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Incidence of Breast Cancer in Women with Breast Mass in Aldiwanyia City.

A Thesis

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22 / 7 /2018

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Dedication

To those who always support me . . . .

My sweets family

My best friends Sura.

With my love & gratitude

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Abstract

Background:

Breast carcinoma is the most common cancer in females worldwide. It is reported around 1/3rd of the recorded cancers in Iraqi females , which give indication that it is serious cancer in females. Lacking of awareness programs in undeveloped countries and decreasing the capacity for early diagnosis and treatment ,both causes high numbers of women presenting with breast cancer in late stages .

Objective of the study:

1-To determine the incidence rate of breast cancer in women presented with breast masses in Aldiwanyia city.

2- Approximate the types , stages, grades , age of presentation and their comparison with other Iraq cities.

3-To do compares with Arab countries and the world and to know where we are.

Patients and Methods:

Across sectional study was passed with 182 females presented with breast mass, present in Aldiwanyia city .History and many evaluation like : Breast examination , mammography breast biopsy were performed to patients.

Abstract

Results

The incidence rate of malignant lesions was calculated : 32(17.6%) of 182 patients,while benign lesions was: 150(82.4%) of 182 patients ,which include:68(37.4%) were fibroadenoma; 21(11.5%) were fibrocystic disease;44(24.2%) were inflammatory lesions that including (abcess, duct-ectasia ,antiboma and mastitis) ,while 17 (9.3%) were simple cysts. Approximately 49.78 years ,was the mean age of women with breast carcinoma .

Conclusion

The incidence rate of breast cancer is about 17.6% in Aldiwanyia, and mostly in females with age group 50years and older.It is slightly higher in postmenopausal women. It is most commen in patients with low education levels, majority of women with breast mass do not know what is breast self examination, and how to do it. There is highly significant association between breast cancer and increase the age of patients.

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List of Abbreviations

List of Abbreviations

Abbreviation	Meaning
AIDS	Acquired immune deficiency syndrome
AJCC	American joint committee on cancer
ANDI	Aberrations of normal differentiation and involution
ASR	Age Standardized Rate
BC	Breast cancer
BIRADS	Breast imaging reporting and database system
BRCA	Breast cancer gene
BSE	Breast self examination
CBE	Clinical breast examination
CIS	Carcinoma in situ
CNB	Core needle biopsy
FDA	Food and drug administration
FNAC	Fine needle aspiration cytology
HER2	Human epidermal growth factor receptor 2
HIV	Human immunodeficiency virus
HRT	Hormone replacement therapy
IARC	International Agency for Cancer Research
IBC	Invasive breast cancer
IUCD	Intra uterine contraceptive device
NCCN	National comprehensive cancer network
OCP	Oral contraceptive pills
USPSTF	United states preventive service task force

1.1 Introduction :-

Breast Cancer (BC) is the most understood sickness in women around the world [1] , represented to around 23 % of the collection cancer cases ,and 14 % of cancer death.[2] It is currently the most widely recognized malignancy in female both in developed and developing countries .[3] It is additionally the most vital reason for female malignancy related death. Despite the fact that significant change in survival from this sickness has been accounted for in high-store nations, the hazard keeps on raising. [4] [5] The variety of death rates (by around 6-19 for each 100,000) positions as the fifth reason for death from tumor in general.[3]In 2013 , expected 232,340 women depended upon to be resolved in the US to had breast tumour, with 39.620 women most likely dying case.

The rate of breast cancer in Arab countries is fundamentally lesser than that in Western countries, yet the idea among Arab doctors managing breast cancer is that it presents at a prior age and at a further developed stage [7] its fluctuate from 19.3 for each 100.000 women in Eastern Africa to 89.7 for each 100.000 women in Western Europe , and are high (more noticeable than 80 for each 100.000) in made areas of the world (except for, Japan) and low (under 40 for each 100.000) in a vast segment of the creating wards [3].

The age standardized mortality rate (ASR) in Iraq about (22/100.000) ,comparative when contrasted with the nations encompassing Iraq ; Saudi Arabia (11),Kuwait (19); Syria (24);Jordan(24) ;Turkey(15); and Iran(11).[8] It is the most well-known tumor among ladies in Iraq. As indicated by the most recent Iraqi Cancer Registry; breast malignancy report for around 33% of the enrolled female developments in Iraq ,which indicated that the BC is the most basic tumor site in women.[9] It is more typical in housewives[10]. Over half of aggregate breast cancer analyzed yearly is found in premenopausal ladies, making the need to start BC screening programs in this populace and one of these strategies incorporate breast self examination [11].

Iraq created national projects for early on recognition of BC as planned by the; World Health Organization (WHO), trying to diminish BC mortility. Works was begun in 2001 out of 4 fundamental particular focuses :(Basrah, Baghdad ,and Mosel) , and 16 extraordinary breast facilities. This works includes: educating and preparing on BSE , Ultrasound to the breast , Mammography ,aspiration of cyst , biopsy for cytology and surgical excision; transfer to(chemo- and radio-therapy) if obtainable [9], it was accounted for in 2010 that BC was analyzed in 19.8% of ladies giving discernable breast lump [12],in Aldiwaniya it was reported 17.34%[13].

The low survival rates in less created nations are principally guaranteed to the absence of mindfulness programs, bringing about a high level of ladies introducing in late-stages, also to the restricted limit with respect to early analysis and powerful multimodality treatment .[14] Family doctors have an imperative impact in screening; identification, and proceedings the patients with breast cancer and can be a valuable piece of amuiltidisciplinary group advance .[15-20]

1.2 Family physician role in breast cancer:

Family doctors have a basic part in the prevention, diagnosis, and treatment of BC . Essential care physicians are the guards to social insurance in the United States. Ladies must have the best access to their family doctor than some other doctor. Patients see their primary doctor more than any specialists. Family doctors for the most part have a long term, trusted and esteemed association with patients. Patients depend on their family doctor for the guidance given them by different authorities and subspecialists [148].

Family doctors must be capable in diagnosis the breast to have the capacity to perceive variations from the norm. Associatively, they should have the capacity to instruct breast self-examination to patients. Physicians should likewise be comfortable with risk components for BC, how to assess breast masses, imaging procedures, and when to refer to breast specialists for further assessment.

1.3 Aim of study :

1-To find out the incidence rate of Breast cancer in female presenting with abreast mass in aldiwanyia city.

2-To estimate the age of presentation , stage, grade, type and side of the tumor and their similarity with other Iraq cities.

3-To do comprison with arab countries and the world and to know where we are.

2. Literature review:

2.1 Breast Anatomy

The human breast is amodified exocrine organ comprise of skin and subcutaneous tissue ,breast parenchyma and stroma, which include fat intervened in acomplex system of (lymphatics,tendons, nerves, arterie , and veins). [21] Protuberant piece of the human breast is by and large depicted as desperately from the 2nd to the 6th ribs , and stretching out from the sidelong lateral edge of the sternum to the front axillary line.In fact, a thin deposit of mammary tissue expanded from the clavicle (above) to the 7th or 8th ribs (underneath), and from the midline to the boundary of latissimus dorsi posterior .

This anatomy is very important when we do a mastectomy, which means removing the entire breast. Anatomy of the breast is show in **Figure 2.1**.

Axillary tail of the mammary gland is also important surgically . In some typical subjects it is unmistakable and in a few, it be able to seen premenstrually and during lactation . An all around created axillary tail is in some cases mixed up for a mass of extended lymph nods .Lobule is the basic unit of breast organ,the size and number of lobules be distinective colossally ,and different in young women; the breast contain about (10 to 100) lobules void by ductules in to alactiferous duct which is about (15-20). Every duct fixed with contractile myo-epithelial cells and is furnished with aterminal ampulla, which is supplying of milk or abnormal discharge [22].

There are stringy groups that give basic help and embed oppositely in the dermis, which is named ;ligament of coopers. Its give the form and the structure of breast . If breast cancer occur,the carcinoma reach to this ligament and causes tethering which can give dimipling deformity on smooth surface of breast [23].

Areola , is a round and hollow or cone shaped distinction which venture from just underneath the focal point of the front surface of the breast and for the most part lies in the level of the fourth inter-costal space. The bulk of the nipple is made up of unstriped muscle fibres arranged circularly and longitudinally, though majority are arranged circularly and there are contraction causes erection of the nipple and serves to entry of the

milk into the ducts. Longitudinal muscles when contracted cause renunciation(Nipple retraction).

The base of nipple is encircled by a more pigmented skin which is called areola. The subareolar area contains much smooth muscle. The fibres of the areola are arranged in cortcentric rings as well as radially and are inserted into the base of the dermis. They function to contract the areola and to compress the base of the nipple.

The Skin of the areola contain many sebaceous glands called the areolar glands which become enlarged during pregnancy and lactation to form 'Montgomery glands'. Greasy emission of these organs gives a defensive lubricant to the skin of the areola and areola amid lactation. There is no fat immediately underneath the skin of the areola and nipple.[24]

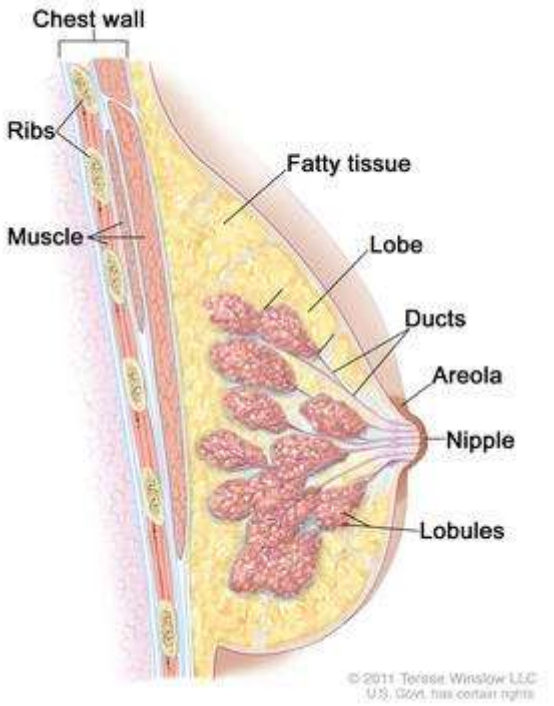


Figure (2.1): show the anatomy of the breast.

Blood supply

The most vital blood vessels that supply to the breast comes from; internal mammary, and lateral thoracic arteries. Around 60% of the

breast, generally the medial and focal parts, is provided by the anterior perforated branches of the internal mammary arteries. Around 30% of the breast, for the most part the upper; outer quadrant, is provided by the lateral thoracic a. The pectoral branch of the thoracoacromial course; the lateral branches of the 3rd, 4th, and 5th intercostals a. ; and the subscapular and thoracodorsal a. , all influence minor commitments to the blood to supply. The vital veins associated with the venous drianage of the thoracic wall and the breast are the perforating branches of the internal thoracic vein, tributaries of the axillary vein ,and perforated branches of back intercostal V.[25]

Lymph Drainage :

About 75% of lymph travals from breast to axillary LN in same side of the body , while 25% of the lymph to the parasternal node [26] . A little measure of outstanding lymph drain to the other breast and to :

1-anterior group
2-interpectoral group
3-posterior group along sub scapular a.
4-lateral group along axillary v.
5-apical group

Sentinel Node (SLN), is characterize as 1st lymph node that draining the area that involve cancer. The lymphatic drainage of breast illustrated in **Figure 2.2**

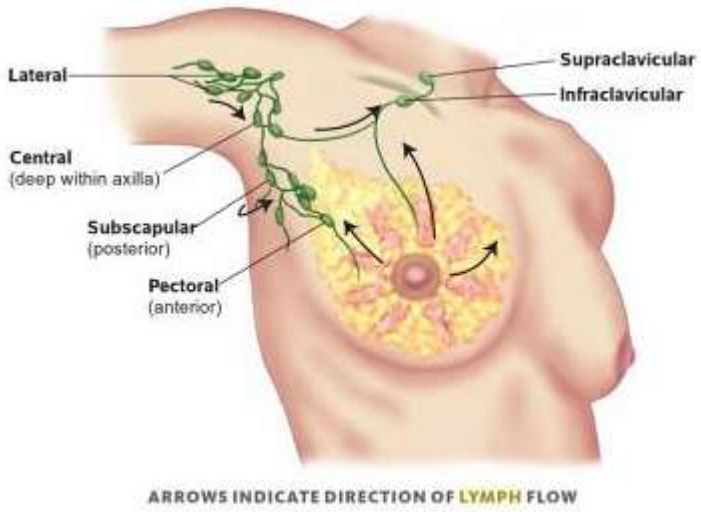


Figure (2.2):show lymphatic drainage of breast.

Morphological shape and support:

The differences in shape, size, volume, tissue thickness, pectoral region, and dividing of the breast decide their common shape, frame, and position on achest. Breast size and different qualities don't effect on milk to fat ratio ; or, the probable for the lady to nurse a newborn child. The volume and the state of the breast are affected generally by hormonal changes (Thelarche ; menstrual period; Pregnancy; and Menopause), and other conditions like; (Virginal breast hypertrophy).[27] In majority ,one breast is faintly bigger than the others[28]. More noticeable and persistent irregularity in volume of breast in more than 25% of women[29]. Whilst, ther is typical conviction that lactation can cause breasts drop [30] , studies discovered that a woman's breasts drop due to (4) factors: smoking , gravity ,number of pregnancy, and increase or decrease in body weight [31].

Breast maturation:

The breasts are basically consist of : glandular, adipose ,and connective tissue [32]. This tissues have hormone receptors,[32-33] , So their sizes change according to these hormons and specific to thelarche ,monthly cycle ,pregnancy (multiplication), lactation, and menopause .

During Puberty :

The arrangement of the individual breast is equivalent in men and women before pubescence. In pubescent girls, in thelarche; the estrogens in conjunction with growth hormone **GH** ; help the growing, development, and improvement of the breasts .In addition, the breast grow in size ,and volume and start resting on the chest. The stages of Secondary Sex Characteristics (breasts, pubic hair, etc.) are showen in Tanner Scale.**Figure 2.3** [34]

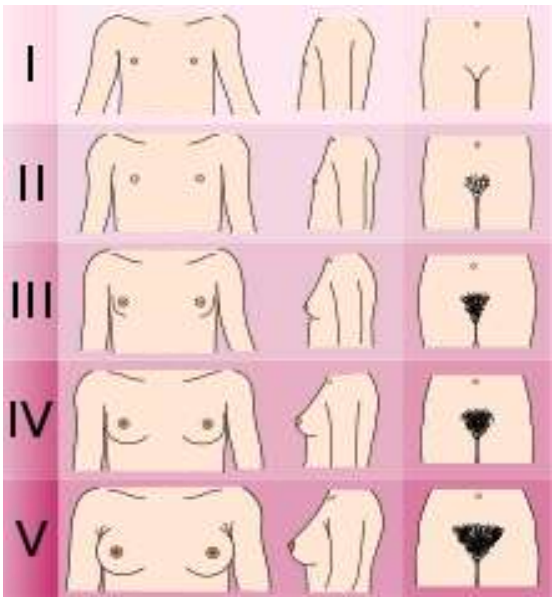


Figure (2.3):show the development of secondary sex charecterstics.

Also, in thelarche the breasts are sometimes different in size, and for the most part, the biggest one is the left breast. This difference is impermanent and usually normal in female in sexual development.(35) Medical conditions can cause over development or under development in girls and women.

Around 2- years from beginning of pubescence; estrogen and GH, encourage the growth of the glandular fat, and ligaments that make the breast. This proceeds for roughly 4- years until the last shape of the breast is built up at age of 21 years . Enlargement of breast in human start at puberty, contrasting to other primate in which breasts enlargement occur only during lactation.(36)

During Menstrual cycle:

In menstrual cycle ; breasts are amplified with pre-menstrual water retentions and transitory development.(37)

During Pregnancy & Lactation:

Breasts achieve full development just in a woman's during 1st pregnancy.(38 The first signs of pregnancy is breast changes, the breasts

grow to be overweight, the nipple and areola becomes bigger and darker. Montgomery's glands enlarge , and veins become noticeable.

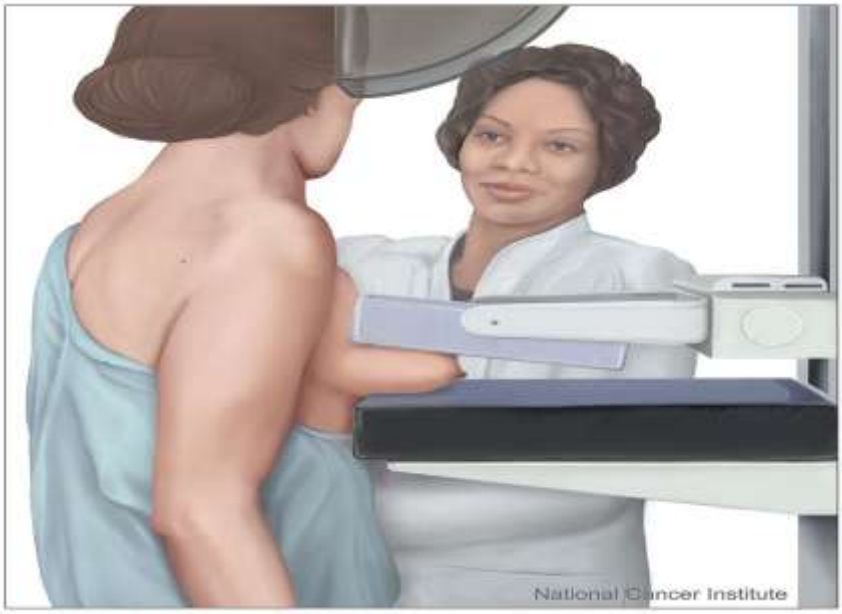
In pregnancy , the breast tenderness is normal, mostly in 1st tri-mester. By mid-pregnancy, The physiologically of breast fit of lactation and some times , express colostrum, which is a type of breast milk.(39)

During Menopause:

Menopause is the result of the atresia of more than 400,000 follicles that are present in the ovaries of a female fetus at 5 months' gestation. Declining ovarian function in late premenopause through the menopause leads to regression of Epithelial structures and stroma. Menopausal involution of the breast results in reduction of both the number of ducts and lobules. Stromal changes dominate and fat deposition increases while the regression of connective tissue continues.
The duct system remains, but the lobules shrink and collapse.
Lymphatic channels are also reduced in number in the postmenopausal breast .The last structures to appear with sexual maturity are the first ones to regress.(25)

2.2 Investigations of breast disease

• **Mammogram**. An indicative mammography ; a specific breast X-ray — enable to examine breast mass ,and different signs and symptoms. A diagnostic mammography center on one zone of the breast , giving perspectives from afew points at high amplification than does a screening type. It is frequently done along with an ultrasound of the breast**. Figure 2.4**



Figure(2.4): show mammography. -

• **Ultrasound:** Sound waves deliver pictures from breast on a monitor, ultrasound is useful to decisive if a breast mass is hard or fluid like colection.

• **MRI:** is magnetic field and radio waves forming images. MRI of breast is importent when the diagnosis is difficult.

• **Ductogram**: it is used to get the causes of nipple discharge. Little dye is injected to the duct. The dye appear on an X-ray ,and can expose the abnormality or the tumor.

Biopsy of breast:

On occasion, removing sample of tissue and examine with a microscope, biopsy ; the main beyond any doubt approach to decide, if a breast lump is cancer. There are many types of biopsy which divided according to the size and position of the suspicious area.

Types of Breast biopsy include:

• Fine needle aspiration biopsy(FNAC). a special needle which is thinner than the ones used for blood tests .

• Core needle (CNB). Using a larger needle than is used for fine-needle aspiration, it can remove more- tissue than can fine-needle aspiration.
• Sterotactic Biopsy: mammography produces images from several different angles of the area in question, then we removes a sample of of tissue with the needle. This biopsy is used for modest calcium deposits that seen just on a mammogram.
• Vacuum Assisted Biopsy : This biopsy is used when we need to take tissue from more than one area from one incision.
• Surgical Biopsy:in this type, we open the breast to remove either part of the lump (incisional biopsy) , or the whole breast lump plus alittle amount of surrounding tissue (excisional biopsy). The doctor should be using medication to frozen your breast , and sometimes needed general anesthesia in an outpatient facility .[40]

2.3 Classification of benign breast disease: [22]

Congenital :
●● Invertion of nipple.
●● Supernumerary of breasts / nipples.
●● other disorder including ;Tietze's disease
(costochondritis).
●● Sebaceous cysts and skin diseases.
Injury or truma.
Inflammation /and infections
●● ANDI (aberrations of normal differentiation and involution):
Cyclical modularity and mastalgia.
Cysts,
Fibro adenoma
Ductectectasia or perductal mastitis.
●● Diseases related to Pregnancy:
-Galectocele, and
- Lactational abscess.

2.4 BREAST CANCER

What is Cancer;

Cancer is a general terminology that represented large group of diseases menifisted by development of abnormal cells away from their usual limits that would be able to attack nearby some parts of the body or extended to different organs. Other usual terms utilized are dangerous tumors and neoplasms. Cancer can influence any part of the body and has numerous anatomic and sub-anatomic subtypes that each requires a particular management .It is the second explanation behind death internationally and represented(8.8 million) demise in 2015. Most recognized types of tumor in men are: Lung, colorectal ,prostate,stomach and liver disease, while in women: breast, colorectal, lung , cervix ,and gastric malignancy.[41]

Breast Cancer :is a mixed disease of both development and progression , its the most predominant cancer diagnosed in females around the world. Globocan statistics, show the occurance of breast cancer has increased from 1.4 million in 2008 to 1.7 million in 2012 ,which account for about 21.4 % increases in the rate of BC in the world in that times. Besides, the incidence of breast cancer was different around many regions in the world , it is less common in less developed countries ,compared to developed countries,about 31.3 of 100.000 and 74.1 of 100.000, respectively according to ASR . Breast cancer is the chief reason for female cancer deaths in world wide , representing around 15% of all cancer deaths.[42-44] In addition , mortality has increased steadily from almost (805 of 100.000 total death in 2008) ,to around (932 of 100.000 in 2012).[45-48]

2.5 Classifications of breast cancer

BC is divided to insitu and invasive . breast carcinoma in situ (CIS) is also classified to; ductal carcinoma in situ which is the most frequent type, and lobular carcinoma in situ. DCIS represents 20 to 25%of recently diagnosed breast cancers in USA ,[49] and it is considered a neoplastic ,and precursor of invasive breast carcinoma (IBC). Like to IBC , DCIS can be treated with surgery, with potentially therapeutic and additionally radiational therapy.

LCIS is not measured as a precursor lesion at this time, but is associated with increased risk of IBC bilaterally.

LCIS is regularly treated with observation . Invasive ductal carcinoma (no specific type), represents 75 – 80 % of IBC, lobular carcinoma for about 10 %, with the remaining 10–15 % ,grouped into special histologic types based on specific morphologic features.[50]

2.6 Risk Factors for Breast Cancer

Various conditions are called risk factors, inclines one to cancer, which involved:

a- Environmental causes: women who exposure to ionazing radiation because of atomic war, uses of medical diagnostic or therapeutic procedures and other devices ,increased the risk of breast cancer[51]

b- Socio-biological causes: age and sex are significant risk factors for breast cancer development . All inclusive, most commen breast cancer death occur in women with age equal or more 50 years .The quantity of breast cancer in women in 4^{th} decade of life rating (1 in 232), compared to those in 7^{th} decade of life (1in 29). Those changing in incidence may be related to hormonal changes in women in this age group.[52,51]

c- Nutritional causes: increase of fat intake may increase the risk of BC.Also eating high amount of caffeine and red meat is optimistic risk for breast cancer, while consumption of fruits and vegetables may decrease the risk[51].

d- Physiological causes: physical activity and exercise with moderated type bring down the risk of cancer .Many studies demonstrated that strong activity with few hours in aweek ,may decrease the risk of breast cancer in about 30% ,compared to no activity at all. [51]

e- Genetic causes: breast cancer is considered hereditary in only 5% to 6% [53], however ,the genetic has important role as a risk factor of BC.Account for 80% of hereditary breast cancer were BRCA-1 and BRCA-2.Women with positive BRCA-1 and BRCA -2 ,have a 50% to 85% risk of developing breast cancer .[54]

f-Family factor:If women have family member with breast cancer ,this increase the risk of breast cancer in other member of same family[55].Family history is major risk factors of breast cancer.

g- Alcohol: Some evidence show that all types of alcohols causes number of cancers like; breast, mouth, throat, and pharyngeal cancer, even moderate intake.[56]

h- Hormonal history:Women with more menstrual cycle in her life have great risk of breast cancer.[57] Hormonal history have to be risk factor of BC,as the relative risk may related to breast over exposure to estrogen and progesterone. Women with early menarche (beginning of menstruation at age 13), having no child or get pregnancy after 30 years old and menopause after 50 years, all those mean more menstrual cycle and therefore more exposed to hormones.[58]

i- History of BC : Women who have history of breast cancer and with treatment , have increase the risk of develop a new cancer in either previous treated breast or in the other one.[59]

j-Increase of body weight: Obese women have high level of oestrogen hormone,this because that fat cell producing estrogen which have risk for developing breast cancer.[57]

k- Hormone replacement therapy / oral contraceptives: HRT , and OC, are considered sources of oestrogen, which is a risk factor for this cancer.[57]

l-The immunty system causes: women with low immunity have more risk of developing many types of cancer. This includes women who have had organ transplantation and, those taking medications to suppress their immune systems to prevent organic rejection, in addition to women who have HIV or AIDS, or other medical diseases which can reduce their immunity to disease.[51]

m-Smoking : About > 80 of different cancer-causing substances ,are available in tobacco smoke. In smoker women , the chemicals from the lungs to the blood stream and, then throughout the body.[56]. Smoking is essential risk factor for breast, other kinds of cancer.

n- Cancer-causing substances : Exposure to cancer causing substances may causes changes of normal cell and formation of cancerous cells.

o-Infections : Viral infections may associated with breast cancer, like: Human Papilloma Virus is linked to cervical cancer, while liver cancer is related to the Hepatitis B and C virus . Epstin- barr virus is associated with Lymphoma.[51,56]

2.7 Stages and grades of breast cancer

According to American Joint Committee on Cancer (AJCC) ,we classify breast cancer stages (TNM staging system) based on their T, N and M stages where: T mean the size of tumor and extend to skin while

increasing number (0-4) behind it confirmed the increasing tumor size and degree of reaching to skin . N confirmed the contribution of lymph nodes and the followed by numbers (0-3) shows influenced lymph nodes. M mean metastasis of the cancer followed by a 0 explain no metastasis and M 1 which indicates that the tumor is metastatic.
Cancer staging include:

<table>
<tr><th>Stages of cancer</th><th>characteristics</th><th>description</th></tr>
<tr><td>Stage 0</td><td>Tis,N0,M0</td><td rowspan="11">Tx:not assessable primary tumor
T0:primary tumor in evident;
Tis:carcinoma in situ(DCIS,LCIS,or paget disease of nipple without tumor mass); T1:tumor size<2cm ;
T2:tumor size >2cm but <5cm ;
T3:tumor size >5cm;
T4:involvement of chest wall or skin to any size tumor
Nx:in assessable nearby lymph nodes
N0:no lymph node involvement;
N1:cancer extended to 1-3 lymph nodes;
N1mi:lymph node micro metastasis;
N2:4-9 lymph nodes involvement;
N3:>10 lymph nodes involvement.;
Mx:distant metastasis cannot be assessed;
M0:No distant metastasis;
M1:Distant metastasis.</td></tr>
<tr><td>Stage I</td><td rowspan="2">T1,N0,M0</td></tr>
<tr><td>IA</td></tr>
<tr><td>IB</td><td>T0,N1mi,M0 or
T1,N1mi,M0</td></tr>
<tr><td>Stage II</td><td rowspan="2">T0,N1,M0 or
T1,N1,M0 or
T2,N0,M0</td></tr>
<tr><td>IIA</td></tr>
<tr><td>IIB</td><td>T2,N1,M0 or
T3,NO,M0</td></tr>
<tr><td>Stage III</td><td rowspan="2">T0,N2,M0 or
T1,N2,M0 or
T2,N2,M0 or
T3,N1,M0 or
T3,N2,M0</td></tr>
<tr><td>IIIA</td></tr>
<tr><td>IIIB</td><td>T4,N0,M0 or
T4,N1,M0 or
T4,N2,M0</td></tr>
<tr><td>IIIC</td><td>AnyT,N3,M0</td></tr>
<tr><td>Stage IV</td><td>AnyT,AnyN,M1</td></tr>
</table>

Grades of breast cancer :

The grade is adescription of how the cancer cells look compared to normal cells. The pathologist looks at atissue sample from the tumour under amicroscope,and look at specific features of the cancer cells to give breast cancer agrade from 1to 3:

1-Grade 1:well differentiated(glandular /tubular differentiation >75% of tumor forms glands; uniform cells with small nuclei,similar in size to normal breast epithelial cells;<7 mitoses per 10 high power fields).
2-Grade 2:moderate differentiated(glandular/tubular differentiation 10%to 75% of tumor forms glands;cells larger than normal with open vesicular nuclei,visible nucleoli,and moderate variability in size and shape;8-15 mitoses per 10 high power fields).
3-Grade 3:poor differentiated(glandular/tubular differentiation<10% of tumor forms glands;cells with vesicular nuclei,prominent nucleoli,marked variation in size and shape;>16 mitoses per10 high power fields).
There are different "scoring systems"available for determining the grade of breast cancer.One of these systems is the Nottingham Histologic Score system(also called "the Elston-Ellis modification of Scarff-Bloom-Richardson grading system").This score depend on 3 features(the amount of gland formation,nuclear features and the mitotic activity),in which each one of this features scored from 1-3 and then the total score ranging from 3-9.The final total score determine the grade in the following way [61]:
1-Grade I tumors have total score of 3-5
2-Grade II tumors have total score of 6-7
3-Grade III tumors have total score of 8-9

2.8 Symptoms and signs : [62]

- Breast mass or breast lump.
- Discharge from nipple (bloody).
- Nipple invertion (retracted) .
- dimpling of the breast's skin or orange-peel surface .
- mastalgia .
- Lymph node swelling or enlargement mostly in the neck or armpit.
- An abnormality of size and shape of either breast or nipple.

2.9 Diagnosis :

1-History taking:

A good history taking from the patients is very important to determine the age and obtain a reproductive history which including: Age of 1st menstruation, and age at menopause, also its important to take history of pregnancies which includes: age at first full-term pregnancy.
A past history of breast biopsies should be taken including: the pathologic discoveries, particularly (proliferative breast disease). If the patient makes a hysterectomy, it is essential to know if the ovaries were presented or not . An addition , history of pregnancy and lactation in premenopausal women should be noted.
Additionally , any uses of HRT or hormones used for contraception is important in history .Family history of breast and any types of cancer should be taken .(63) Any breast symptoms like: pain, ,asymmetry of breast or thickening, changes of the skin; (color changes, nipple abrasion ,dermatitis , ulcers), nipple discharge and a palpable mass. Mastalgia (breast pain) with no other findings on examination is ararely sign of cancer, and majority of women with breast cancer do not have breast pain.(64) The US preventive services task force (USPSTF), has refreshed guidelines about risk assessment, genetic counselling, and genetic examination for BRCA-related cancer. The recent recommendations are as follows :

- Female with family members of breast, ovarian , or peritoneal cancer should be screened to perceive a family history that may be related to increased risk for mutations in BRCA1 or BRCA2 genes , which related to the breast cancer
- Female with positive screening results, should get genetic counselling and, there after BRCA test if justified.
- Female with no a family history that increased risk for mutations should not make routine genetic counselling or BRCA test.(65,66)

Breast self- and clinical breast examination

A clinical or BSE involved ; feeling of breast for any mass or other different anomalies , however, some evidence does not support its use in women with a characteristic risk for BC.(67) Clinical breast examination; is the examining of the breasts with the assistance of clinicians. Vaibility of examination of breasts highly affected by three

major concerns like; skills of the consultant, age of woman, and size of mass. [68] Breast self-examination (BSE); is regular examining the breasts without anyone else, it can be a vital method for early recognition of breast cancer, which then become more successfully treated . Although not every cancer can be diagnosed in this method , it is considered as abasic advance that you must take for yourself.[69]

One week after the menstruation period is beginning ,it is best time for BSE , because breasts in this time are most drastically averse to be enlarge or become tender . Breasts examination at different circumstances of menstruation may become difficult to compare the finding between frequent examination . If the cycle is irregular, or if the patient have stopped menstruation in (menopause or those removal of uterus),So the examination should be on a day of the month that is easy to keep in mind. BSE do not cause distress.

A breast self-examination menover as follow:

1. All clothes should be removed from above the midsection. Rest , extend the breasts reliably finished the chest and makes it easier to feel any abnormality . Check the whole breast by sensation the tissue from the collar bone to the base of the bra line .
2. By using the pads of three middle fingers, the middle fingers of left hand is to check right breast, and the middle fingers of right hand to examine left breast.
3. There are three levels of pressure for feeling ,firm pressure to feeling the tissue near the ribs and breast bone,medium pressure for alittle more profound, and light pressure for feeling tissue near the skin surface.If you feeling abnormal mass or lump ,you should avoid lifting your fingers away from the skin on same site of mass,and check other breast on similar site if you found the same complain it is probably normal. Also you can examine your breasts in shower on standing position.[70]

The (NCCN) guidelines recommend ; yearly clinical breast examination (CBE) for ladies with age more than 40 years old and having average risk, also BSE for developing and displaying breast awareness.[71]

2.10 Laboratory and Imaging

Mamography

Mammography is the premise in breast cancer detection.[72 It has three types which include: digital ,film ,and digital breast tom-synthesis. Film- mammogram is uses x-ray device to record image of breast, while digital -mammogram uses a special computerized tools and

transmit lower radiation. Film mammography has a great extent supplanted by digital mammography, which gives an impression of being much more exact for females less than 50 years of age, and to those whom have dense breast tissue.[73-75] The FDA -2011 accepted the uses of digital breast tomosynthesis, or 3- D mammography ; which creates a 3-D image of the breast with several high-resolution X-rays, to be used mixing with a 2-D digital mammography image. [76]
The breast imaging reporting and data base system (BI-RADS) , is the manner to reporting the findings of mammogram.[77]

The classes extend from 0 which mean Incomplete, to 6 proven malignancy .Also the UK of mammograms are achieved on a specific scales includes; [1 * Normal , 2 * Benign , 3 * Indeterminate , 4 * Suspicious of malignancy , and 5* Malignant]. Confirmation recommended that, prediction of the breast cancer risk is increased when accounting of genetic causes [78]. The U.S. Preventive Services Task Force in 2009,recommends that mammography should make every 2 years in age from 50 to74.[79] The European Cancer Observatory in 2011, and Preventive Health care in 2012 ; recommended Mammography every (2 to 3) years between ages 50 -69.[80,81] The using of mammography as a screening test for the early detection of breast cancer in healthy women is controversial [82-84].
Around 7% of each 1.000 women in U.S. who are screened, will be come back for a diagnostic conference [85] . About 10 of these women referred for biopsy; and the remaining 60 cases are found as a benign cause. From the 10 referred making biopsy, found that 3.5 have cancer and 6.5 have not. From the 3.5 which have cancer, 2 cases will have an cancer in early stage . Mammography sometimes have false negatives test .The numbers of cancers undetected by mammogram around 20 %.[86]
The review for the United States Preventive Services Task Force, in 2016 : show that mammography was associated with a little diminishing in BC mortality rate , But this decrease was not significant in any age. Asimilar review was found mammography decrease the risk of advanced cancer in women with aged 50 and older, but not in those with age from 39 -49.[87]

Ultrasonography

Ultrasonography (US) has an essential part in the evaluation of breast cancer. It is a moderately minimal effort, promptly accessible

modality that does not use ionizing radiation, can be used for interventional procedures, and is generally well tolerated by women[88].
It is consider to be either diagnostic or screening method[89]. It may be used with or without a mammography. [90] It is used for diagnosing cancers in earlier stage than mammography.[91] It may also be useful for an assessment of masses that are mammographically occult, in the assessment of suspected breast cancer in women less than 30 years of age. Some breast imagers suppose that US is important for the assessment of masses in women 30 years of age and older. US is also useful in the guidance mammography that in biopsy and therapeutic procedure.[92-96]

MRI

MRI is documented as a very sensitive imaging modality for the identification of invasive breast cancer.[97]

Anticipated clues for MRI in screening**:**

- Patients with positive family history of BC
- Patients with positive BRCA-1 and BRCA-2.
- History of past breast surgery or biopsy procedures.
- Metastasis to axillary with an obscure essential tumor.
- thick or scarred tissue. [98]

BIOPSY

A few techniques for breast biopsy now exist .The most proper strategy for biopsy for understanding rely upon assortment of elements, including the size ,area ,appearance and qualities of the abnormality.[99] Two kinds of needle biopsies are used for diagnosis breast cancer: fine needle aspiration cytology (FNAC) and core needle biopsy (CNB).[100,101]
A fine needle aspi-ration (FNA) biopsy includes use of littler-bore needle to get cytologic samples from a breast mass. Point of interest of FNA

biopsy incorporate its less intrusive methodology and low cost[102,103], however, it can now and then ignore a cancer if needle doesn't go to the cancer cells. [104,105], the requirement for pathologists with particular skill in interpreting test results.[106]
CNB used a big needle, and rather than cells, CNB removes a little chamber of tissue (a core).[107] Advantages of breast CNB include: increased precision compared with FNA when the technique is performed when no mass is obvious and the capacity to acquire tissue samples of adequate size to dispense with the requirement for a subsequent biopsy to afirm malignancy. [108]

2.11 Screening of cancer:

Screening of breast cancer comprises of testing ladies to distinguish the cancers previously any symptoms show up, different techniques have been assessed as breast cancer screening instruments, including mammography, clinical breast exam and BSE.[41]. In January 2016, (USPSTF) issued its last suggestions on breast cancer screening.[109,110] The guidelines include :

- The USPSTF recommends biennial screening by mammography for ladies matured 50 to 74 years .
- No necessity for routine screening mammography in ladies matured 40-49 years; the choice to being stanard, biennial screening mammography before age 50 years ought to be an individual one and should consider quiet setting , including the patient's qualities with respect to particular advantages and harms.
- Inadequate current proof to survey the extra -advantages and impairments of screening mammography in ladies with aged 75 years and more established.
- Insufficient current proof to survey the extra- advantages and damages of either advanced mammography or MRI rather than film mammography as a screening methodology for BC.
- No necessity for clinicians to train ladies how to perform BSE ; this suggestion depend on examines that found that encouraging BSE did not decrease breast cancer mortality but rather brought about extra imaging methods and biopsies .

• Insufficient current confirmation to survey the extra advantages and harms of clinical breast examination (CBE) past screening mammography in ladies matured 40 years or more seasoned .
Regardless of the USPSTF suggestions and American college of Obstetricians and Gynecologists, (ACOG): prescribes breast self-awareness "can incorporate BSE." [111]

ACOG likewise keep on prescribing adherence to its present rules , which include the following [112]:
• Mammography screening for each 1-2 years for ladies with age 40-49 years,
• Mammography screening yearly for ladies aged 50 years or more established. .

2.12 Treatment :

There are a few different manners to treat BC, contingent upon its compose(type) and stages.

Local Rx : It is mean treated the tumor without influencing whatever remain of the body. Types of local therapy include:

- Surgery , and
- Radiation treatment

Systemic Rx: medications used to treat BC are viewed as **systemic** therapies since they can achieve cancer cells in any part of the body. They can be given through mouth or place through the bloodstream. Dependent upon the types of breast cancer, distinctive types of medication treatment may be used, including:

- Chemotherapy.
- Hormonal therapy
- Targeted therapy

A few ladies get in excess of one type of treatment for their cancer.[113] Several components will influence their treatment design ,including the stage of their cancer ,regardless of whether their cancer is hormone receptor-postive or HER2-postive,the results of gene expression profiling tests as well as tests to decide whether their cancer is hereditary ,their age and menopausal status, and their general wellbeing .way of life and individual preference are likewise critical elements when arranging treatment.[114]

Surgery

Breast cancer surgery is a key component of breast cancer treatment that involves removing the cancer with an operation. Breast cancer surgery might be used alone or in blend with other treatments, similar to: chemotherapy, hormone treatment, targeted therapy and radiation treatment. For individuals with a high danger of breast cancer, breast cancer surgery might be a choice to decrease the risk of future breast cancer.[115]

Breast conserving therapy or 'Lumpectomy' which include the expulsion of the cancerous zone, the encompassing tissue and at times the lymph node, which intending to keep up a normal breast appearance after surgery. 'Partial Mastectomy' or 'Quadrantectomy'; this is the place a larger part of tissue is removed (compared with Lumpectomy). 'Total Mastectomy ', which is performed trying to assist cancer prevention. This surgery includes; the expullesion of the whole breast, without the expulsion of lymph nodes.[116]

Other different types of mastectomy are preventive mastectomy which used in ladies who have a higher risk of breast cancer also called prophylactic mastectomy. Radical mastectomy which means a complete expulsion of the breast, including the nipple, overlying skin, the muscle underneath the breast, and the lymph node .Because radical mastectomy isn't more compelling than other types of mastectomy ,its once in a while used today ,and its only prescribed when the cancer has spread to the

chest muscle. Modified radical mastectomy(MRM) is a less traumatic, and widely used procedure ,the whole breast is expulled also the under arm lymph node. In any case , the chest muscles are left intact, and the skin overlying the chest wall could conceivably be left intact.[117]

Axillary surgery

This helps to determine the stages of breast cancer and preparation the best treatment for the patient .It also provides the chance to remove any involved lymph node.We have two types of axillary surgery: sentinel LN biopsy and axillary node dissection. [118]

Sentinel LN Biopsy (SLNB):

A sentinel Lymph Node Biopsy (SLNB); is medical procedure to discover and expel a sentinel lymph node to check whether it contains cancer cells. A sentinel LN ; is the 1st lymph node in a chain or gathering of lymph node that cancer is well on the way to spread to. There is frequently in excess of one sentinel lymph node. A SLNB is likewise called sentinel node biopsy or sentinel lymph node disection.[119]

Radiotherapy

Radiation treatment is utilized to illuminate the zone where the tumor was, and murder malignancy cells with X-rays. Radiotherapy is normally endorsed in those situations while during the operation the main tumor is evacuated, however not the entire breast, or when the tumors could spread to the lymphnodes or different organs.[120]

Chemotherapy

Chemotherapy is the treatment with help of medications fit for restraining the division of disease cells or devastating them. At the point when the recommended chemotherapy is after the operation , it is called "adjuvant". Such treatment is expected to murder malignancy cells that may stay in ladies after surgery. This treatment keeps the reiteration of masses , and destroy tumor metastasis.[121] Neoadjuvant chemo is given

before surgery to moderate the development of a quickly developing cancer or to limit the size of a bigger breast cancer[122]. Palliative chemo is utilized to control the cancer in settings in which the malignancy has spread beyond the breast and restricted lymph nodes.

Hormonal Therapy:

Patients with estrogen receptor positive tumors(ER+) ,are contender for getting endocrine therapy to decrease probability of relapse or of another essential breast cancer. Endocrine treatment is typically managed after surgery, chemotherapy and radiotherapy have been given, however can likewise happen in the neoadjuvant or non-surgical setting. Hormonal medications incorporate:

1-Tamoxifen : is presently given to treatment of early, and propelled estrogen receptor (ER+ or ER-) breast tumor in pre- and post-menopausal ladies, however thought to be standard ET for premenopausal state [123-125] .It is normally taken day by day by mouth for a long time for BC.[126]

2-Aromatase inhibitors (AIs) : are a group of medications utilized as a part of the treatment of breast cancer in postmenopausal ladies.[127]

3-GnRH analogues for ovarian inhibition are valuable in ladies who stay premenopausal and , are at adequate risk for recurrence to warrant adjuvant chemotherapy. [128]

Targeted Therapy

Target treatment is another technique for BC treatment that uses drugs obstructing the protein HER2. These medications are not quite the same as medications that are utilized for chemotherapy and they have a tendency to have less reactions.[129]

2.13 Treatment of breast cancer according to the stage of disease

Stage 0:even however BC is considered "non invasive", it requires prompt treatment, typically medical procedure or radiation or, acombination of the two .[130]

Stages I to III: it includes : surgery and radiation treatment, frequently with chemo or other medication treatments earlier or after surgery.[113]

Stage IV (metastatic breast cancer): Treatment for organize IV breast malignancy is typically a systemic treatment.[113]

2.14 Prevention of breast cancer

1- Life-style

Ladies can diminish the danger of BC by keeping up a healthy weight, decreasing alcohol intake , expanding physical movement, and breast feeding.[131] The advantages with direct exercise, for example, brisky walking are seen at all age groups including postmenopausal women.[131,132] Elevated amounts of physical action diminish the danger of breast malignancy by around(14%).[133] Strategies that energize a consistent physical movement and decrease obesity could likewise have different advantages, for example, diminished dangers of cardiovascular sickness and diabetes.[134] High eating of citrus natural product has been related with a 10% diminishment in the danger of BC .[135] Omega-3 polyunsaturated fats seem to diminish the risk.[136] High utilization of soy-based sustenances may decrease hazard.[137]

2-Pre-emptive surgery

Removal of the two breasts before any malignancy has been analyzed or any suspicious irregularity or other lesion has showed up (a strategy known as prophylactic mastectomy) might be considered in individuals with BRCA1 and BRCA2 changes, which are related with a significantly risk for an inevitable diagnosis of BC.[138,139] Evidence is not sufficiently enough to help this methodology in anybody, yet those at the most highly risk.[140] BRCA testing is proposed in those with a high family risk after hereditary advising. It isn't suggested routinely.[141]

3-Medications

The particular estrogen receptor modulators, (for example, tamoxifen) decrease the danger of BC, however increment the danger of thrombo embolism and endometrial cancer[142] .So, they are not prescribed for the anticipation of breast malignancy in ladies at average risk, yet might be offered for those at high risk.[143] The advantage of BC reduction proceeds for no less than five years subsequent to stoping a course of treatment with these solutions.[144]

2.15 Prognosis &Servival rate

•Stage 1 BC (and DCIS, LCIS) have a good prognosis.[145]

•Stage 2 and 3 BC with a dynamically poor visualization and more serious danger of recurrence. [146]

•Stage 4, metastatic cancer, (i.e. spread to far off sites) has poor prognosis.[146]

Poor prognosis is related with the accompanying components:

• age: Prognosis seems more terrible for patients determined to have BC during their 30s than for patients diagnosed in middle age.

• Tumor size: Larger tumors will probably be node positive, however they additionally give a poor anticipation free of node status.

• Grade of cancer: Patients with ineffectively separated tumors(highly grade) have a poor prognosis.

• Estrogen and progesterone receptors: Patients with ER+ tumors have a fairly good prognosis and will probably profit by hormone treatment. women with progesterone receptors in tumor, may likewise have a abetter outcomes . Women with both estrogen and progesterone receptors on a tumor, may have a good prognosis than those with a single of this receptors, however this advantage isn't clear.

• HER 2 protein : When the HER2 quality is ampilified, HER2 is over communicated, expanding cell development and propagation and regularly bringing about more forceful cancer cells. Over articulation of HER2 is an autonomous risk for a more awful prognosis ; it might likewise be related with high histological grade, ER− tumors, more prominent expansion, and bigger tumor size, which are on the whole poor prognostic elements.

• BRCA 1qualities: Patients with the BRCA1 gene seem to have a poor outcomes than those with irregular tumors.

• BRCA 2 quality : likely have an indistinguishable progonsis from those free from genes, if the tumors have comparable attributes. With genes, danger of a second tumor in outstanding breast tissue is expanded (maybe >40%). [147]

•Breast malignancy survival (5- year relative servival) as per stages: [119]

.stage 0: 100%
.stage1:100%
. stage2: 93%
.stage3: 72%
.stage4: 22%.

3. Patients and Methods:

3.1 Study design:

A descriptive cross-section study.

3.2 Study location and time:

This study was carried out in Iraq ,Aldiwanyia governorate.Two hospitals involved in this study, Aldiwanyia general teaching hospital &maternity and children hospital,in addition to private lab. Both hospitals have breast examination consultancy. Women selected randomly, by taking every woman presented with palpable breast mass in aldiwanyia city.This study included the period from January 2018 to July 2018.

3.3 Sampling:

The patients integrated in our study, were the only women presented with palpable breast mass. The sample size was estimated according following equation:

$$n = \frac{1.96^2 * p\,(1-p)}{d^2}$$

Where:

n:sample size

1.96^2: is statistical parameter corresponding to the confidence level of 95% [149]

P:is the proportion(12%).[150]

d:relative precision=(0.05).

So, the total sample size required by the condition will be 162 patients.The total number of patients for study in two hospitals was 182 patients.

3.4 Data collection:

A structured questionnaire was prepared and performed by breast lump/mass questionnaire –HSBC, 2012.Verbal consent was obtained from the women before participation in the current study; data collection tools include:

1-Questionnaire included the following information; sociodemographic and other variable that include(name, age, marital status, occupation, address ,and educational level)

2- Questions about hormonal history which includes;

a-In the case of menstruation, the date of the last month (first day of menarche)

b-How old was your first menstruation: regular or not? The age when stopped (if you have)

c-Number of pregnancies?

d- number of children?

e-Have you ever dealt with hormone replacement therapy? If yes, when?

3-Questions about breast mass which include:

a-First appearance of the breast mass(s)?

b-location of the mass (such as left breast and right breast or both)?

c-Number of mass(s) when discovered for the first time?

d-Which increase in the number and / or size of the mass(s) over the years?

e-Are there breast/nipple discharge?

f-Have any tests been performed ? (ultrasound mammography, suction needle, biopsy, etc) and the results if present.

g-Are you currently or previously in any treatment ? (radiation therapy, chemotherapy, hormone replacement ,etc.).

h-Was the mass (s) fully removed?

4-Family History of breast cancer? from father and mother.

3.5 Instruments:

Questionnaire.

3.6 Pilot project:

The prepared questionnaire was applied in two hospitals to modifiy the questions that were not understood by their patients.

3.7 Inclusion criteria:

We take all the women with breast mass in aldiwanyia city

3.8 Exclusion criteria:

We exclude female patients who have any presentation other than breast mass.

3.9 limitation of study:

No limitation and no refusal from the patients.

3.10 Ethical approval:

The ethical approval of this study include the following:

1-Acceptance of scientific committee of Community and Family medicine department in collage of medicine / University of Al-Qadisiyah and acceptance of committee of ethical scientific researches in the collage.

2-verbal consent of female patients with palpable breast mass.

3.11 Statistical study:

Data were analyzed, using the statistical package for the social science (SPSS, version 23), a descriptive and inferential statistical analysis using percentage and frequency tables, and Pearson Chi-square test(x^2) was used with P values of < 0.001 were considered statistically significant.

Results

4.1 Demographic and breast mass characteristics of the study sample

This study included 182 cases of breast lesions in women with an age range of 16-72 years and a mean age of 38.79 ±12.74 years. Taking marital status into consideration, 150 (82.4%), whereas, 32 (17.6%) were unmarried. According to occupation, 56 (30.4%) were employed and 126 (69.6%) were not employed. According to residency, 133 (73.5%) were from urban and 49 (26.5%) were from rural areas. According to level of education, there were 67 (37.0%), 83 (45.3%) and 32 (17.7%) ladies with primary, secondary education and higher education, as shown in table 4-1. The breast lesion was situated in the right side in 85 (46.7%), in the left side in 76 (41.8%) and was bilateral in 21 (11.5%). According to clinical behavior, 150 (82.4%) had benign lesions and 32 (17.6%) had malignant lesions, as shown in table 4-2.

Table 4-1: Sociodemographic characteristics of the study sample

Characteristic	Value
Number of cases	182
Age	
Mean ±SD (years)	38.79 ±12.74
Range (Min.-Max.) (years)	56 (16-72)
Marital status, *n* (%)	
Married, *n* (%)	150 (82.4)
Unmarried, *n* (%)	32 (17.6)
Occupation	
Employed, *n* (%)	56 (30.4)
Unemployed, *n* (%)	126 (69.6)
Residency	
Urban, *n* (%)	133 (73.5)
Rural, *n* (%)	49 (26.5)

Education	
Primary, *n* (%)	67 (37.0)
Secondary, *n* (%)	83 (45.3)
Higher education, *n* (%)	32 (17.7)

SD: Standard deviation; Min.: minimum; Max.: maximum; *n*: number of cases

Table 4-1: Breast mass characteristics of the study sample

Characteristic	Value
Site	
Right, *n* (%)	85 (46.7)
Left, *n* (%)	76 (41.8)
Bilateral, *n* (%)	21 (11.5)
Clinical behavior	
Benign, *n* (%)	150 (82.4)
Malignant, *n* (%)	32 (17.6)

n: number of cases

4.2 Benign breast lesions

Out of 182 patients, 68 had Fibro-adenoma constituting 37.4 % out of all sample included in the present study and 45.3% out of benign cases enrolled in the current study. Twenty one had fibrocystic disease constituting 11.5 % out of all sample included in the present study and 14.0% out of benign cases enrolled in the current study. Forty four had inflammatory lesions in the form of mastitis, duct-ectasia and abscess forming 24.2% out of all sample included in the present study and 29.3 % out of benign cases enrolled in the current study. Seventeen cases had simple cyst accounting for 9.3 % out of all sample included in the present study and 11.3 % out of benign cases enrolled in the current study, as shown in table 4-2.

Table 4-2: The frequency distribution and rates of benign breast lesions

Benin lesion	*n*	% out of all sample	% out of benign lesions
Fibro-adenoma	68	37.4	45.3
Fibrocystic disease	21	11.5	14.0
Inflammatory (mastitis, duct-ectasia, abscess)	44	24.2	29.3
Simple cyst	17	9.3	11.3
Total	150	82.4	100.0

n: number of cases

4.3 Malignant breast lesions

Out of 182 patients, 3 had carcinoma in-situ constituting 1.6 % out of all sample included in the present study and 9.4% out of malignant cases enrolled in the current study. Twenty four had invasive ductal carcinoma constituting 13.2 % out of all sample included in the present study and 75.0% out of malignant cases enrolled in the current study. Four had invasive lobular carcinoma forming 2.2 % out of all sample included in the present study and 12.5 % out of malignant cases enrolled in the current study. One case had medullary carcinoma accounting for 0.5 % out of all sample included in the present study and 3.1 % out of malignant cases enrolled in the current study, as shown in table 4-3.

With respect to grade of malignant lesions, 6 patients had grade I breast cancer accounting for 18.8 % out of all malignant cases included in this study, 19 had grade II breast cancer constituting 59.4 % out of all

malignant cases enrolled in the current study and 7 patients had grade III breast cancer forming 21.9 % out of all malignant cases subjected to the present study, as shown in figure 4-1. According to stage of disease, the current study included 3 (9.4%) cases at stage 0 (carcinoma in-situ), 5 (15.6%) cases at stage I, 15 (46.9%) at stage II, 7 (21.9%) cases at stage III and 2 (6.3%) cases at stage IV, as shown in figure 4-2.

Table 4-3: The frequency distribution and rates of malignant breast lesions

Malignant lesion	*n*	% out of all cases	% out of malignant cases
CIS	3	1.6	9.4
Invasive ductal carcinoma	24	13.2	75.0
Invasive lobular carcinoma	4	2.2	12.5
Medullary carcinoma	1	0.5	3.1
Total	32	17.6	100.0

CIS: carcinoma in-situ; *n:* number of cases

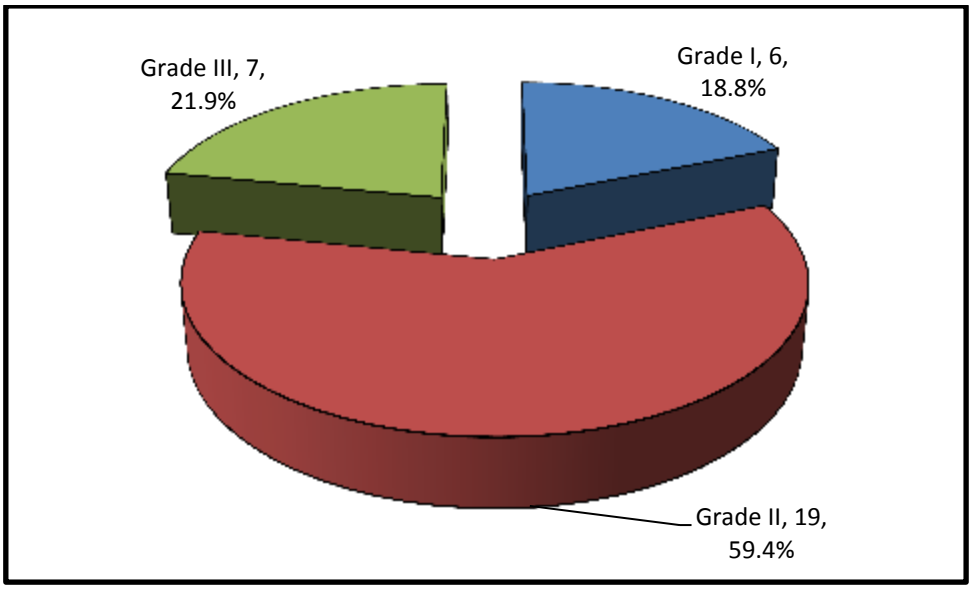


Figure 4-1: Pie chart showing the distribution of malignant cases according to grade

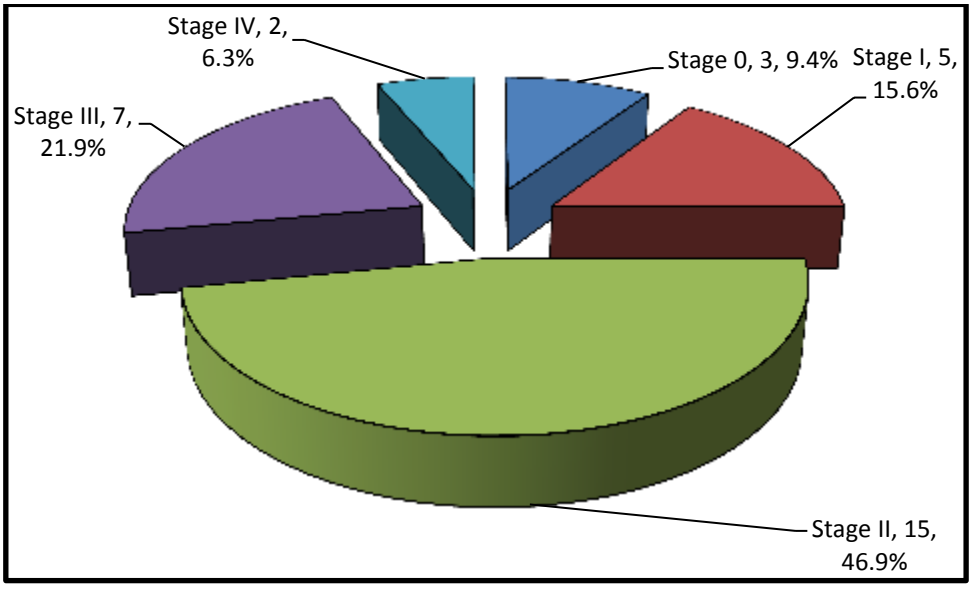


Figure 4-2: Pie chart showing the distribution of malignant cases according to stage

4.4 Association between clinical behavior of breast lesions and age of the patients

The following study showed that patients with malignant lesions were significantly older than patients with benign lesions, 49.78±7.58 years versus 36.66±12.4 years (P<0.001), as shown in figure 4-3. The distribution of malignant and benign lesions according to 20 years intervals is shown in table 4-4 and figure 4-4.

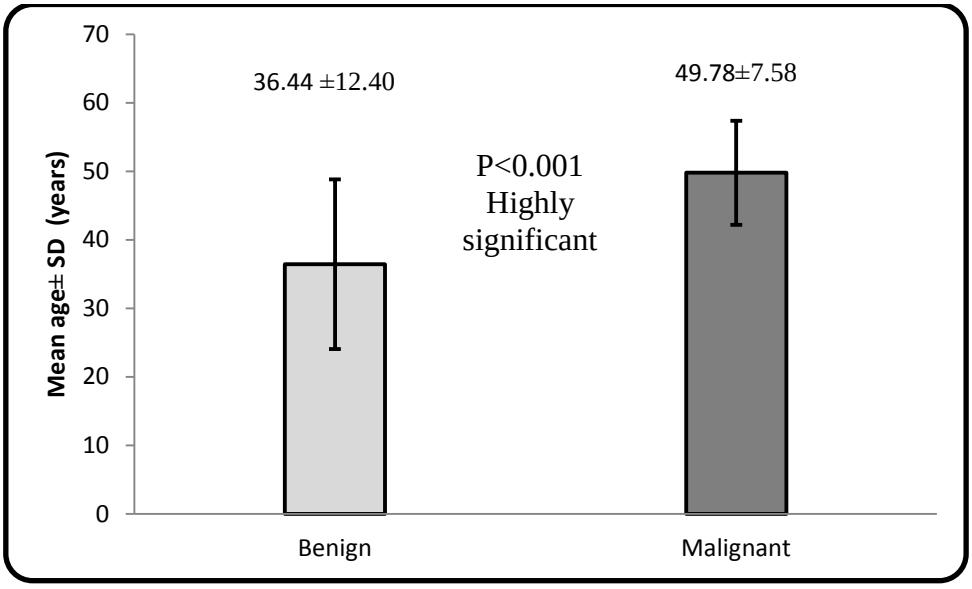


Figure 4-3: Bar chart showing the difference in mean age between patients with benign breast lesions and patients with malignant breast lesions

Table 4-4: Association between clinical behavior of breast lesions and age of the patients

Age intervals	Benign n = 150	Malignant n = 32	χ^2	*P*
≤20 years	7 (4.7)	0 (0.0)	45.936	<0.001 Highly significant
21-29 years	43 (28.7)	0 (0.0)		
30-39 years	41 (27.3)	4 (12.5)		
40-49 years	41(27.3)	9 (28.1)		
50-59 years	9 (6.0)	14 (43.8)		
≥ 60 years	9 (6.0)	5 (15.6)		

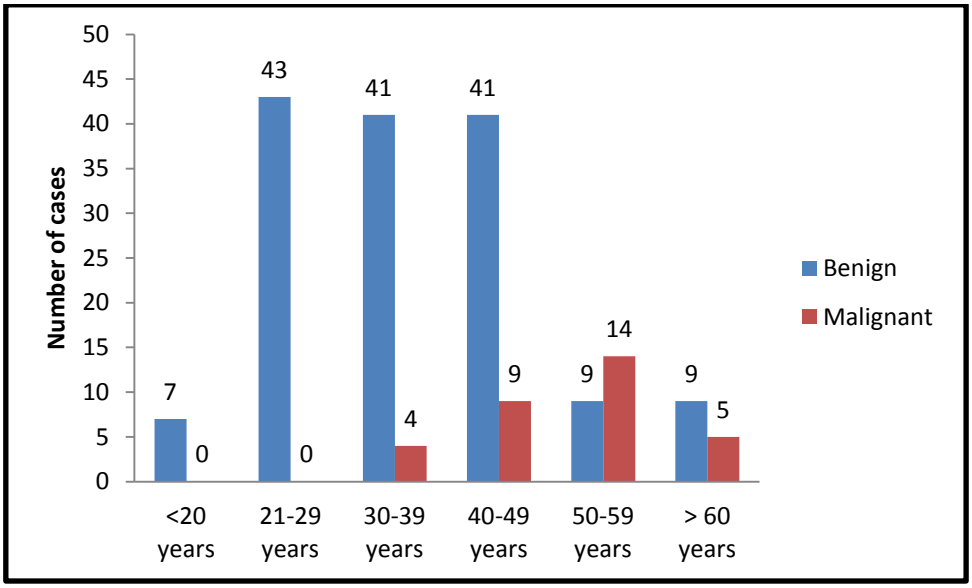


Figure 4-4: Histogram showing the distribution of benign and malignant cases according to age

4.5 Age of patients in association with type, stage and grade of malignancy

There was no significant association between age of patients and type of malignancy (P=0.779), table 4-5. In addition, there was no significant association between age of patients and grade of malignant tumor (P=0.842), table 4-6. Moreover, there was no significant association between age of patients and stage of malignant tumor (P=0.871), table 4-7.

Table 4-5: Association between age and type of malignant breast lesion

Malignant lesion	21-40 years	41-60 years	> 60 years	Total	Mean age ±SD	*P*
CIS	0	3	0	3	47.33 ±4.04	0.779 † Not signficant
Invasive ductal ca.	4	19	1	24	50.04 ±8.49	
Invasive lobular ca.	0	4	0	4	50.75 ±4.35	
Medullary ca.	0	1	0	1	47.00 ±	
Total	4	27	1	32	49.78 ±7.58	

† Kruskal Wallis test

Table 4-6: Association between age and grade of malignant breast lesion

Grade	21-40 years	41-60 years	> 60 years	Total	Mean age ±SD	*P*
I	0	6	0	6	51.50 ±5.47	0.842† Not significant
II	2	16	1	19	49.79 ±6.89	
III	2	5	0	7	48.29 ±11.12	
Total	4	27	1	32	49.78 ±7.58	

† Kruskal Wallis test

Table 4-7: Association between age and stage of malignant breast lesion

Stage	21-40 years	41-60 years	> 60 years	Total	Mean age ±SD	*P*
0	0	3	0	3	47.33 ±4.04	0.827 † Not significant
I	0	5	0	5	50.80 ±3.70	
II	2	12	1	15	49.13 ±8.64	
III	2	5	0	7	49.29 ±8.98	
IV	0	2	0	2	57.50 ±3.54	
Total	4	27	1	32	49.78 ±7.58	

† Kruskal Wallis test

4.6 Association between marital status and breast lesions

There was no significant association between marital status and clinical behavior of breast lesions (P=0.064). In addition, there was no significant association between marital status and type of benign lesions (P=0.176). Added to that, there was no significant association between marital status and type of malignant lesion (P=0.871). Moreover, there was no significant association between grade and stage of malignancy and marital status of patients (P= 0.584 and 0.837, respectively), as shown in table 4-8.

Table 4-8: Association between marital status and breast lesions

Characteristic		Married	Not married	*P*†	Significance
Clinical behavior	Benign / Malignant	120 /30	30 /2	0.064	Not significant
Benign lesions	Fibro-adenoma	49	19	0.176	Not significant
	Fibrocystic disease	18	3		
	Inflammatory	38	6		
	Simple cyst	15	2		
Malignant lesions	CIS	3	0	0.871	Not significant
	Invasive ductal ca.	22	2		
	Invasive lobular ca.	4	0		
	Medullary ca.	1	0		
Grade	I	6	0	0.548	Not significant
	II	18	1		
	III	6	1		
Stage	0	3	0	0.837	Not significant
	I	5	0		
	II	14	1		
	III	6	1		
	IV	2	0		

† Chi-square test" >20 % of cells have expected count <5".

5.1 Discussion:

Occurrence of BC exceed all female disease with high mortality rates around the world [151] . The etiology of breast cancer is questionable and satisfactory essential counteractive action isn't conceivable [11].The changes that have been noticed in the incidence and the age of presentation of breast carcinoma in Iraq could be attributed only to the usual risk factors[10].

In this study, the incidence rate of breast cancer was 17.6% (32 out of 182 patients) among females presenting with breast mass. It is similar to the rate accounted in Iraqi Cancer Registry 2010, in Aldiwaniya(about 17.34%), Iraq in general (13.9%) in 2014, as well as compared to the countries surrounding Iraq , Kuwait (9.7) ,Jordan (17.6), Saudi Arabia (9.9) , Syria (18.9), Iran (12.8) , Turkey (20.6).[8]

However ,this rate was lower than rate that was reported in Saudi and Sudanese patients respectively(33.3%,34%) in similar studies.[152] This distinction might be clarified by expanding BC awareness, and malignancy screening focuses that assistance in early breast tumor detection. The larger part of females with breast cancer at mean age 49,78.It was like the studies that revealed in other Arab nations including 48.49 years in Saudi Arabia[153], 49 years in Jordan[154], 49 years in Lebanon[155],and 48 years in Egypt[156]. The chance of getting BC goes up as a women become more older. Around 1from 8 intrusive breast malignancies are found in ladies <45 years, and around 2 from 3 invasive breast tumors are found in ladies age 55years or more seasoned. Peak frequency was recorded equally in the age categories 50-59 years, similar peak age frequencies were recorded in other reports from our country[157],also .In this study the peak incidence according to age group was above age of 50 years ,which was similar to the report in United States of America , where women aged 50 years and older are the most commonly affected[158].

The most common histological type of breast cancer in this study was the ductal carcinoma (75.0%),although it can effect women with any age group, followed by lobular carcinoma(12.5%) Which is similar to the reports of other studies in Iraq.[159]while other types like CIS about 3 cases(9.4), Although low percent , which is nearly same finding in other study[160], the patients in our study were relatively presented at low stage

at time of diagnosis, this highlights increased community awareness about BC, and the recommended for early detection and screening programs including periodical mammography and periodical physical and breast self-examination.

The most prevalent stage at time of diagnosis was stage II (46.9%), that means the cancer is either in the breast or nearby lymph nodes or both, it is an early stage breast cancer and there is no metastasis to other site. while in other study in Iraq, they found that 47% of them presented with advanced stage breast cancer; either stage III or IV in a study carried out in Erbil in 2004.[10] The relative early diagnosis might be related to increased education and awareness about breast cancer or might be related to decrease aggressiveness of the tumor, this is not like other study, in which, most patients presented in late stages of the disease when seeking medical advice, which is again similar to the above studies in the region. It is not well understood whether this delay in presentation is due to cultural and social customs or due to more aggressiveness of the disease in this part of the world.[161]

According to grading of cancer, the current study showed that 19 out of 32 cases (59.4%) ;are grade (II),which was the most predominant one in this study, followed by 7 out of 32 cases(21.9) are grade(III),and 6 out of 32cases(18.8%) are grade(I),which is similar to the other Iraq studies,[162]Which give the support to my research.

In this study, breast cancer mostly occurs in females with low educational level while the incidence decrease in those with highly education, this may be due to decrease awareness and attention about breast cancer and BSE.. BC awareness is a key segment of early conclusion endeavours. Ladies need to know the most widely recognized manifestations related with breast cancer , for example, irregularities of mass and thickenings, they need to realize that provoke assessment and early detection enhances outcome , they need access to wellbeing offices that can give exact finding, and they should be enabled to get to these services in a convenient manner.

Health Professional should be prepared in clinical breast exams (CBE) and breast wellbeing guiding, including socially delicate patient-clinician correspondence strategies. Early recognition screening techniques should to practically coordinate accessible assets (staff, equipment, offices) and community support and access to care. CBE gives a lower-cost screening methodology than mammography and requires less assets to actualize and is most fitting in settings where early detection has not already been made accessible to the general population. Effective usage of early detections program , insightful of neighbourhood hindrances, can result in cutting back of BC and enhanced general health outcomes [(163)].BSE is still has an important role to play in the early detection of breast cancer in resource-constraint settings where routine clinical breast examination and mammography may not be feasible.

In such settings, BSE is suggested in light of the fact that it is free, private, effortless, simple, safe, and requires no particular equipment. It has additionally been appeared to enhance breast wellbeing mindfulness and consequently possibly take into account early location of breast anomalies The American Cancer Society suggests that ladies from the age of 20 years onwards should to be instructed on the advantages of performing BSE monthly[(164)] .Therefore, BSE should be skilled to all women ,regardless of their training level .In option, when showing ladies about BC and BSE, hospitals ,doctors ,and essential human services facilities ought to grant this data remembering the training level of the ladies.[(165)]The occurrence of BC in this study was discovered marginally more in postmenopausal ladies than in premenopausal ladies. Ladies who experienced the difference throughout everyday life (menopause) after the age of 55 have slightly expanded danger of BC. The increment in risk might be expected to longer life time presentation to the hormones oestrogen and progesterone. Some thinks about detailed that more youthful age at menarche expanded breast malignancy chance just in premenopausal ladies , while some revealed expanded just for postmenopausal women.[(166-168)]

The majority of patients with breast cancer are married in this study, some studies reported that there is connection between BC and marital status, which demonstrate that unmarried ladies will probably be diagnosed at a later stage than wedded ladies, and marital status appeared to be emphatically connected with survival in patients with various distinctive types of malignancy; however, little is thought about the connection between marital status and BC in more youthful women. younger unmarried ladies will probably more likely to die of BC than wedded ladies . So youthful unmarried ladies with BC might be advantage from extra counselling , psychosocial support and case administration at the season of examination to assurance their general outcomes are enhanced. [169]

This study show no significant association between marital status and type of malignant lesion (P=0.871). Moreover, there was no significant association between grade and stage of malignancy and marital status of patients (P= 0.584 and 0.837, respectively).Some study show that socioeconomic variables and comorbidity had little impact on the relationship between marital status and survival.[170]

Most patients in this study were housewives who lived in intermediate and low socioeconomic state, which is constant with other studies in Iraq.[159]While in Europe it was found that BC occurrence is higher in the most rich groups in society.[171]The majority of female patients with breast cancer in this study have history of palpable mass for more than 6 month duration or even year without medical seeking, Particularly, when they do not hurt or cause way of life issues. Early diseases are by and large effortless masses, while propelled malignancies progress to wind up extensive, excruciating or potentially ulcerated tumours. The objective of breast awareness is to teach ladies about the significance of diagnosing disease at beginning times when treatment is less demanding and result is better. Progressive cancer ask for more broad treatments and will probably spread ("metastasize") to different organs and soon thereafter they never again can be restored. So ,we should educated all the women about the BC ,risk factor, symptoms, and advice them about the importance of breast examination whatever the breast is painful or not, because only 15% of cases of breast cancer presented with breast pain.[172]

In our study, the unmarried patients were about 32(17.6%). Some considers detailed that ladies with no kids, or those get first kid behind 30 years have slightly advanced risk of BC .Getting numerous pregnancies and be pregnancy at a young age diminish BC risk, pregnancy decreases the numbers women's cycle, which might be the purpose behind this impact .[173]

Breast cancer in current study was presented mostly in the left side, which were about 22 of32 cases, and 8 of 32 cases were in the right side, Evidence shows that breast cancer involved the left side more than the right side.[174] A few explanations have been proposed for the large quantity of left BC to right breast cancer. One recommendation is that the left breast is bigger than the right. In any case, this explains neglects to clarifies why the laterality proportion fluctuates by the quadrant of the breast. Another proposed explanations is that moms specially use the correct breast over the left while breastfeeding and this shields from BC. In any case, we have discovered that male BC likewise have a laterality proportion essentially more prominent than one. A third speculation is that benefit gave ladies specially check the left breast for protuberances . Assuming valid, at that point one would expect that the four quadrants of the breast would all have a similar laterality proportions and that diverse laterality proportions would exist amongst little and extensive tumors. Notwithstanding, the laterality proportion varies in every quadrant of the breast. Besides, little tumors happen with an indistinguishable laterality proportion from vast tumors.

In addition ,many hypothesis found that laterality ratio is linearly related to some factors like: age, birth year ,and year of diagnosis but also this relation are not unique. [175]

Some studies showing, that left-sided tumors have a tendency to give more poor survival contrasted with right-sided tumors, conceivably identified with radiation danger to the heart in left-sided diseases. [174]

In other side, this study shows 150 out of 182 cases (82.4%) were benign lesion .Its account for about 80% of the breast pathology, very few benign breast disease have an ability to become malignant, but the majority are treated easily without adverse consequences. It includes heterogeneous group of lesions, some of them may even represent exaggerated physiologic phenomenon rather than a true pathological

entity. Generally they can be broadly classified into Non proliferative and Proliferative lesions .Non proliferative breast injuries incorporates BC , metaplastic epithelial change, epithelial related calcifications and gentle ductal hyperplasia of the typical kind. Proliferative breast lesions are to a great degree unpredictable and interrelated grouping of disarranges, some of which give an expanded danger of creating carcinoma of breast later on are hence considered as risk markers, instead of premalignant lesions. The rate of benign breast lesion starts to increase in the 2^{nd} decade of life and become greatest in (4^{th} _ 5^{th})decades.[176-177]

In our study majority 43(28.7%) of the patients with Benign Breast disease were in the age group 21-29 and these are consistent with those of similar studies.[178] The most common benign lesion in this study is Fibro adenoma constituting to 45.3%(68 out of 150 cases).

Fibro adenoma is widely recognized lesion in breast, it happens in 25 % of ladies . Typically , it is an infection of early on regenerative life; the high point of occurrence is with ages of 15 and 35 years .An immediate relationship between OC used below 20 years and the danger of fibro adenoma ..Although most every now and again one-sided, about 20 % of cases, various lesions happen in a similar breast or in both sides [179] .The source of Fibro adenoma has been assumed, that it might emerge for Bcl-2 positive mesenchymal cells of Breast [180] .

Simple Fibro adenoma does not confer additional risk of malignancy, whereas a complex fibroadenoma poses a slight higher risk of developing malignancy[181]. Increase in awareness about Breast lumps and growing concerns; for detection Breast malignancies in earlier stage has led to the early detection and evaluation of Breast mass.

Fibrocystic disease was the second most common Breast lesion in our study about (14%) which is similar to the findings of of other studies[182] . Fibrocystic disease is common in females of age group 20-50which often occurs multifocal and bilateral. Hormonal imbalance plays a major role in the pathogenesis with oestrogen predominance over progesterone . Though this has been called by many names as Cystic mastopathy, Reclus's disease, chronic cystic disease and Mazoplasia for many years the term Fibrocystic disease is preferred because of the characteristic clinical and Histopathological findings observed in 50% of the patients clinically and 90% histologically. This element represents a generally safe of advancement of Breast malignancy sometime later in life .[182] As the consumption of mammogram and the recognizable proof of benign breast disease turn out to be more common, it is critical to distinguish

ladies who are at an expanded hazard for BC. Other benign disease , were found in this examination were the inflammatory diseases(29.3%), which include: mastitis ,duct-ectasia and abscess. Acute mastitis involves the inflammation of the interlobular connective tissue of the breast and if not properly managed can lead to septicaemia.[182]

Ductectasia , :is an average clinical substance which is clinically similar to invasive cancer . It is an infection of basically moderate to old age women , Smoking has been risk factor for ductectasia. In a few women, clinical diagnosis and mammographic discoveries may propose danger, and biopsy might be required to exclude carcinoma.[179]

Cyst ,also presented in some cases of our study 17 out of 150 cases, about (11.3%). It s present in excess of 33% of ladies in age of 35 and 50 years . Though, most are subclinical "microcysts," in around 20%– 25% of cases, palpable (gross) cystic change, which for the most part exhibits as a simple cysts, is experienced. Cyst can't reliably be recognized from strong masses by clinical breast examination or mammography; in these cases, ultrasonography and fine needle yearning (FNA) cytology, which are profoundly exact, are uses. Since gross cyst isn't related with an expanded danger of cancer improvement, the present assent on the direction of gross cyst is ordinary observation of the patient, without promote treatment. convoluted or atypical cyst is a sono- graphic finding that is portrayed by interior echoes or thin septations , thickened or potentially sporadic wall, and missing posterior improvement .These patients can be dealt with follow-up imaging studies, however, it sometimes needed careful biopsy to exclude neoplasm .[179]

In our study, there was strong association between benign breast diseases and age of the women ,and there was no significant association between marital status and type of benign lesions (P=0.176).

5.2 Conclusions:

1-The incidence of breast cancer in Aldiwanyia around 17.6% , and occur mostly in females with age group 50years and older.

2-Most common type is ductal carcinoma ,and preponderance of cases of breast cancer ,have stage II .

3-Breast disease is most common in patients with low education levels.

4-Postmenopausal women marginally high BC risk ,than premenopausal ladies.

5- There is highly significant association among breast cancer and the age of women.

6-There is no relation between types ,stages, and grade of breast cancer and age of patients.

7-Laterality ratio of breast cancer is the left side more than right side.

8-There is a highly significant association between benign breast disease and age of patients.

9-Most commen types of benign breast disease is fibro adenoma.

10-Majority of women with breast mass do not know what is BSE , and how to doing it.

5.3 Recommendations:

1-Increase awareness and education to all women regarding the risk of BC.

2-Education the women about the sign and symptoms of breast cancer.

3-Education of all women about BSE and how to do it in their home with frequent time after each menstrual period.

4-Encourge the women with palpable breast mass for medical seeking whatever the mass painful or not ,and regular visit, to follow up the disease.

5- Enhancing of BC awareness programs and expanding BC screening centres at various zone of Iraq are expected to set up early finding and conclude best treatment.

6- Company of screening test for breast cancer in early age and reasonable documentation agenda in Iraqi healing centers are vital to achieved appropriate management standard in our ward.

7-Multifactorial examinations for some factors that influence BC in Aldiwanyia are be considered ,including ;hormonal replacement treatment , correspondence, time of first pregnancy, length of conceptive life and, recurrence of specific genes that related with BC.

8-Formation of committees and medical health staff and education them about breast cancer and method of early detection,also making educational visit in schools, universities and state department for awareness of this disease.

9- Advice the women who planned to used hormonal contraception to prevent used the contraception for long period ,and avoid used it as much as possible in women with age <20 years.

10- Advice women by local and national media about risk of BC.

11- Advice ladies to do mammography extraordinarily those with family history of breast malignancy every year.

12-Advice for further researches in future about the risk of genetic mutation ,hormonal contraception on breast cancer.

13-Encourge all family physician about their significant role in breast cancer diagnosis ,and follow up.

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جمهورية العراق

وزارة التعليم العالي والبحث العلمي

جامعة القادسيه / كلية الطب

فرع طب الاسره والمجتمع

معدل الاصابة بسرطان الثدي بين النساء المصابه بتورم في الثدي في محافظة الديوانية

رساله مقدمه الى مجلس كلية الطب في جامعة القادسيه كجزء من متطلبات نيل درجة الدبلوم العالي المعادل للماجستير في طب الاسره

من قبل

مروه عبد الهادي حسين

بكلوريوس طب وجراحه عامه

بأشراف

الاستاذ المساعد الدكتور

حسن راجي جلاب

جامعة القادسيه /كلية الطب

فرع طب الاسره والمجتمع

1440 هـ

2018 م

أقرار المشرف

أني الاستاذ المساعد الدكتور حسن راجي جلاب المشرف على رسالة طالبة الدبلوم العالي (المعادل للماجستير) مروه عبد الهادي حسين , قد اطلعت على رسالة الطالبة المذكوره والتي أنجزت تحت أشرافي ,أقر وأؤيد صلاحيتها للمناقشه لاستيفائها كافة المتطلبات العلمية لدرجة الدبلوم العالي .

التوقيع :

المشرف: **الاستاذ المساعد الدكتور حسن راجي جلاب.**

مصادقه

أني رئيس فرع طب الاسره والمجتمع في كلية الطب /جامعة القادسيه ,اصادق على أقرار المشرف على رسالة طالبة الدبلوم العالي (المعادل للماجستير) مروه عبد الهادي حسين واعتبر الرساله صالحه للمناقشه من قبل اللجنه الممتحنه لهذا الغرض .

التوقيع:

م .د علي عبد الحسين موسى

رئيس فرع طب الاسره والمجتمع

الخلاصة

خلفية البحث :

سرطان الثدي هو اكثر انواع السرطان شيوعا بين النساء في جميع انحاء العالم ويمثل حوالي ثلث اصابات السرطان المسجله في العراق في الاناث تحديدا,لذلك يعتبر اهم انواع السرطان التي تصيب النساء. ويعد سبب انخفاض معدلات العيش في البلدان القليله التطور الى قلة برامج التوعيه ,مما ادى الى ارتفاع نسبة الاصابه بسرطان الثدي وفي مراحل متاخره,بالاضافه الى القدره المحدوده على التشخيص المبكر والعلاج الفعال لهذا المرض. طبيب الاسره له دور مهم في توعية النساء حول هذا المرض وطرق الكشف المبكر عنه وطرق علاجه.

هدف البحث:

1- تحديد نسبه الاصابه بسرطان الثدي لدى النساء اللواتي يعانون من تورم في الثدي في محافظة الديوانية .
2- تحديد اكثر الاعمار اصابة بسرطان الثدي ونوع المرض وصنفه ومقارنته مع المدن العراقيه الاخرى.
3- مقارنه نسب حدوث سرطان الثدي مع الدول العربيه و دول العالم .

المرضى وطرق العمل:

تم اجراء دراسه وصفيه مقطعيه في محافظة الديوانية وشملت 182مريضه مصابه بتورم في الثدي ,وتم اخذ التاريخ المرضي مع الفحوصات الثلاثيه والتي تشمل (الفحص السريري ,والتصوير الشعاعي , والخزعه) لجميع المريضات.

النتائج:

نسبة الاصابه بمرض سرطان الثدي كانت :32(17.6%) من اصل 182 مريضه ,بينما كانت نسبة اورام الثدي الحميده:150(82.4%) من اصل 182 مريضه وكانت تشمل التالي:الورم الغدي الليفي 68(37.4%) ,مرض الثدي الكيسي الليفي 21(11.5%),التهابات الثدي الحميده 44(24.2%) وتكيس الثدي البسيط 17(9.3%).

متوسط عمر النساء المصابات بمرض سرطان الثدي كان 49.78سنه.

الاستنتاجات :

معدل الاصابه بسرطان الثدي في محافظة الديوانيه كانت حوالي 17.6%. اغلب النساء المصابات بهذا المرض من الفئه العمريه 50 سنه فما فوق,تكون النسبه اعلى قليلا في النساء بعد سن اليأس.تكثر الاصابه بالمرض عند المرضى الذين يعانون من انخفاض مستوى التعليم ,كما ان غالبية النساء اللواتي يعانين من امراض الثدي واللاتي يقمن بمراجعة المستشفيات لايعرفن ماهو الفحص الذاتي للثدي وطريقة عمله.من خلال هذه الدراسه تبين ان هناك ارتباط كبير بين سرطان الثدي وعمر المريضه.

الاستبيان

اسم المريضه:	
العمر:	الحاله الزوجيه:
عنوان السكن:	التحصيل الدراسي:
الحاله الاقتصاديه:	الوظيفه:

1- في حالة الحيض ,تاريخ اخر دورة شهريه (اليوم الاول):

*كم كان العمر عند اول دوره شهريه:

منتظمه ☐ غير منتظمه ☐

* العمر عندما توقفت الدوره الشهريه (ان حدث ذلك):

2-عدد مرات الحمل:

3-عدد الاطفال:

4 - هل سبق وان تناولت الهرمونات العلاجيه البديله او هرمونات منشطه او هرمونات مانعه للحمل ؟

*اذا كان الجواب نعم فمتى تم ذلك:

5- تاريخ ظهور العقده او الورم :

6- موقع العقده او الورم :

الثدي الايمن ☐ الثدي الايسر ☐ كلاهما ☐

7-عدد العقد او الورمات:

8 - اي زياده او نقصان في حجم وعدد العقد على مر السنين: نعم ☐ لا ☐

9-هل هناك افرازات من الثدي : نعم ☐ لا ☐

*اذا كان الجواب نعم متى :

10-هل تم اجراء اي اختبارات او فحوصات :

موجات فوق الصوتيه ☐ تصوير الثدي بالاشعه السينيه ☐

خزعه ☐

*ماهي نتائج الفحص اذا كان كذلك :

11- هل انت حاليا او سابقا في اي علاج : نعم ☐ لا ☐

على سبيل المثال : (علاج اشعاعي, علاج كيمائي ,استبدال هرمونات)

12- هل تم ازاله العقده او الورمه بشكل كامل: نعم ☐ لا ☐

13- تاريخ العائله (هل هناك احد من افراد العائله مصاب بسرطان الثدي من جانب الاب والام):

اسم المشرف اسم الباحث