

Breast Basics, Boards and Bottomline!

A community guide to maintaining breast health and what to do if concerns arise.

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- I have no relevant relationships with ineligible companies to disclose within the past 24 months.



The Ohio State University Comprehensive Cancer Center –
Arthur G. James Cancer Hospital and Richard J. Solove
Research Institute

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Objectives:

- Objective 1- Discuss early detection of breast cancers through screening and diagnostic imaging
- Objective 2- Breast biomarkers and treatment discussion
- Objective 3- Strategies to maintain optimal health and correlate this to modifiable risk factors for breast cancer

Basic Anatomy:

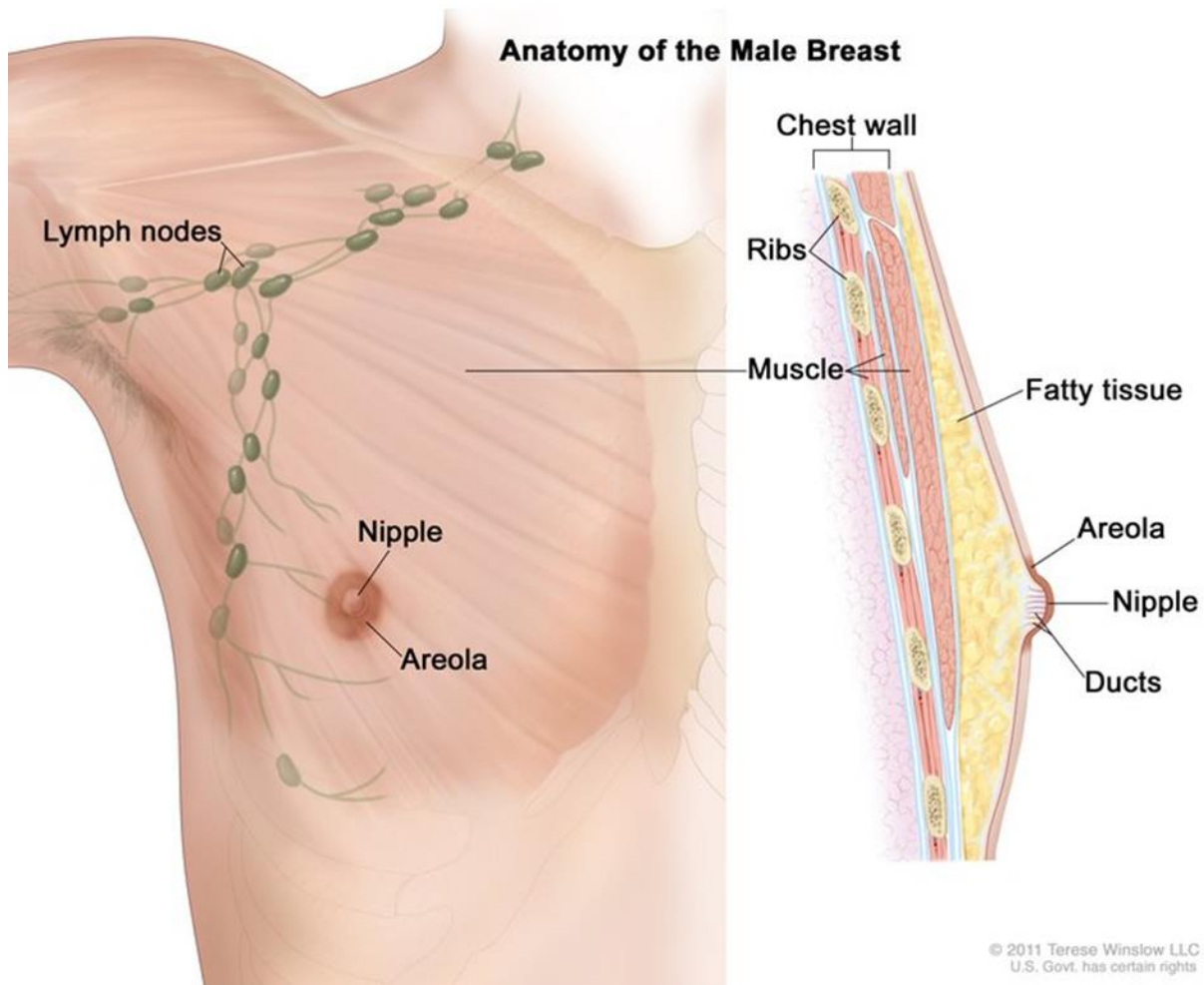
male and female breast

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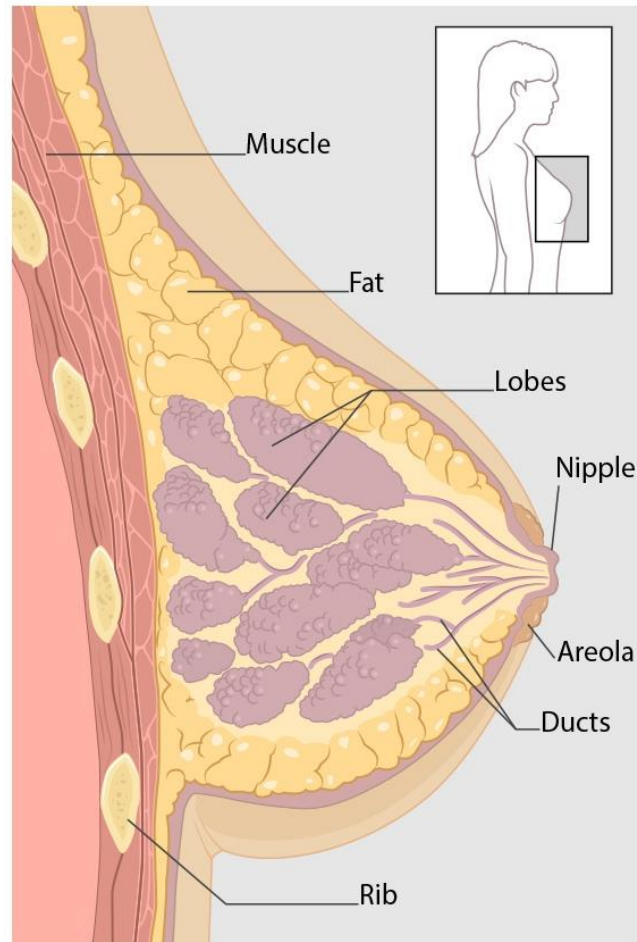
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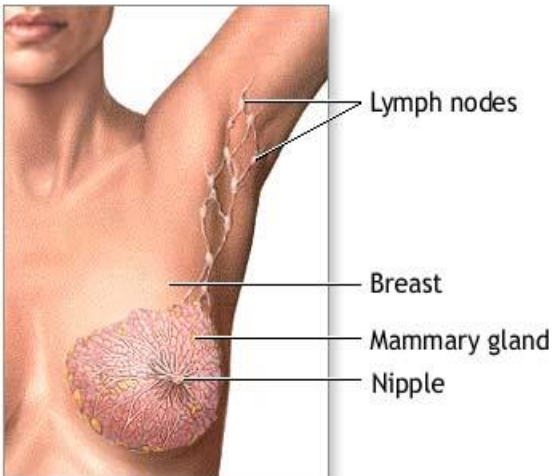
ncbi.nlm.nih.gov

Female breast anatomy

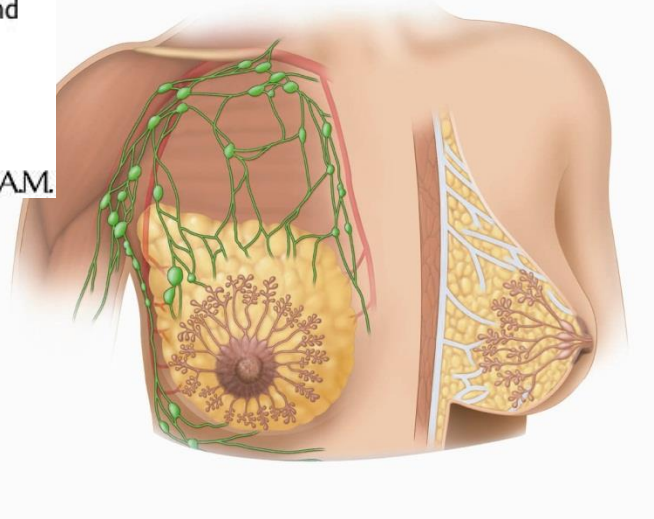
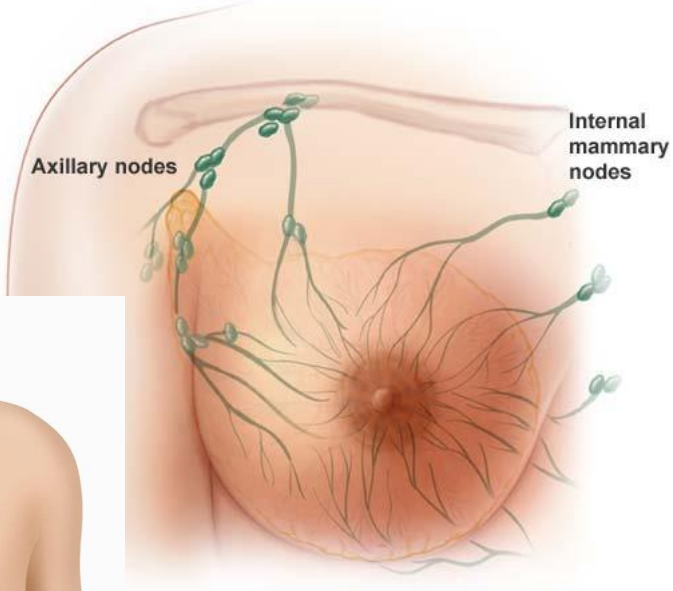


www.cdc.gov

Breast Lymphatic Anatomy



ADAM.



(Clinical Key, 2018)

- Objective 1: Review the value of self breast awareness and self breast exam with discussion of potential findings/concerns

Techniques of Breast Self Exam



With fingertips close together, gently probe each breast in one of these three patterns

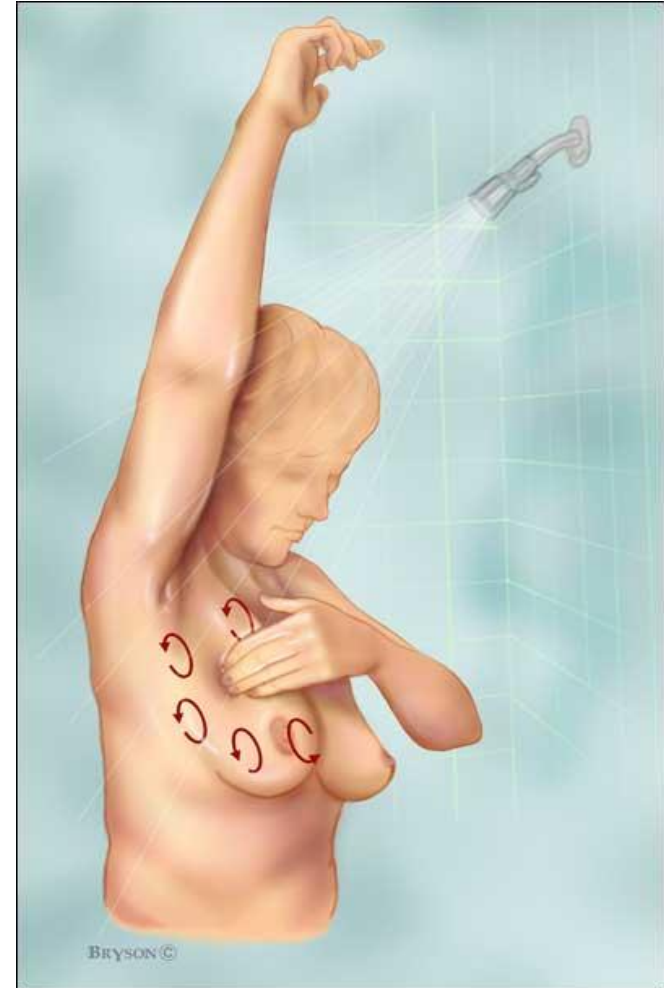


Breast self-exam:
Manual examination
(standing)

ADAM.



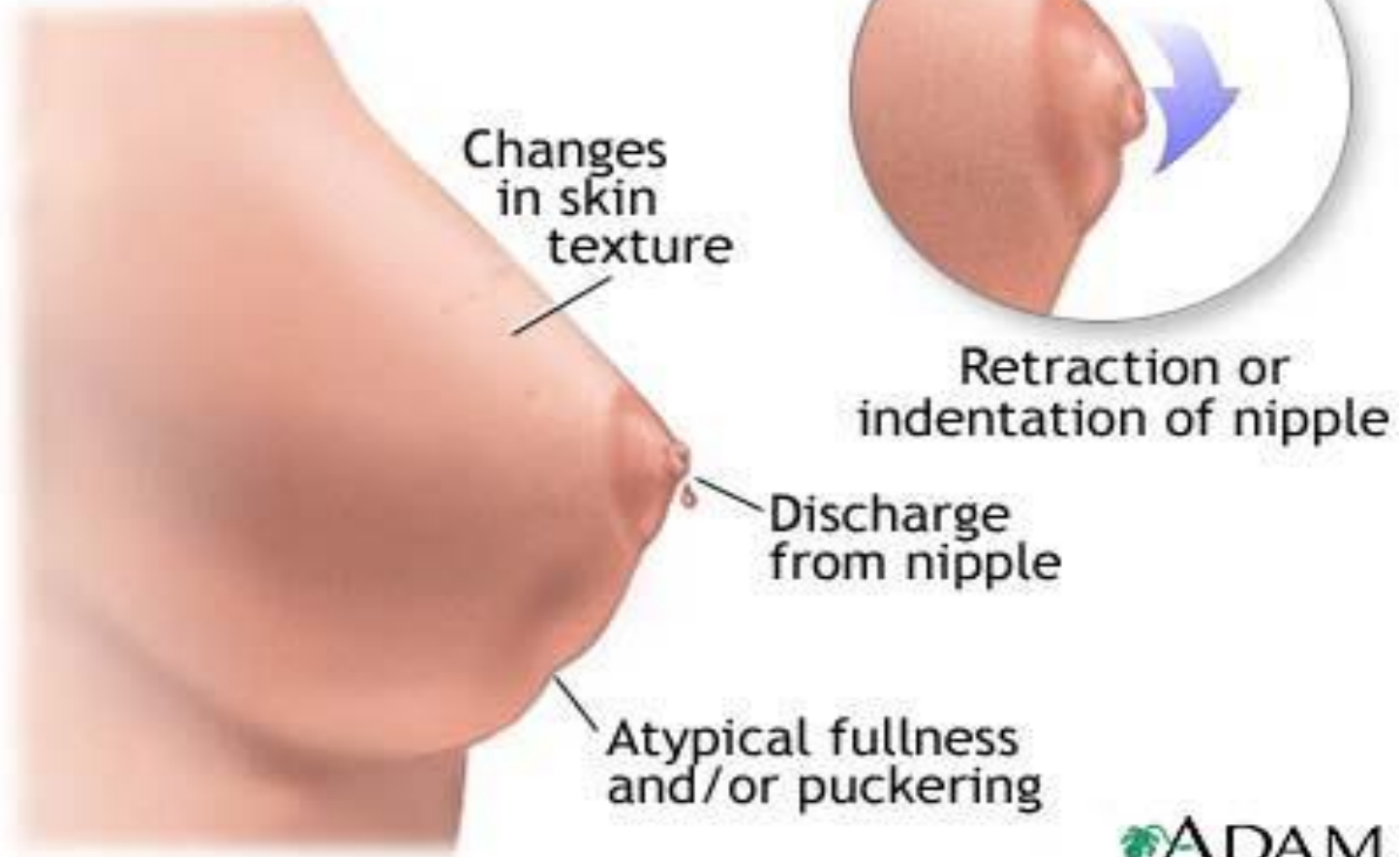
<http://breastnet.net/detection-diagnosis/breast-self-exam/step-by-step-guide/>



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Inspection

Breast self-exam:
Visual inspection



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Peau d'orange

- Peau d'orange (French for orange peel) is characterized by edema and pitting and results from blockage of lymphatic drainage with or without associated stromal infiltration. The most common cause of breast peau d'orange is **inflammatory breast cancer**.

Inspection: Visually identifying changes to the skin

Mastitis vs Inflammatory Breast Cancer



Inspection: Paget's Disease



Early Paget's disease



Advanced pagets disease nipple

http://www.breastcare.com/common_clinical_pagets.htm

Inspection:

Abnormal Lesions & Skin Infections



http://www.vashishtsurgicalservices.co.uk/benign_disease/patient_info/benign_breast_infection.htm

http://www.medicine-on-line.com/en/detail_week.php?id=27&usertype=html

<http://dermatlas.med.jhmi.edu/derm/indexDisplay.cfm?ImageID=-772952270>

Inspection: Nipple Discharge



(Wong Chung, 2016)

Inspection: Nipple Discharge

Considered normal

- Monthly fluctuations in hormones that make up the normal menstrual cycle
- Estrogen stimulates the growth of milk ducts in the breasts
- Progesterone stimulates the formation of the milk glands
- A milky color is considered normal for nipple discharge

(Wong Chung, 2016)

Considered abnormal

- Spontaneous
- Unilateral nipple discharge
- Unrelated to menstrual cycle/hormone fluctuations
- Any bloody nipple discharge should NOT be considered normal!

Inspection: Nipple Discharge

Other possible reasons:

- sexual stimulation
- manual expression
- exercise (running/jogging)
- disruption of keratin plug
- pregnancy
- pituitary tumor
- papilloma
- breast cancer
- herbs
- psychotropic drugs
- marijuana



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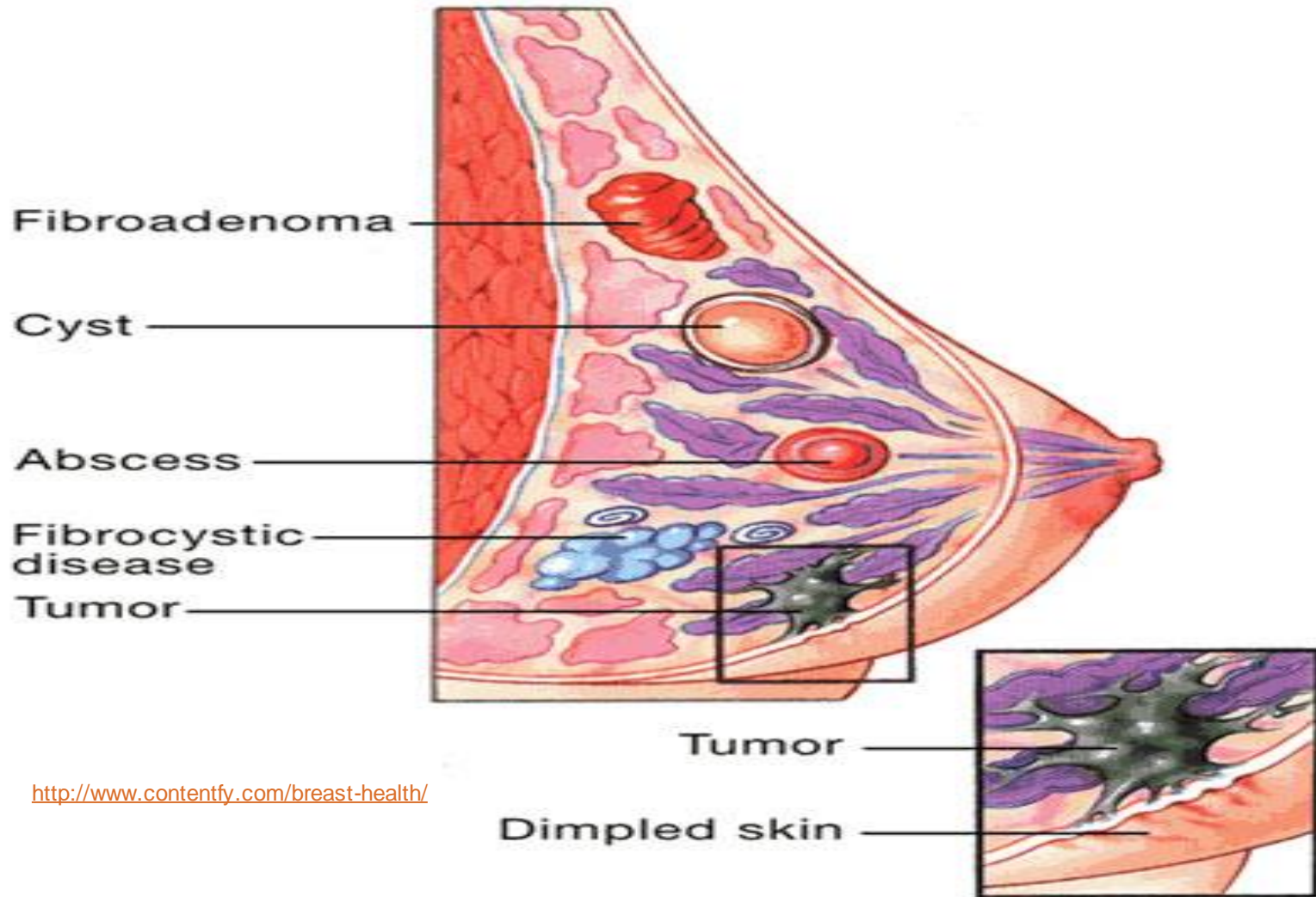
Inspection: Nipple Inversion & Skin Dimpling



<http://www.geronguide.com/gallery/index.php/Breast-Cancer/breast-cancer-symptoms-signs-01>

<https://kubon-sagner.e-bookshelf.de/products/reading-epub/page/3/product-id/656552/titel/ABC%2Bof%2BBreast%2BDiseases.html?firm=%22BMJ+BOOKS%22>

Palpation: Lump



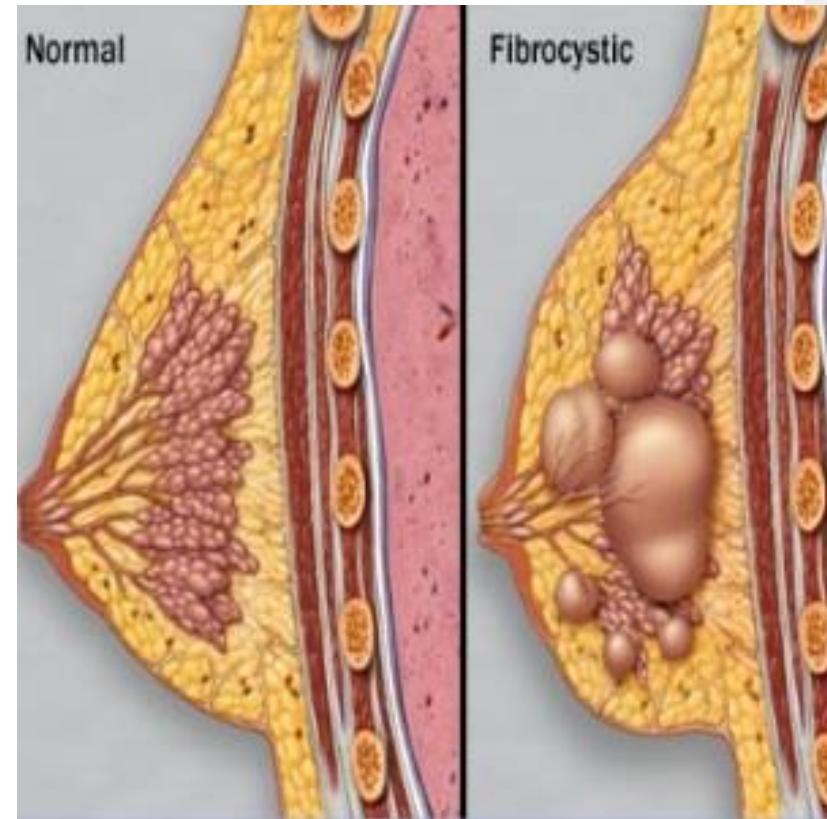
<http://www.contentfy.com/breast-health/>

Palpation: Fibrocystic Breasts

- Commonly called Fibrocystic breast change

The term fibrocystic change is used to refer to

- Lumpy
 - Cystic
 - Painful breasts
- Symptoms fluctuate with menstrual cycle
- Important to teach BSE & ways to help manage this pain



http://www.riversideonline.com/health_reference/Womens-Health/DS01071.cfm

Management of fibrocystic changes and breast pain

- Decrease caffeine
- Stop using tobacco
- Decrease alcohol intake
- Wear a supportive bra

Palpation: Cysts

- Are the most common breast lump palpated
- Moveable in breast tissue, soft to firm
- Fluctuate with menstrual cycle
- Most commonly in women age 35-50
- Can become very painful
- Ultrasound for further evaluation and possible cyst aspiration

(Huff, 2009)

Breast with single fluid-filled sac

Fluid-filled
sac



<http://www.mayoclinic.com/health/medical/IM02803>

Palpation: Tumor (malignancy)

- Most breast cancers present as a palpable mass without any other physical findings
- Patients should report any change in her breast self exam to her primary care provider
- An office visit and clinical breast exam should be performed at a minimum
- If warranted the patient should be sent for a diagnostic breast work up and referral to a breast specialist



<http://www.argosymedical.com/Reproductive/index.html>

Objective 1 (cont):

Explore early detection of breast concerns through breast screening and diagnostic imaging including a brief overview of breast imaging modalities

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Screening Recommendations for women of **average** risk:

- Different agencies may make different recommendations from various guidelines. At the James we continue to follow NCCN guidelines (National Comprehensive Cancer Network)
- For women at **average risk**, NCCN/James:
 - Age 25-39 years, clinical encounter, ongoing breast cancer risk assessment, risk reduction counseling, CBE every 1-3 years+SBE
 - >40 years annual clinical encounter w/ongoing breast cancer risk assessment, risk reduction counseling, CBE, SBA, annual mammography, +/-tomo
 - Upper age limit to stop is not defined

NCCN MS-6 Breast Cancer Screening/Diagnosis

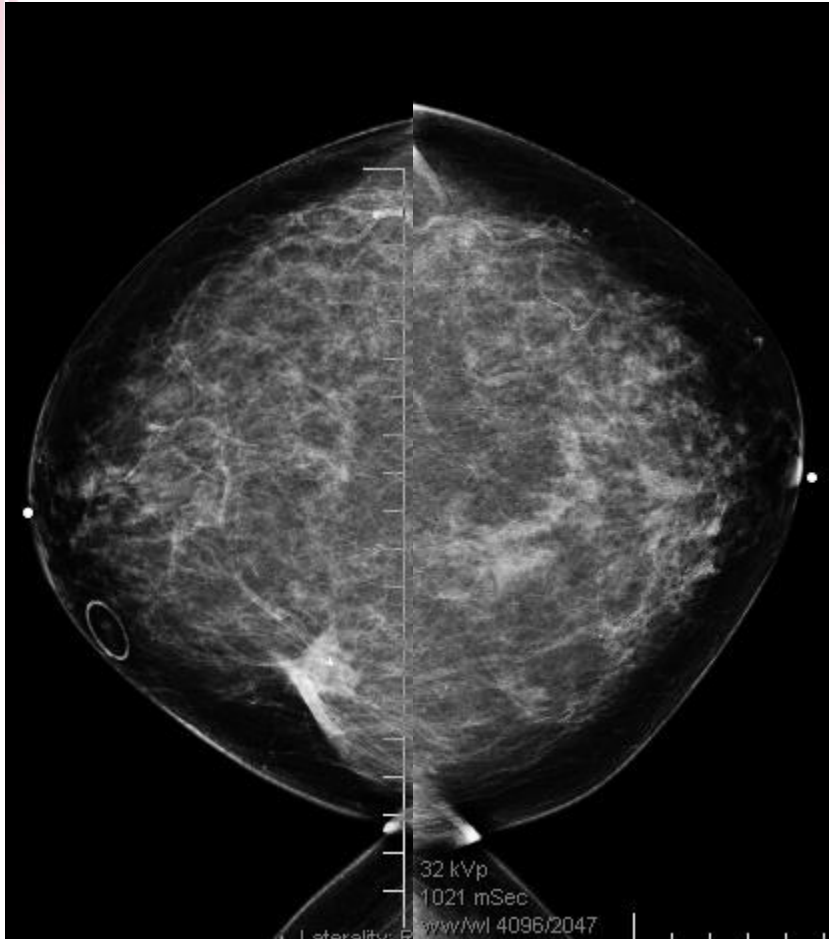
Individuals at High Risk for Breast Cancer

- This is an important conversation to have with your practitioner-and is an important component to annual/ongoing **breast cancer risk assessment**
- There are various standardized tools available to practitioners to assist with the evaluation breast cancer risk. A healthcare professional will determine the most appropriate model based upon an individual's history
 - Examples include:
 - The Gail model
 - Claus
 - Tyrer-Cuzick

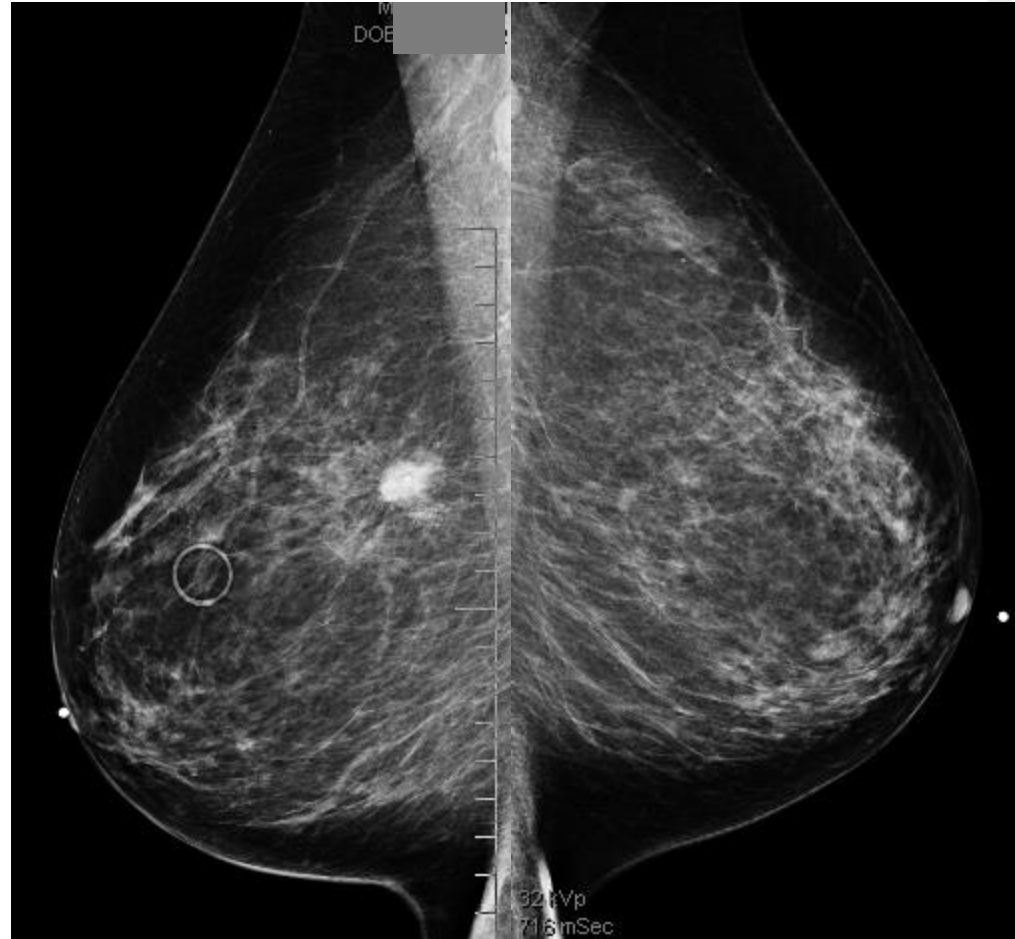
NCCN, MS12

Individuals at High Risk for Breast Cancer are managed according to NCCN guidelines. NCCN, MS12

Screening Mammograms



Craniocaudal (CC): Superior to inferior view. Identifies the location of a mass as medial or lateral in relation to the nipple.

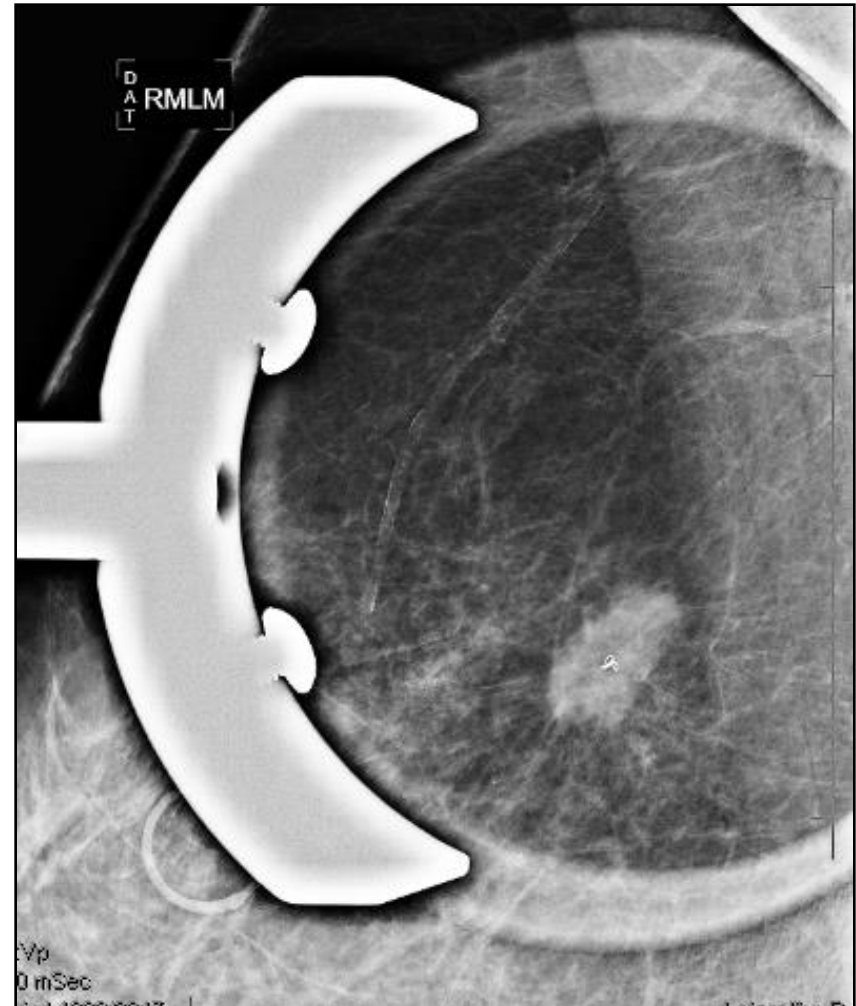


Mediolateral Oblique (MLO): Medial to lateral view, using 30-60° of obliquity. Identifies the location of a mass as superior or inferior in relation to the nipple.

Diagnostic Mammograms

Additional views are obtained to evaluate and characterize the area of concern. These may include:

- True Lateral Views
- Spot Compression Views
- Magnification Views
- Tangential Views
- Rolled Views
- Cleavage Views



Tomosynthesis-3D imaging

- Shows images of the breast in 3D vs. 2D
- Stacks multiple pictures of different sections instead of one whole image
- Beneficial for patients with dense breast tissue
- Increases ability to find smaller lesion
- Decreases call back rates

Breast Sonography

- Persistent masses following diagnostic mammography are evaluated with sonography.
- Used to characterize masses to aid in accurate BI-RADS categorization.
- Location is correlated with mammographic views and documented using clock stations and distance from nipple.



Evaluated Features

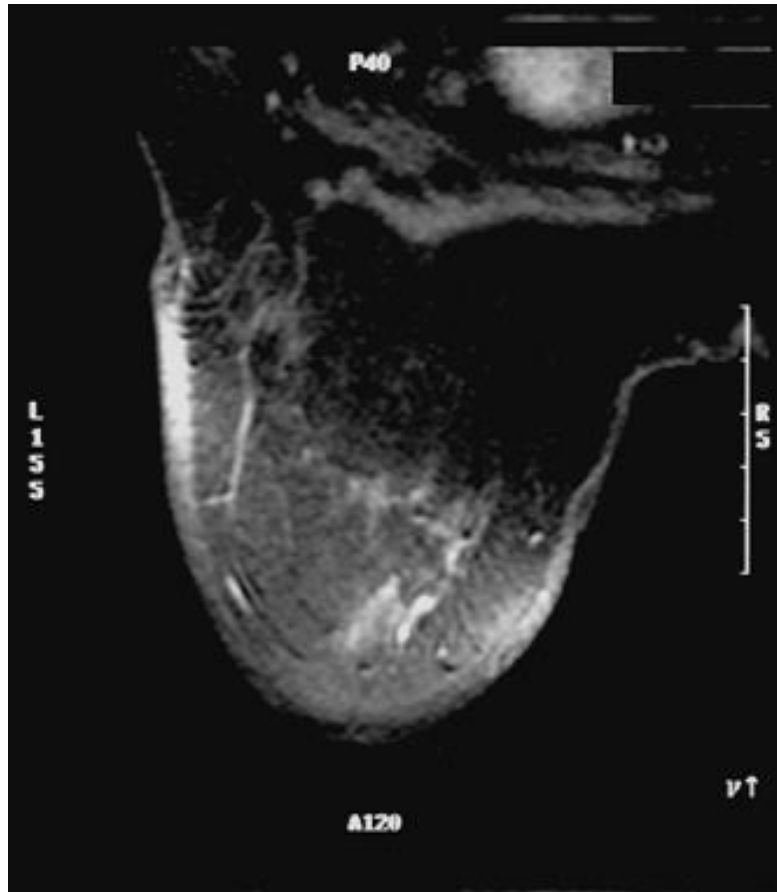
Mammography

- Mass features
- Calcifications
- Architectural distortion
- Special cases

Sonography

- Shape and orientation
- Margins
- Lesion boundary
- Echogenicity
- Posterior acoustic features
- Effect on surrounding tissue
- Calcifications
- Vascularity
- Special cases

MRI



<http://www.radiologyinfo.org/en/info.cfm?pg=breastmr> Retrieved 8-5-11

BI-RADS Categories

- 0-Need additional imaging evaluation and/or prior mammograms for comparison
- 1-Negative
- 2-Benign findings
- 3-Probably benign findings, short-interval follow-up suggested
- 4-Suspicious abnormality, biopsy should be considered
- 5-Highly suggestive of malignancy, appropriate action should be taken
- 6-Known biopsy proven malignancy, appropriate action should be taken

Objective 4: Discuss strategies to maintain optimal health and correlate this to non modifiable risk factors and modifiable risk factors for breast cancer.

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Let's start with the Non Modifiable Risk Factors:

- Female
- Increasing Age
- Race/Ethnicity
- Dense breast tissue
- Benign Breast conditions such as ALH
- Family Hx/Hereditiy
- Gene Mutations
- Reproductive history factors
- #prior breast biopsies
- Prior thoracic radiation therapy

Modifiable Risk Factors

- Having children
- Current or prior estrogen or progesterone use
- Hormone therapy after menopause
- Breastfeeding (lowers risk)
- Alcohol use (alcohol can increase levels of estrogen, decrease absorption of nutrients). Limit to one drink/day
- Diet
- Overweight/Obesity
- Lack of physical activity

Objective 1 (cont)

Occurrence of Breast Cancer in Men and Women. The most recent information.

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Breast Cancer in Men:

- The American Cancer Society estimates for breast cancer in men in the United States for 2021 are:
 - About 2,650 new cases of invasive breast cancer will be diagnosed
 - About 530 men will die from breast cancer
 - Breast cancer is about 100 times less common among white men than among white women. It is about 70 times less common among Black men than Black women
 - As in Black women, Black men with breast cancer tend to have a worse prognosis.
 - For men, the lifetime risk of getting breast cancer is about 1 in 833.

American Cancer Society's Cancer Statistic Center,
cancerstatisticscenter.cancer.org/

Breast Cancer in Women:

- Breast Cancer is the most common cancer in American women, EXCEPT for skin cancers
- The average risk of a women in the United States developing breast cancer sometime in her life is about 13%. This means there is a 1 in 8 chance she will develop breast cancer. This also means there is a 7 in 8 chance she will never have the disease.
- Current year estimates
 - About 281,550 new cases of invasive breast cancer
 - About 49,290 new cases of DCIS
 - About 43,600 women will die of breast from breast cancer

Breast Cancer in Women:

- At this time there are more than 3.8 million breast cancer survivors in the United States
- Breast cancer is the 2nd leading cause of cancer death in women (only lung cancer kills more women each year)
- This includes women that still being treated or those who have completed treatment

American Cancer Society Statistics Center
10/19/2021, cancer.org

Objective 2:

Review discuss the most basic types of breast cancer inclusive of a broad overview with emphasis on the **uniqueness** of each breast cancer diagnosis and treatment plan

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Breast Cancer Basics:

- If breast diagnostics are completed and there is still concern, a biopsy will be recommended. This can be completed in multiple ways (US, Stereotactic, MRI guided)
- Even though the imaging was suspicious, the biopsy may return as benign
- If there is a breast cancer it will be described by the anatomic location (most commonly “ductal” or “lobular”) and whether or not it has breached that structure
- It will also be described by its biology (ER/PR/HER2)

Breast Cancer Treatments are various

- There are many variables that are taken into consideration when determining breast cancer treatment
 - Age/Functional status
 - Overall health (pre-existing conditions)
 - ER/PR positivity or ER/PR negativity
 - HER2 positivity or HER2 negativity
 - Lack of positivity to any of the above receptors (TNBC)
 - Changes to the DNA/proteins of the cancer

Breast Cancer Staging 0-4

T=Tumor, N=Node, M=Mets. RCB=residual cancer burden

- Stage 0: Tis, N0, M0 (Surgery/+/-XRT to reduce recurrence/Endocrine therapy)
- Stage 1
- Stage 2
- Stage 3
- Stage 4:spread to other parts of the body, most often bones, lungs, liver, brain
- Pathologic Staging: Pt has undergone surgery
- Clinical Staging: Utilized in the neoadjuvant setting (annotated with yp)

TNM Staging “M”

- M0: No clinical or radiographic evidence of distant mets
- cM1: Distant mets detected by clinical and radiographic means
- pM1: Any histologically proven metastases in distant organs or if non regional nodes, metastases greater than 0.2 mm

Biomarkers:

- Estrogen
- Progesterone
- HER2

Ductal Carcinoma In Situ (DCIS):

Lobular Carcinoma In Situ (LCIS):

- Stage 0 (Carcinoma In Situ)
- There are two kinds of breast carcinoma in situ:
 - (DCIS) is a condition in which abnormal cells are found in the breast duct lining. These abnormal cells are noninvasive, which means they have not spread outside the duct to other breast tissues. In some cases, DCIS may become invasive and spread to other tissue
 - Lobular carcinoma in situ (LCIS) is a condition in which abnormal cells are found in the breast lobules. LCIS rarely becomes an invasive cancer. Having LCIS in one breast, however, does increase the risk of developing breast cancer in the other breast.

Breast Cancers:

- Invasive Ductal Carcinoma
- Invasive Lobular Carcinoma
- Inflammatory Breast Cancer
- Recurrent or Metastatic Breast Cancer (MBC): in regards to MBC even if the tumor is located in a different location it will still histologically be a breast cancer)
- Other Breast Processes include:
 - Phyllodes tumor-very rare breast tumor that begins in the connective tissue of the breast, different than carcinomas that start in the ducts or lobules
 - Paget's disease-rare tumor that begins in the ducts, spreads to the nipple, then spreads to the areola

Invasive Carcinomas include NOS, ductal, inflammatory, medullary NOS, medullary with lymphoid stroma, mucinous, Papillary (predominantly micropapillary pattern, tubular, lobular, Paget Disease and infiltrating, undifferentiated, squamous cell, adenoid cystic, secretory cribriform)

Breast Cancer Grades+Stages:

- Breast Cancer Grade is Different than Stage
- Pathology specimen grading
 - G1, G2, G3 (G3=poorly differentiated)

Broad overview of approaches to breast cancer treatment

- Local treatment:
 - Surgery-excision/LN sampling. Careful consideration given regarding the size of the cancer, size of the breast, timing of surgery, the ability of the individual to heal, reconstructive considerations, or any risk reducing strategies that may be desirable
 - Radiation-high energy particle waves that pass through the targeted tissue to damage the DNA of cancer cells and keeps them from duplicating/growing/functioning. There are different types of radiation

Broad overview of approaches to breast cancer treatment

- Systemic Treatment
 - Hormonal Therapy-indicated in hormone+ breast cancer. Examples include but are not limited to Tamoxifen or Anastrozole
 - Targeted therapy for HER2 positivity
 - Chemotherapy
 - Immunotherapy
 - CDK 4/6 inhibitors for metastatic disease- advertisements frequently seen on television
 - Other agents, including targeted therapy w/PARP inhibitors, Albelisib for PIK3CA, etc

Endocrine Therapy

- **SERMS:** Tamoxifen. Works to prevent the action of estrogen by blocking estrogen from binding to receptors inside the cancer cell. (oral daily)
- **Ovarian Suppression:** Goserelin/Leuprolide. Stops the ovaries from making estrogen over a period of time in premenopausal women, is an injection. Some women consider oophorectomy.
- **Aromatase Inhibitors:** Anastrozole/Letrozole/Exemestane. Blocks the aromatase enzyme from making estrogen in postmenopausal women and in premenopausal women that are using Ovarian Suppression
- **Estrogen Receptor Downregulator:** Fulvestrant. Reduces the action of estrogen by blocking estrogen from binding to receptors inside the cancer cell and destroys estrogen receptors. Fulvestrant is only used for advanced stage breast cancer in postmenopausal women, premenopausal women who are using ovarian suppression, and men in combination with a medicine to suppress production of androgens, including testosterone by the testes. Given by injection.
- Bicalutamide: AR positivity (TNBC)

HER2: Human epidermal growth factors receptor 2

- HER2: A growth promoting protein on the outside of all breast cells. In about 1 in every 5 breast cancers, cancer cells have an unusually high amount
- HER2-positive breast cancers have overexpression/amplification of the HER2 receptor.
- These cancers are typically treated with surgery and HER2-targeting antibodies. Often, chemotherapy is also recommended to decrease the chance that the cancer will return.
- Drug example: Trastuzumab is a type of targeted cancer therapy called a “monoclonal antibody”. Another name for this medicine is Herceptin. Trastuzumab seeks out cancer cells and attaches to the HER2 receptors, to prevent the cells from dividing and making new cancer cells. Can be given IV or SQ, Echo prior to dosing and about every 3 months while on therapy or an Echo about every 6 months in the metastatic setting.

General supportive care and consideration for those diagnosed with breast cancer:

- Anti emetics, growth factor support, scalp cooling, medications to prevent hypersensitivity reactions
- Fertility considerations/pregnancy status (Fertility counseling, egg preservation, ovarian suppression)
- Psychosocial Oncology
 - Licensed individuals to assist with the specific needs of those diagnosed with breast cancer (fear of recurrence, “new normal”)
 - Sexual Health/Body Image
 - AYA (addressing the needs of the younger population diagnosed with cancer)
- Spiritual Needs
- Financial Assistance-financial toxicity associated with cancer diagnosis
- Smoking cessation
- Geriatric concerns

Multidisciplinary approach at SSCBC

- Surgical Oncology
- Medical Oncology with Lab (1st/4th floor)+Infusion availability
- Plastic Surgery/Reconstruction
- Radiation Oncology
- Psychosocial Oncology
- Chaplain
- Social Services
- Medication Assistance
- Expert nursing support in all disciplines listed above
- Multimodality Conference
- Hope's Boutique
- Radiology, inclusive of breast diagnostic imaging, CT, MRI, Echo, XRay

References:

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- Phi XA, Tagliafico A, Houssami N, Greuter MJW, de Bock GH. [Digital breast tomosynthesis for breast cancer screening and diagnosis in women with dense breasts - a systematic review and meta-analysis.](#) BMC Cancer.18(1):380. doi: 10.1186/s12885-018-4263- PMID: 29615072. 2018 April 3

As always you are welcome to join us in Step Up for Stefanie or Pelotonia!
Questions?



Creating a cancer-free world. *One person, one discovery at a time.*

Case Study:

- CM is a 31 year old PRE-menopausal female who was referred to OSU Diagnostic Breast Clinic June 2021 after being seen by her GYN for routine exam. GYN noted breast changes and pt c/o LEFT breast “dent” and “pulling in of the skin” She did NOT palpate a mass in the area and had no other breast concerns. Some morning HA that she relates to wisdom teeth that need removed. Otherwise feeling well with stable mood, energy, appetite. LMP noted.
- CM advised she had noted some left breast changes in November 2020. She recalled a hx of falling forward and hitting her ACW while chasing her dog.
- CM denies hx of prior breast concerns
- CM denies family hx of breast/ovarian cancer

CM, continued

- PSH/PMH: depression, panic attack, D&C, benign skin biopsy, miscarriage
- Non Smoker. OFF oral contraceptives and actively attempting to become pregnant
- Imaging: Provide details to the radiologist-skin thickening, recent vaccines, hx trauma, etc.
 - B/L Diagnostic Mammo with Tomo (dense breasts given age)+US:
 - Scattered areas of fibroglandular density. In the lower inner left breast near the site of interest per the patient there is an area of ?distortion and possible obscured mass. Adjacent to and abutting masses is an area of fat density to be pursued with ultrasound.
 - Ovoid mass in the inner right breast at posterior depth will be pursued with US
 - Left Breast US: located 9-10 cmfn there is a mixed echogenicity mass that includes an area of distortion/irregular hypoechoic mass measuring 1.9 x 1.3 cm, abutting to this is an area with appearance of fat necrosis. When measured together measures up to 2.6 cm x 1.7 cm, felt to be suspicious

CM, continued

- PE unremarkable other than breast findings
- Right Breast: scattered dense tissue throughout. No definitive palpable masses. I was unable to discern the mass noted on the right breast US@2:00
- Left breast: scattered dense tissue throughout. There is an approximately 2-3 cm irregular mass about 10-12 cmfn at 8-9:00, some mild skin retraction adjacent to the areolar complex in the L LIQ. No other definitive palpable masses

CM, continued

- Right breast US: 2:00 axis Z2-3, 11-12 cmfn there is an indistinctly marginated parallel mass with measures 1.1 cm, located at some depth within the breast. No definite internal vascularity. Felt to be indeterminate.
- Sum impression of imaging:
 - In the area of concern in the left breast there is a suspicious left breast mass. Associated with this is some change that could be posttraumatic in nature, however, there is also an element which has the appearance of an irregular mass. LEFT US guided biopsy is recommended for definitive diagnosis.
 - Indeterminate mass in the inner right breast for which US guided biopsy is recommended as well.
 - BiRads 4: recommendations tissue diagnosis
- Biopsy procedure explained and advised would call with pathology results.

CM, continued

- OSU Pathology:
 - **Left breast**, 8-9:00, clip, US guided vacuum assisted bx:
 - Invasive Ductal Carcinoma, G3, 2 cm in greatest length. Ductal Carcinoma in Situ
 - ER 90% strong intensity, PR 75% strong intensity, HER Negative by IHC 0, HER2 FISH pending
 - **Right Breast**, 2:00, z2-3, mass, Fibroadenoma (benign)
 - Imaging and Pathology deemed concordant. **Given age, consider breast MRI for further evaluation.**
 - Pt is called and the multidisciplinary panel is initiated. Given pt and spouse actively attempting pregnancy, I requested she stop attempts at this time until evaluated by disciplines and definitive treatment plan determined. (?needs for scans, radiation receipt, contrast, etc)

CM, continued

Surgical Consultation (1st)

- Met w/surgical oncology
 - Options discussed including breast conservation with lumpectomy (+radiation), mastectomy, immediate/delayed reconstruction in the event she chose mastectomy
 - Discussed node sampling, technique, risk of rxn w/blue dye, lymphedema.
 - Pt was interested in lumpectomy and sentinel lymph node biopsy
 - MRI to evaluate extent of disease recommended
 - Genetic testing recommended as a positive results may be impactful in regards to potential for risk reducing strategies
 - Referral to Oncofertility
 - To be seen by medical oncology, radiation oncology, plastics

CM, continued

- Established Care with medical oncology. HER2 status is negative.
- Determined LEFT Stage 1A IDC, G3, measuring 2 cm ER+ PR+, HER2 negative
- **Clinical** prognostic staging 1A cT1c, cN0, Mx (not assessed)
- Recommend proceed with breast MRI-to evaluate if there is abutment to the chest wall
- Recommended upfront surgery and fertility preservation/egg harvesting
- Consider Oncotype to assist with determining if any benefit to adjuvant chemo therapy. (depending on LN status). If did need chemo, could induce menopause with zoladex for ovarian preservation
- Recommend endocrine therapy, Youth Referral (AYA)

CM, continued

- Encounter with Fertility
- Pt/spouse trying to conceive since March, further details reveal that she had an *ectopic* pregnancy November 2020
- Discussed egg and embryo freezing with success rate 50% and 40% respectively, cost of egg freezing \$5,000-8,000 and the cost of embryo \$5,500-12,000 regionally
- Ovarian tissue cryopreservation
- Adoption/Egg donation
- Discussed baseline testing to assess ovarian reserve, disruption of endocrine therapy, suppression, contraception, sexual function

CM, continued

- Met with radiation oncology
- Discussed options for local regional treatment. Advised that mastectomy and breast conservation w/lumpectomy+radiation yield equivalent local control and survival
- Discussed risk for permanent complications from radiation including skin/pigment change, appearance-fibrosis, radiation pneumonitis when a portion of the ipsilateral lung is included in the field, and risk for secondary cancer (<0.1%)

CM, continued

- Met with Plastic Surgery
- Discussed that this is an optional process
- Options include implant based reconstruction, Autologous abd based reconstruction, Latissimus/implant based reconstruction
- Pt remains considering lumpectomy without oncoplastic rearrangement
- Awaiting genetic results

CM, continued

- B/L breast MRI completed.
- MRI with spiculated mass with non mass enhancement in LIQ left breast, additional indeterminate small focus lower outer left breast. If breast conservation is being considered, bx recommended.
- Pt advised that if she desired breast conservation than 2 additional MRI guided biopsies will be needed. Still considering surgical plan. Genetics remains pending.
- Pt now interested in mastectomy and SLNBx based on MRI findings.
- Genetics reveals a VUS in the SDHA gene and she does NOT carry a pathologic mutation.
- Ongoing meetings with fertility
- Now scheduled for a LEFT mastectomy SLNBx with DIEP flap August 2021

CM, continued

- PostOp Pathology:
- Invasive Ductal Carcinoma **4.5 cm** in greatest dimension ER+ PR+ HER2-. Surgical margins negative. Nodal assessment demonstrated 1/8 lymph nodes. Total #nodes: 8, Sentinel Nodes: 2, #micromets: 1
- Cancer Staging:
 - Clinical Stage: cT1c, cN0, cM0, ER+, PR+, HER2-
 - Pathologic Stage: Stage IIa pT2pN1b(sn), cM0, G3, ER+ PR+, HER2-

CM, continued

- Return to medical oncology, recovering from surgery and has completed egg harvesting and fertility treatment
- Now Planned for weekly Taxol, Adriamycin, Cytosan and Zoladex
- Plan for port placement, ?scalp cooling, echo, labs, staging scans, give any vaccines that are needed prior to tx start if pt amenable
- Eval post op healing prior to chemo start, drains out, well approximated
- Unfortunately, pt developed flap necrosis and returned to the operating room for debridement w/plastics September 2021. Given delay in treatment to allow for wound healing, **anastrozole started**
- Staging scans were negative for distant disease, Echo wnl
- **End of October 2021**, started weekly paclitaxel with scalp cooling and Leupron and experienced mild infusion reaction

CM, continued

- So how does this patient respond when her active treatments are completed and she moves on to survivorship? How will she feel when she returns to her “new normal?”
- What is “survivorship”
- Cancer survivorship begins the day of diagnosis and continues throughout your lifetime. Survivorship care provides support for the physical, emotional, and practical issues (job, insurance, financial) of living with cancer. Our goal at The James Cancer Hospital is to help manage these issues to optimize your quality of life, longevity and general wellbeing.

References:

- National Comprehensive Cancer Network (NCCN),
NCCN.org
- James Comprehensive Cancer Center,
<https://search.osumc.edu/Pages/onesourceresults.aspx?k=breast%20cancer>

