretation of mammograms which meets the American College of Radiologist Guidelines was offered, would you be willing to take it

- Yes (go to Q#16)
- No (end survey)

16. Would you/ a radiologist from your facility be available for 5 weeks (full day) rotation at KHCC to meet ACR guidelines

- Yes
- No

17. What kind of commitment can you as facility provide towards such training (ACR):

- Cost sharing
- Work commitment by trainee for facility for a certain period
- Other
- None

END OF PART 1

**PART II:
OBSERVATIONAL ASSESSMENT OF MAMMOGRAM FACILITY**

1. Physical status and appearance of radiology facility overall

Very poor Poor Acceptable Very Good Model

Comments:

2. Physical status and appearance of patient processing area

Very poor Poor Acceptable Very Good Model

Comments:

3. Physical status and appearance of Actual mammogram area

Very poor Poor Acceptable Very Good Model

Comments:

4. Sense of Privacy provided in the mammogram area

Very poor Poor Acceptable Very Good Model

Comments:

5. Presence of a changing room for mammogram patients

Yes (go to # 6) No (go to #7)

6. Physical status and appearance of changing room

Very poor Poor Acceptable Very Good Model

Comments:

7. Presence of patient educational material on breast cancer and testing

Yes No

Comments:

Annex B:

- Private Market Mammogram Facilities Profiles

Private Sector Project for Women's Health
Assessment Survey of Private Mammogram Facilities
in Jordan, November 2007 :
Individual Profiles of Facilities Surveyed

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Mahaba Hospital – مستشفى المحبة
Governorate	Madaba
Location	Madaba Town entrance
Contact Details	<i>Telephone: 053245541-3</i> <i>PO Box: 111 Madaba</i>
Radiologist in Charge	Dr Jeryes Karadsheh

**Mahaba Hospital –
مستشفى المحبة**

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2003
Mammogram Screening Policy	Physician and Self Referrals Accepted
Mammogram Machine Brand	Philips Mammo Diagnostic
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	
Cost – Ultrasound	20JD
Cost – Mammogram + Ultrasound	35JD
Number of Patients Screened /Month	7
Main Mammogram Patient referral source	Specialists in or affiliated with the hospital
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	2
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	1
Interest in sending technicians for Mammogram training	Unknown by Respondent
Interest in taking ACR Mammogram training for Radiologists	No
Interest and possibility for participation in a discount referral program	Cannot be determined by respondent
Overall Assessment of Mammogram Facility	Poor

Comments:

- ❖ Only Mammogram facility serving Madaba Governorate – receives referrals for Mammogram testing from the surrounding MOH hospitals and centers
- ❖ Has mandatory mammogram + ultrasound package policy
- ❖ The decision maker is Dr Amjad Zawaideh – Hospital Director

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	X ray Imaging Center مركز الاشعة التخصصي
Governorate	Amman
Location	Jabal Amman – 4 th Circle Ibn Khaldoun St. #20 (Next to Pharmacy 1)
Contact Details	<i>Telephone: 4649177</i> <i>Fax: 4619177</i> <i>PO Box: 5340 – Amman</i>
Radiologist in Charge	Dr Adnan Ishac Shinacko

X ray Imaging Center
مركز الأشعة التخصصي

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	1985
Mammogram Screening Policy	Physician and Self Referrals Accepted
Mammogram Machine Brand	Philips
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	30
Cost – Ultrasound	20
Cost – Mammogram + Ultrasound	50
Number of Patients Screened /Month	5
Main Mammogram Patient referral source	Specialists - Private Sector
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	0
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	0
Number of male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Not Applicable
Interest in taking ACR Mammogram training for Radiologists	Yes
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Acceptable

Comments:

- ❖ Previously approached by KHCC for Mammogram discount at 22 JD and accepted but did not receive any formal feedback

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Jabal Zeitoun Hospital مستشفى جبل الزيتون
Governorate	Zarka
Location	Zarka – Amman Highway
Contact Details	<i>Telephone: 053655555</i> <i>Fax: 053655550</i> <i>PO Box: 403 - Zarka</i>
Radiologist in Charge	Dr Shihadeh Al Shiekh

Jabal Zeitoun Hospital
مستشفى جبل الزيتون

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2002
Mammogram Screening Policy	Strictly Physician Referrals
Mammogram Machine Brand	Philips
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	40
Number of Patients Screened /Month	30
Main Mammogram Patient referral source	Specialists – Private sector
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	2
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	2
Number of male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Yes
Interest in taking ACR Mammogram training for Radiologists	Yes
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Poor

Comments:

- ❖ One of the two private hospitals in Zarka providing MMG testing
- ❖ The Radiologist in-charge is the owner and of Madar Radiology Center in Jabal Hussein

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Hikmah Hospital مستشفى الحكمة
Governorate	Zarka
Location	Zarka – Amman Highway
Contact Details	<i>Telephone: 053990990</i> <i>Fax: 053931100</i> <i>PO Box: 403 - Zarka</i>
Radiologist in Charge	Dr Akram Al Khalil

Hikmah Hospital

مستشفى الحكمة

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2002
Mammogram Screening Policy	Strictly Physician Referrals
Mammogram Machine Brand	Philips
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	40*
Number of Patients Screened /Month	5
Main Mammogram Patient referral source	Specialists – Private sector
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	1
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	1
Number of male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Yes
Interest in taking ACR Mammogram training for Radiologists	NO
Interest and possibility for participation in a discount referral program	Cannot be Determined by Respondent
Overall Assessment of Mammogram Facility	Very Poor

Comments:

- ❖ Has a mandatory mammogram + Ultrasound testing package policy
- ❖ Has separate cost for Bilateral Mammogram Testing –
 - ↳ Cost for Bilateral Mammogram + Ultrasound is 40 JDs
 - ↳ Cost for Bilateral Mammogram + Ultrasound is 25 JDs

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Specialty Hospital المستشفى التخصصي
Governorate	Amman
Location	
Contact Details	<i>Telephone: 5001111</i> <i>Fax: 56997425</i> <i>Email: info@specialty-hospital.com</i> <i>PO Box: 930186 - Amman</i>
Radiologist in Charge	Dr Kamal Al Sha'alan

Specialty Hospital
المستشفى التخصصي

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	1999
Mammogram Screening Policy	Physician and Self Referrals Accepted
Mammogram Machine Brand	PlanMed Sophie
Mammogram Machine Type	Non Digital (Digital Cassettes)
Availability of Computer Aided Detection	No
Cost – Mammogram Test	35
Cost – Ultrasound	30
Cost – Mammogram + Ultrasound	60
Number of Patients Screened /Month	25
Main Mammogram Patient referral source	Specialists – Hospital
Number of Radiologists interpreting Mammograms	3
Number of Trained/Certified Radiologists interpreting Mammograms	1 (Not full time – has a clinic outside hospital)
Total Number of Technicians handling Mammogram Tests	2
Number of Trained/MMG Certified Technicians handling Mammograms	1 (female – trained at KHCC 6 credit hours and 2 weeks rotation at RMS)
Number of Female Technicians handling Mammogram Tests	2
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Yes
Interest in taking ACR Mammogram training for Radiologists	Yes
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Very Good

Comments:

- ❖ Person responsible for evaluating training and discount programs is Dr Riyad Sharqawi (Medical Administration Department)
- ❖ The trained radiologist is Dr Wardshan Abbasi who also run the Diagnostic Radiology Center
- ❖ Facility receives a high load of non Jordanian patients
- ❖ May consider some form of commitment for sending staff to a mammogram training program

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Arab Medical Center المركز العربي الطبي
Governorate	Amman
Location	Fifth Circle
Contact Details	<i>Telephone: 5921199</i> <i>Fax: 5921282</i> <i>Email: medical@amc-hospital.com</i> <i>PO Box: 3128- Amman 11181</i>
Radiologist in Charge	Dr Ahmad Helaylah

Arab Medical Center
المركز العربي الطبي

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	1999
Mammogram Screening Policy	Physician and Self Referrals Accepted
Mammogram Machine Brand	Siemens – CR Microprocessor
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	40
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	65
Number of Patients Screened /Month	40
Main Mammogram Patient referral source	Specialists – Affiliated with Hospital
Number of Radiologists interpreting Mammograms	2
Number of Trained/Certified Radiologists interpreting Mammograms	1 – Austria /1998
Total Number of Technicians handling Mammogram Tests	2
Number of Trained/MMG Certified Technicians handling Mammograms	1 (female – trained at KHCC /1998 – course for Axilla Identification)
Number of Female Technicians handling Mammogram Tests	2
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Yes
Interest in taking ACR Mammogram training for Radiologists	Yes
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Acceptable

Comments:

- ❖ The physician trained in Mammogram is Dr Sameer Kalandar (Iraqi)
- ❖ The only mammogram facility to have both a trained radiologist and a trained technician in mammogram and breast cancer diagnosis
- ❖ The facility has an Easy PAX Mammogram system
- ❖ Facility was previously approached for patient discount referral by KHCC at 22 JD – accepted but no follow through from KHCC
- ❖ Indicated possibility of conducting mammogram for less than 22 JD for a referral program

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Radiology Diagnosis Center مركز الاشعة التشخيصي
Governorate	Amman
Location	Jabal Hussein – Firas Circle Basma Complex
Contact Details	<i>Telephone: 4649880</i> <i>Fax: 4649881</i> <i>PO Box: 923374- Amman 11192</i>
Radiologist in Charge	Dr Munir Khatib

Radiology Diagnosis Center
مركز الأشعة التشخيصي

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	1993
Mammogram Screening Policy	Physician and Self Referrals Accepted
Mammogram Machine Brand	Continental – MAM /CP II
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	30
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	55
Number of Patients Screened /Month	15
Main Mammogram Patient referral source	Specialists – Hospitals
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	0
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	0
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Not applicable
Interest in taking ACR Mammogram training for Radiologists	Contingent to timing and Content
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Very good

Comments:

- ❖ The Radiologist in charge is only available either at 12:30 or at 6:30; the Radiologist is also in charge at Philadelphia Hospital, Rahma Hospital and Mauwasat Hospital
- ❖ The facility has a male technician who all performs other radiology test provided by the center except for mammogram. The Secretary was trained by the physician to conduct the mammogram.
- ❖ The radiologist has proactively approached some JAFPP clinics for a discounted referral for breast cancer screening and diagnosis; provide mammogram + ultrasound referrals for these patients at 30JDs

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Istishari Radiology Center مركز الاشعة الاستشاري
Governorate	Amman
Location	Jabal Hussein – Razi Street Sammour complex
Contact Details	<i>Telephone: 5656556</i>
Radiologist in Charge	Dr Ziyad Suwwan

Istishari Radiology Center
مركز الأشعة الاستشاري

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2002
Mammogram Screening Policy	Physician and Self Referrals Accepted
Mammogram Machine Brand	Fisher
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	30
Cost – Ultrasound	30
Cost – Mammogram + Ultrasound	40
Number of Patients Screened /Month	12
Main Mammogram Patient referral source	Specialists Private Sector
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	2
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	2
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Depending on time
Interest in taking ACR Mammogram training for Radiologists	Contingent to timing and Content
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Acceptable

Comments:

- ❖ The Radiologist also oversees cases referred for interpretation from Ahli Hospital

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Specialty Center for Radiology المركز التخصصي للاشعة
Governorate	Amman
Location	Jabal Hussein – Khalid Bin Waleed Street Adel Al Qasem complex
Contact Details	<i>Telephone: 5621535</i>
Radiologist in Charge	Dr Taha Shihab

Specialty Center for Radiology
المركز التخصصي للأشعة

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	1993
Mammogram Screening Policy	Physician and Self Referrals Accepted
Mammogram Machine Brand	Siemens
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	30
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	40
Number of Patients Screened /Month	5
Main Mammogram Patient referral source	Specialists Private Sector
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	0
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	0
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Not Applicable
Interest in taking ACR Mammogram training for Radiologists	No
Interest and possibility for participation in a discount referral program	Cannot at this time
Overall Assessment of Mammogram Facility	Poor

Comments:

- ❖ The Radiologist is also a Radiotherapist
- ❖ Mammogram machine currently out of order
- ❖ When a mammogram is requested– the secretary conducted
- ❖ Maintenance of machine depends on receiving commitment for a steady flow of patients

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Ibn Al Haytham Hospital مستشفى ابن الهيثم
Governorate	Amman
Location	Madina Munowara St.
Contact Details	<i>Telephone: 5516808</i> <i>Fax: 5516823</i> <i>Email: ihh_96@wanadoo.com.jo</i> <i>PO Box: 940614- Amman 11194</i>
Radiologist in Charge	Dr Sahar Shamaá

Ibn Al Haytham Hospital

مستشفى ابن الهيثم

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	1996
Mammogram Screening Policy	Physician and Self Referrals Accepted
Mammogram Machine Brand	Siemens
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	30
Cost – Ultrasound	30
Cost – Mammogram + Ultrasound	50
Number of Patients Screened /Month	20
Main Mammogram Patient referral source	Specialists Private Sector and Hospital Affiliated Specialists
Number of Radiologists interpreting Mammograms	2
Number of Trained/Certified Radiologists interpreting Mammograms	1 (Female – U/S rotation at AUB – Beirut in 2002)
Total Number of Technicians handling Mammogram Tests	2
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	2
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Yes
Interest in taking ACR Mammogram training for Radiologists	Yes
Interest and possibility for participation in a discount referral program	Cannot be determined by respondent
Overall Assessment of Mammogram Facility	Poor

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Radio-Diagnostic Consultation Center المركز الاستشاري التشخيصي الشعاعي
Governorate	Amman
Location	Jabal Amman – Ben Khaldoun St (4th Circle) Zahran Medical Complex
Contact Details	<i>Telefax: 46414146</i> <i>PO Box: 135- Amman 11731</i>
Radiologist in Charge	Dr Nuwwar Fariz

Radio-Diagnostic Consultation Center

المركز الاستشاري التشخيصي الشعاعي

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	1995
Mammogram Screening Policy	Physician and Self Referrals Accepted
Mammogram Machine Brand	Siemens
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	
Cost – Ultrasound	30
Cost – Mammogram + Ultrasound	60
Number of Patients Screened /Month	180
Main Mammogram Patient referral source	Specialists - Private Sector
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	1 (USA – 1995/2003 – Breast imaging courses with ACR/RSNA)
Total Number of Technicians handling Mammogram Tests	2
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	2
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Needs further information
Interest in taking ACR Mammogram training for Radiologists	Depending on content
Interest and possibility for participation in a discount referral program	Needs further information
Overall Assessment of Mammogram Facility	Very Good

Comments:

- ❖ Market leader in volume of mammogram patients
- ❖ Academic and Technical Reference in market
- ❖ Mandatory mammogram + ultrasound package testing policy
- ❖ One of the two private centers run by female radiologist
- ❖ Participation in a referral network contingent to certain conditions
- ❖ Not so keen on the concept of training for technicians at KHCC

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Amal Maternity Hospital مستشفى الامل للتوليد
Governorate	Amman
Location	Jabal Hussein
Contact Details	<i>Telephone: 5607155</i> <i>Fax: 5607283</i> <i>Email: alamal@nets.com.jo</i> <i>PO Box: 921988- Amman</i>
Radiologist in Charge	Dr Raed Attal

Amal Maternity Hospital

مستشفى الامل للتوليد

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2004
Mammogram Screening Policy	Physician and Self Referrals Accepted
Mammogram Machine Brand	Giotto
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	40
Cost – Ultrasound	30
Cost – Mammogram + Ultrasound	50
Number of Patients Screened /Month	60
Main Mammogram Patient referral source	Specialists - Private Sector and Hospital
Number of Radiologists interpreting Mammograms	2
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	2
Number of Trained/MMG Certified Technicians handling Mammograms	1 (female – training at Princess Basma Hospital)
Number of Female Technicians handling Mammogram Tests	2
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Needs further information
Interest in taking ACR Mammogram training for Radiologists	Yes
Interest and possibility for participation in a discount referral program	Most likely – respondent not decision maker
Overall Assessment of Mammogram Facility	Very Good

Comments:

- ❖ Ranks number 2 in volume of mammogram patients amongst hospitals
- ❖ One of the radiologists is part time
- ❖ Hospital holds discounts programs
- ❖ Gynecologist – Dr Mahmoud Al Taher performs Breast Surgery for certain cases

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Israa Hospital مستشفى الاسراء
Governorate	Amman
Location	Jubeiha Queen Rania Al Abdallah Street Opposite Jordian University Mosque
Contact Details	<i>Telephone: 530 0300</i> <i>Fax: 534 7888</i> <i>PO Box: 927096- Amman 11190</i>
Radiologist in Charge	Dr Haytham Al Azzem

Israa Hospital

مستشفى الاسراء

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2006
Mammogram Screening Policy	Physician and Self Referrals Accepted
Mammogram Machine Brand	Hologic
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	30
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	55
Number of Patients Screened /Month	15
Main Mammogram Patient referral source	Specialists - Private Sector and Hospital
Number of Radiologists interpreting Mammograms	4
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	2
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	2
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Yes
Interest in taking ACR Mammogram training for Radiologists	Yes
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Acceptable

Comments:

- ❖ Currently working on preparing a Quality Protocol Manual for Breast Cancer Screening and Diagnosis – if completed would become only facility with a full documented Quality Protocol
- ❖ The stated prices are rack prices – all patients receive 10% discount on the prices of tests procedures and lab work
- ❖ Previously approached and accepted to work with KHCC for a discount program but no follow through from KHCC

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Al Ahli Hospital مستشفى الاهلي
Governorate	Amman
Location	Abdali
Contact Details	<i>Telephone: 5664164-8</i> <i>Fax: 5603948</i> <i>PO Box: 1596- Amman 11118</i>
Radiologist in Charge	Dr Ziyad Suwwan

Al Ahli Hospital
مستشفى الاهلي

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2006
Mammogram Screening Policy	Physician and Self Referrals Accepted
Mammogram Machine Brand	Philips
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	30
Cost – Ultrasound	
Cost – Mammogram + Ultrasound	4
Number of Patients Screened /Month	15
Main Mammogram Patient referral source	Hospital Specialist
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	1
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	0
Number of Male Technicians handling Mammogram Tests	1
Interest in sending technicians for Mammogram training	Yes
Interest in taking ACR Mammogram training for Radiologists	Not applicable
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Poor

Comments:

- ❖ Do not have a resident radiologist – technician performs mammogram and then end report for interpretation to Dr Ziyad Suwwan at Istishari Radiology Center
- ❖ Do not conduct ultrasound – if needed conducted at Istishari radiology Center
- ❖ Decision maker is Hospital owner – Dr Ibrahim Outoum

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Amman X- ray Center مركز عمان للاشعة
Governorate	Amman
Location	Jabal Amman – 4 th Circle Ben Khaldoun Street – next to Zahran Labs
Contact Details	<i>Telephone: 4643666</i> <i>PO Box: 5364- Amman 11131</i>
Radiologist in Charge	Dr Majed Ghousheh

Amman X- ray Center
مركز عمان للاشعة

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2004
Mammogram Screening Policy	Prefer Physician Referrals
Mammogram Machine Brand	Philips
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	40
Cost – Ultrasound	20
Cost – Mammogram + Ultrasound	60
Number of Patients Screened /Month	50
Main Mammogram Patient referral source	Specialists – Private Sector
Number of Radiologists interpreting Mammograms	2
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	1 – non resident called on case to case basis
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	1
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Not applicable
Interest in taking ACR Mammogram training for Radiologists	Yes
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Model

Comments:

- ❖ The mammogram area is the best area within the entire facility
- ❖ Only facility with “Model” mammogram area
- ❖ Dr Majed Ghousheh of the European Society for Breast Cancer Imaging and The Mediterranean Task Force for Cancer Prevention
- ❖ The facility applies a no formal Quality Protocol based on European Society of Radiology
- ❖ Currently the bulk of mammogram patients are Iraqis

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Italian Hospital المستشفى الايطالي
Governorate	Amman
Location	Downtown – Mahajereen District
Contact Details	<i>Telephone: 4777101</i> <i>PO Box: 815420- Amman 11180</i>
Radiologist in Charge	Dr Hazem Qusos

Italian Hospital
المستشفى الايطالي

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	1993
Mammogram Screening Policy	Accept Physician and Self referrals
Mammogram Machine Brand	IMS
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	35
Number of Patients Screened /Month	22
Main Mammogram Patient referral source	Specialists – Hospital
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	0
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	0
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Not applicable
Interest in taking ACR Mammogram training for Radiologists	No
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Very Good

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Tala Ali Hospital مستشفى تلاع العلي
Governorate	Amman
Location	Tala Ali
Contact Details	<i>Telephone: 5347175</i>
Radiologist in Charge	Dr Shammam Y. Mohamed

Tala Ali Hospital
مستشفى تلاع العلي

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2007
Mammogram Screening Policy	Accepted Physician and Self Referrals
Mammogram Machine Brand	PlanMed
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	30
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	35
Number of Patients Screened /Month	8
Main Mammogram Patient referral source	Specialists – Hospital
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	0
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	1
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Not applicable
Interest in taking ACR Mammogram training for Radiologists	Yes
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Acceptable

Comments:

- ❖ The Hospital recently acquired mammogram – 4 months ago
- ❖ The facility has a male technician who performs all radiology tests except mammogram which is performed by the Radiologist (female)
- ❖ The radiologist performs clinical breast examination for all patients presenting for mammogram
- ❖ Decision maker is Dr Yousef Khasawneh
- ❖ The main referring physician is Dr Kamilia Khaswneh

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Islamic Hospital المستشفى الإسلامي
Governorate	Amman
Location	Abdali
Contact Details	<i>Telephone: 5680127</i> <i>Fax: 5661773</i> <i>Email: info@islamic-hospital.org</i>
Radiologist in Charge	Dr Saleh Al Saheb

Islamic Hospital
المستشفى الاسلامي

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	1992
Mammogram Screening Policy	Accepted Physician and Self Referrals
Mammogram Machine Brand	Bennett
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	30
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	40
Number of Patients Screened /Month	75
Main Mammogram Patient referral source	Specialists – Hospital and Private Sector
Number of Radiologists interpreting Mammograms	4
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	6
Number of Trained/MMG Certified Technicians handling Mammograms	1 (female; KHCC (2005) /JUH (1992)
Number of Female Technicians handling Mammogram Tests	6
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Yes
Interest in taking ACR Mammogram training for Radiologists	Yes
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Very Good

Comments:

- ❖ Radiologists and technicians very knowledgeable and experience in breast cancer screening and diagnosis
- ❖ Hospital frequently conducts awareness lectures for various women's health topics for the public and provide attendees with discount vouchers for breast cancer screening
- ❖ In Hospital Breast Surgeon – Dr Basheer Bani Mustafa

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Khalidi Medical Center مركز الخالدي الطبي
Governorate	Amman
Location	Jabal Amman – 4 th Circle Ben Khaldoun Street
Contact Details	<i>Telephone: 464 4281</i> <i>Fax: 461 6081</i>
Radiologist in Charge	Dr Alif Al Saleh

Khalidi Medical Center
مركز الخالدي الطبي

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	1996
Mammogram Screening Policy	Accepts Physician and Self Referrals
Mammogram Machine Brand	GE Senograph 800
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	50
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	70
Number of Patients Screened /Month	45
Main Mammogram Patient referral source	Specialists – Private Sector
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	2
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	2
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Yes
Interest in taking ACR Mammogram training for Radiologists	Yes
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Very Good

Comments:

- ❖ The radiologist responsible for interpretation and mammogram results reports is Dr Saleh Al Aloull
- ❖ The highest charging facility for breast cancer imaging
- ❖ Hospital previously participated with KHCC in a discount program – very interested in a referral discount program but fear that it will be unorganized as was the KHCC one
- ❖ The only facility that has electronic archiving system for images

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Jordan Hospital مستشفى الاردن
Governorate	Amman
Location	Queen Nour Street
Contact Details	<i>Telephone: 5608080</i> <i>Fax: 5607575</i> <i>Email: johosp@jordan-hospital.com</i> <i>PO Box: 520248 Amman 11152</i>
Radiologist in Charge	Dr Shouman Ahmad

Jordan Hospital

مستشفى الاردن

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	1996
Mammogram Screening Policy	Accepts Physician and Self Referrals
Mammogram Machine Brand	General Electric
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	35
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	60
Number of Patients Screened /Month	30
Main Mammogram Patient referral source	Specialists – Private Sector and Hospital
Number of Radiologists interpreting Mammograms	2
Number of Trained/Certified Radiologists interpreting Mammograms	1 (Germany – 1985)
Total Number of Technicians handling Mammogram Tests	6
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	2
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Yes
Interest in taking ACR Mammogram training for Radiologists	Yes
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Acceptable

Comments:

- ❖ Complain of very high turn over of technicians
- ❖ Technicians complain about the mammogram area – do not feel that there is adequate radiation protection

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Jordan Radiology Center مركز الاردن للاشعة
Governorate	Amman
Location	Jabal Amman – 4 th Circle May Ziyadeh St. Next to Dr Farid Risheq Nuclear Medicine Center
Contact Details	<i>Telephone: 4639997</i>
Radiologist in Charge	Dr Mazen Halaseh

Jordan Radiology Center
مركز الاردن للاشعة

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2000
Mammogram Screening Policy	Accepts physician and self referrals
Mammogram Machine Brand	Philips
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	50
Number of Patients Screened /Month	15
Main Mammogram Patient referral source	Specialists – Private Sector
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	1 (England – 1990's)
Total Number of Technicians handling Mammogram Tests	1
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	1
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Yes
Interest in taking ACR Mammogram training for Radiologists	Depending on time and content
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Acceptable

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Diagnostic Radiology Center مركز الاشعة التشخيصية
Governorate	Amman
Location	Abdali Shuqair Medical complex
Contact Details	<i>Telephone: 5662066</i> <i>Email: awadshan@hotmail.com</i> <i>PO Box: 961574 Amman 11196</i>
Radiologist in Charge	Dr Wardshan Abbasi

Diagnostic Radiology Center
مركز الأشعة التشخيصية

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2004
Mammogram Screening Policy	Only accepts self referrals if over 40 yrs of age
Mammogram Machine Brand	PlanMed
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	30
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	40
Number of Patients Screened /Month	35
Main Mammogram Patient referral source	Specialists – Private Sector and JAFPP referrals
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	1 (Female; Cleveland – 1 month training/2002
Total Number of Technicians handling Mammogram Tests	0
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	0
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Not applicable
Interest in taking ACR Mammogram training for Radiologists	Yes
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Very Good

Comments:

- ❖ One of two private mammogram facilities overseen by a female radiologist
- ❖ Works mornings at the Specialty hospital Radiology Department specifically for breast cancer imaging
- ❖ Ranks third amongst private facilities inn volume of breast cancer imaging patients
- ❖ Previously approached by KHCC for discount and accepted
- ❖ Interest in a rotation training program but length less than 5 weeks

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Jubilee Radiology Center مركز اليوبيل للاشعة
Governorate	Amman
Location	Jabal Amman – 4 th Circle Raja Medical complex
Contact Details	<i>Telephone: 4610466</i>
Radiologist in Charge	Dr Khristo Zeidan

Jubilee Radiology Center
مركز اليوبيل للاشعة

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2000
Mammogram Screening Policy	Accepts physician and self referrals
Mammogram Machine Brand	Acoma – HF 47
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	
Cost – Ultrasound	30
Cost – Mammogram + Ultrasound	50
Number of Patients Screened /Month	10
Main Mammogram Patient referral source	Specialists – Private Sector
Number of Radiologists interpreting Mammograms	2
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	1
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	0
Number of Male Technicians handling Mammogram Tests	1
Interest in sending technicians for Mammogram training	No
Interest in taking ACR Mammogram training for Radiologists	Depending on time and content
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Acceptable

Comments:

- ❖ Has a mandatory mammogram + ultrasound package testing policy
- ❖ Has one part – time radiologist as well as one full time

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Istiklal Hospital مستشفى الاستقلال
Governorate	Amman
Location	Arajan
Contact Details	<i>Telephone: 5652710</i> <i>Fax: 5652600</i>
Radiologist in Charge	Dr Yousef Nassar

Istiklal Hospital

مستشفى الاستقلال

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2006
Mammogram Screening Policy	Prefer physician Referrals
Mammogram Machine Brand	PlanMed
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	35 (Bilateral)
Cost – Ultrasound	35
Cost – Mammogram + Ultrasound	58 (Bilateral)
Number of Patients Screened /Month	17
Main Mammogram Patient referral source	Specialists – Hospital affiliated
Number of Radiologists interpreting Mammograms	2
Number of Trained/Certified Radiologists interpreting Mammograms	1 (Male – USA /1990's)
Total Number of Technicians handling Mammogram Tests	2
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	2
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Yes
Interest in taking ACR Mammogram training for Radiologists	Depending on time and content
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Very Good

Comments:

- ❖ Has different pricing for unilateral and bilateral mammogram imaging
 - ↳ Unilateral Mammogram – 23 JDs
 - ↳ Unilateral Mammogram + Ultrasound Package – 42 JD

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Madar Radiology Center عيادة المدار للاشعة التشخيصية
Governorate	Amman
Location	Jabal Hussein Aqad Complex
Contact Details	<i>Telephone: 5688767</i> <i>Fax: 5688769</i>
Radiologist in Charge	Dr Shahadeh Al Sheikh

Madar Radiology Center
عيادة المدار للاشعة التشخيصية

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2006
Mammogram Screening Policy	Strictly Physician Referrals
Mammogram Machine Brand	Philips
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	40
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	60
Number of Patients Screened /Month	10
Main Mammogram Patient referral source	Specialists – Private Sector
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	0
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Not applicable
Interest in taking ACR Mammogram training for Radiologists	Depending on time and content
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Poor

Comments:

- ❖ Radiologist does not oversee clinic – works at Jabal Zeitoun Hospital
- ❖ Has one male radiologist but not responsible for mammogram testing – breast imaging done nurse who works at the clinic

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Philadelphia Hospital مستشفى فيلادلفيا
Governorate	Amman
Location	Prince Rashed District
Contact Details	<i>Telephone: 5854801</i> <i>Fax: 5854819</i>
Radiologist in Charge	Dr Munir Khatib

Philadelphia Hospital

مستشفى فيلادلفيا

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2005
Mammogram Screening Policy	Strictly Physician Referrals
Mammogram Machine Brand	Lorad
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	30
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	55
Number of Patients Screened /Month	1
Main Mammogram Patient referral source	Specialists – Hospital
Number of Radiologists interpreting Mammograms	1 –non resident
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	1
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	1
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	No
Interest in taking ACR Mammogram training for Radiologists	No
Interest and possibility for participation in a discount referral program	Cannot be determined by respondent
Overall Assessment of Mammogram Facility	Very Poor

Comments:

- ❖ Radiologist attends radiology clinic on a case per case basis

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Farraj Radiology Center مركز فراج للاشعة
Governorate	Amman
Location	Madaba Street – Qudus Complex
Contact Details	<i>Telephone: 47556301</i>
Radiologist in Charge	Dr Jameel Farraj

Farraj Radiology Center
مركز فراج للاشعة

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	1993
Mammogram Screening Policy	Accepts physician and self referrals
Mammogram Machine Brand	SGR
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	40
Number of Patients Screened /Month	15
Main Mammogram Patient referral source	Specialists – Private Sector and some GPs as well as JAFPP
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	0
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	0
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	No
Interest in taking ACR Mammogram training for Radiologists	Depending on time and content
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Acceptable

Comments:

- ❖ Approached by Women’s Union for a referral discount program
- ❖ Has a female technician who performs all radiology tests except for mammogram which is performed by radiologist
- ❖ Conduct clinical breast examination prior to breast imaging
- ❖ Has mandatory mammogram + ultrasound package testing policy
- ❖ Only private mammogram facility serving the southern Amman area

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Modern Radiology Center مركز الأشعة الحديث
Governorate	Amman
Location	Nazzal – Qudus Complex
Contact Details	<i>Telephone: 0795238085</i>
Radiologist in Charge	Dr Mahmoud Faraj

Modern Radiology Center

مركز الأشعة الحديث

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2003
Mammogram Screening Policy	Accepts physician and self referrals
Mammogram Machine Brand	Philips
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	
Cost – Ultrasound	30
Cost – Mammogram + Ultrasound	25
Number of Patients Screened /Month	10
Main Mammogram Patient referral source	Specialists – Private Sector and some GPs as well as JAFPP
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	0
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	1 – non resident/ on case per case basis
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	No
Interest in taking ACR Mammogram training for Radiologists	Depending on time and cotent
Interest and possibility for participation in a discount referral program	Yes
Overall Assesment of Mammogram Facility	Acceptable

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Jordan Radiology Clinic عيادات الاردن للاشعة
Governorate	Zarka
Location	Saáda Street
Contact Details	<i>Telephone: 053974777</i>
Radiologist in Charge	Dr Saleem Mousa

Jordan Radiology Clinic

عيادات الاردن للاشعة

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2006
Mammogram Screening Policy	Accepts physician and self referrals
Mammogram Machine Brand	Philips
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	
Cost – Ultrasound	15
Cost – Mammogram + Ultrasound	30
Number of Patients Screened /Month	30
Main Mammogram Patient referral source	Specialists – Private Sector and some GPs as well some from MOH
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	1
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	1
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	No
Interest in taking ACR Mammogram training for Radiologists	Depending on time and content
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Acceptable

Comments:

- ❖ Has mandatory mammogram + Ultrasound testing policy

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Arab Radiology Clinic المركز العربي للاشعة
Governorate	Irbid
Location	Wasfi Tal St (Cinema St) Al Fanek Complex
Contact Details	<i>Telephone: 027258333</i>
Radiologist in Charge	Dr Mahmoud Shriedeh

Arab Radiology Clinic
المركز العربي للاشعة

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	2001
Mammogram Screening Policy	Prefer Physician Referrals
Mammogram Machine Brand	Philips
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	30
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	50
Number of Patients Screened /Month	5
Main Mammogram Patient referral source	Specialists – Private Sector and JAFPP as well some from MOH
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	1 (USA – 1990's)
Total Number of Technicians handling Mammogram Tests	0
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	0
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Not Applicable
Interest in taking ACR Mammogram training for Radiologists	No
Interest and possibility for participation in a discount referral program	Yes
Overall Assessment of Mammogram Facility	Acceptable

Comments:

- ❖ The only decent mammogram facility in Irbid

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	X-ray and Ultrasound Center مركز الاشعة و السونار
Governorate	Irbid
Location	Eidoun Street
Contact Details	<i>Telephone: 027275870</i>
Radiologist in Charge	Dr Yousef Warddat

X-ray and Ultrasound Center

مركز الأشعة و السونار

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	1985
Mammogram Screening Policy	Physician and Self Referrals
Mammogram Machine Brand	Shimadzu
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	30
Cost – Ultrasound	25
Cost – Mammogram + Ultrasound	55
Number of Patients Screened /Month	5
Main Mammogram Patient referral source	Hospital Specialist
Number of Radiologists interpreting Mammograms	1
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	0
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	0
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Not Applicable
Interest in taking ACR Mammogram training for Radiologists	No
Interest and possibility for participation in a discount referral program	No
Overall Assessment of Mammogram Facility	Very Poor

Comments:

- ❖ Dr covers Rosary Sisters Hospital for imaging on call basis

PSP Mammogram Center Assessment
Mammogram Center Profile

Facility Name	Rosary Sisters Hospital مستشفى راهبات الوردية
Governorate	Irbid
Location	Road off Irbid – Huson Highway
Contact Details	<i>Telephone: 027102011</i>
Radiologist in Charge	Dr Yousef Warddat

Rosary Sisters Hospital
مستشفى راهبات الوردية

Profile Item	Detail
Date of Initiation of Mammogram Screening Services	1990
Mammogram Screening Policy	Physician and Self Referrals
Mammogram Machine Brand	Villa
Mammogram Machine Type	Non Digital
Availability of Computer Aided Detection	No
Cost – Mammogram Test	30
Cost – Ultrasound	20
Cost – Mammogram + Ultrasound	40
Number of Patients Screened /Month	8
Main Mammogram Patient referral source	Hospital Specialist
Number of Radiologists interpreting Mammograms	1 – non resident
Number of Trained/Certified Radiologists interpreting Mammograms	0
Total Number of Technicians handling Mammogram Tests	0
Number of Trained/MMG Certified Technicians handling Mammograms	0
Number of Female Technicians handling Mammogram Tests	0
Number of Male Technicians handling Mammogram Tests	0
Interest in sending technicians for Mammogram training	Not Applicable
Interest in taking ACR Mammogram training for Radiologists	No
Interest and possibility for participation in a discount referral program	No
Overall Assessment of Mammogram Facility	Very Poor

Comments:

- ❖ Mainly a maternity Hospital