

Breast Management Issues for Clinicians

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Medical Advisor

Women's Wellness Connection



Objectives

- Describe a thorough breast health history, including risk assessment for factors that place women at above average risk for breast cancer
- Review the normal anatomy of the breast
- Describe the core competencies of a thorough clinical breast examination
- Apply **new** algorithms for appropriate follow-up of common suspicious clinical findings
- Identify strategies to avoid delay in diagnosis of breast cancer, including use of algorithms



Revised (2011)
Breast Cancer Diagnostic Algorithms
Developed by
California Department of Public Health
and Adopted by WWC

Available at www.qap.sdsu.edu



Estimated Cancer Incidence in Women (US, 2010)

- Breast - 28%
- Lung – 14%
- Colon & rectum – 10%
- Endometrium – 6%
- Thyroid – 5%
- Non-Hodgkin lymphoma – 4%
- Melanoma – 4%
- Ovary – 3%

Breast Cancer Risk by Age

Current Age	Chance of Breast Cancer in Next 10 Years
20	1/1,760
30	1/229
40	1/69
50	1/42
60	1/29
70	1/27
Lifetime	1/8

Risk Assessment

- Purpose: To identify women who would benefit from more personalized plans for risk reduction and screening
- Biggest risk factors: female gender, age, family history

Slight to Moderate Risk (<3x average)

- History of breast lesion without atypia
- Reproductive Factors
 - Menarche < age 12
 - Menopause > age 55
 - Nulliparity, or first birth > age 30
 - Combined HRT use for > 2-5 years
- One first degree relative with breast cancer \geq age 50
- Lifestyle
 - 2-5 alcoholic drinks per day
 - Obesity, especially after menopause



Consider Further Assessment with Gail Model

- Age
- Age at menarche
- Age at first live birth
- First-degree relatives with breast cancer
- Breast biopsy history
- Race/ethnicity



5-yr risk \geq 1.67% \rightarrow enhanced measures

Enhanced Measures

- CBE at least once a year
- Consider annual mammogram beginning at an earlier age
- Risk reduction counseling
- Consider referral to breast specialist for further assessment



Strong Increased Risk ($\geq 3x$ average)

- Personal history of
 - Breast cancer
 - DCIS or atypical ductal hyperplasia
 - Lobular hyperplasia or carcinoma in situ
- Recommendations
 - CBE at least once a year
 - Annual mammogram after diagnosis
 - If diagnosed < age 45, refer to genetic counselor



- History of therapeutic chest radiation before age 30 (for Hodgkin's disease, etc.)
 - CBE at least once a year
 - Annual mammogram beginning 8-10 years after therapy
 - Consider annual MRI
 - Refer to breast specialist
- High breast density (>75% on mammogram)
 - CBE once a year
 - Consider annual mammogram



Strong Family History

- One first- or second-degree relative with breast cancer before age 50
- Two or more affected relatives
- Recommendations:
 - CBE at least once a year
 - Annual mammogram beginning age 40
 - Refer to genetic counselor and/or breast specialist

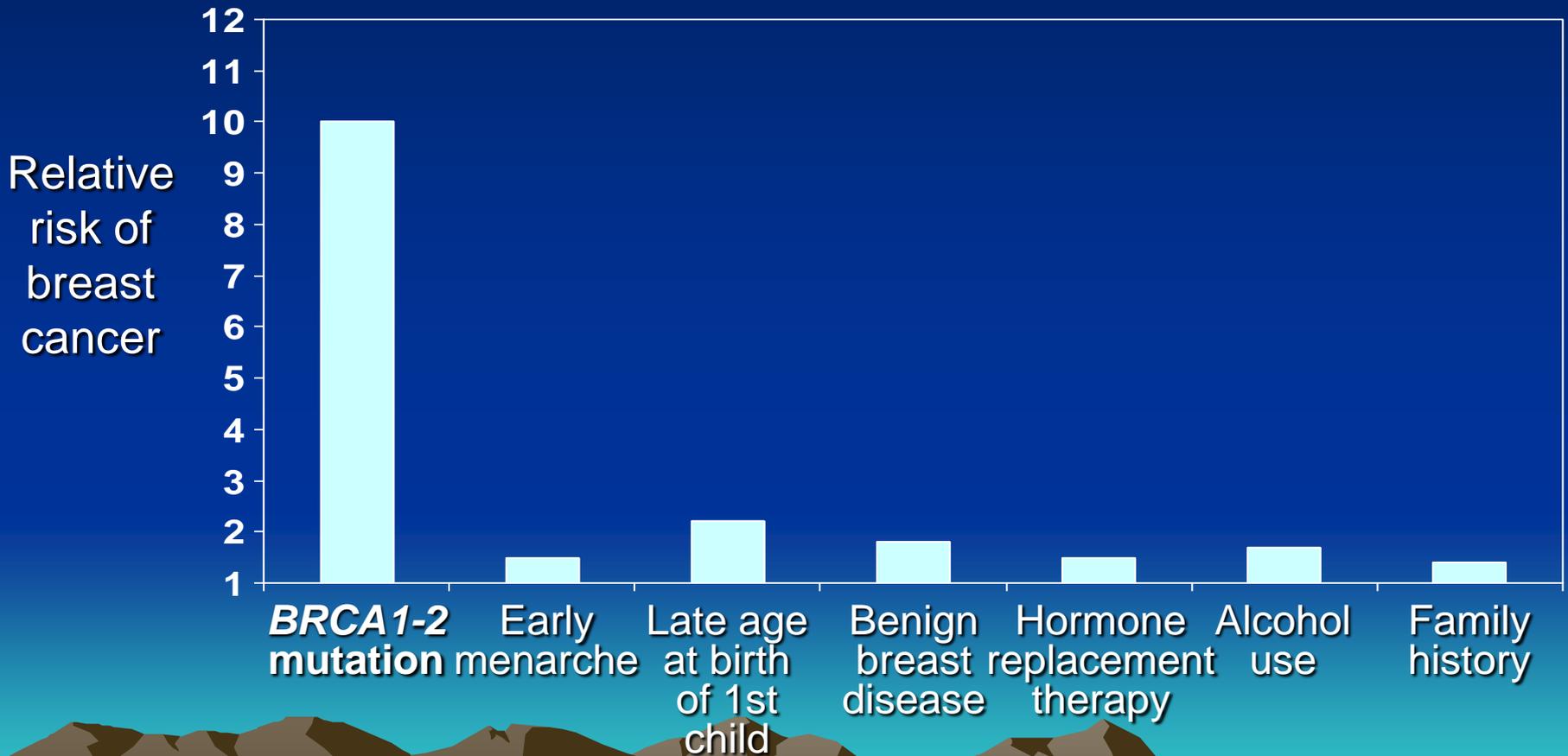


Genetic Factors

- Known inherited mutations (especially BRCA 1 and 2) account for 5-10% of breast cancer
 - Premenopausal onset
 - Associated with ovarian cancer
 - Most common in Ashkenazi Jewish women
- Up to 85% risk of breast and/or ovarian cancer



Relative Risk of Breast Cancer



Indications for Genetic Testing/Counseling

- FH of breast cancer < age 45, in two or more close relatives < age 50, in 3 or more relatives any age, or in a male relative
- FH of ovarian cancer
- Breast and ovarian cancer in same relative
- Ashkenazi Jewish heritage with breast or ovarian cancer in family
- Clustering of breast with multiple cancers of all types in family



Recommendations for Genetic Mutation Carriers

- CBE every 6 months
- Annual mammogram and MRI beginning at age 25 or based on earliest diagnosis in family
- Refer to breast specialist



Tailored care proven to reduce mortality

*Also need surveillance/prevention methods for ovarian cancer

Breast Health History

- Breast changes: detailed description, duration, association with menstrual cycle
 - Discomfort or pain
 - Lumps or swelling
 - Nipple discharge
 - Skin or nipple changes
- Identification of screening practices (SBE, CBE, mammograms) and results



HISTORY



**Cancer Detection Programs:
Every Woman Counts**

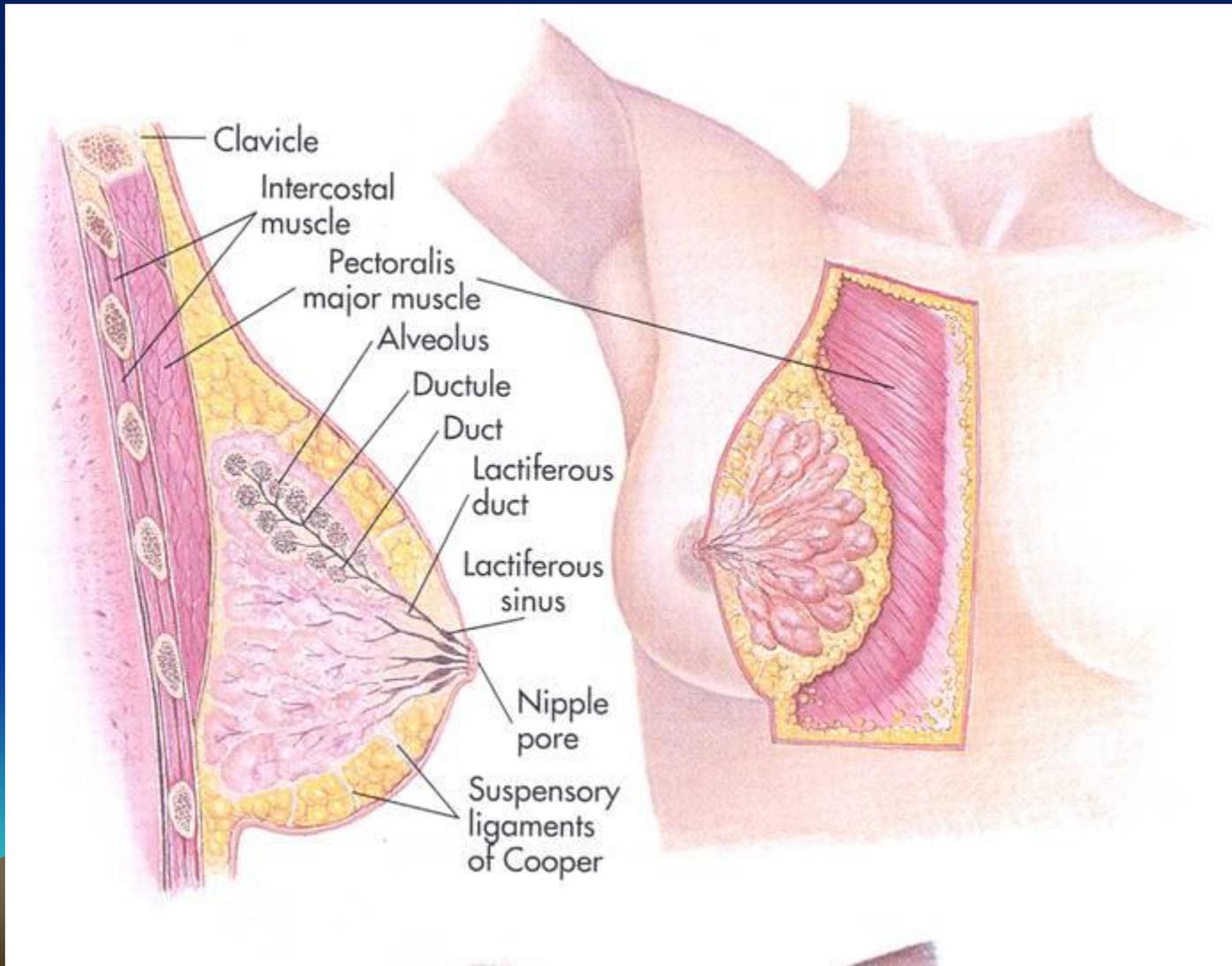
- ⌘ Health history
questions regarding
age, family history,
personal history,
reproductive history
- ⌘ Review patient's
concerns or symptoms
- ⌘ Assess actual and
perceived risk

The Clinical Breast Exam (CBE)

Evidence supports the independent contributions of CBE and mammography in screening and diagnosis of breast disease and suggests CBE may play an important role for women with cancer not detectable on mammography or not age appropriate for mammography.

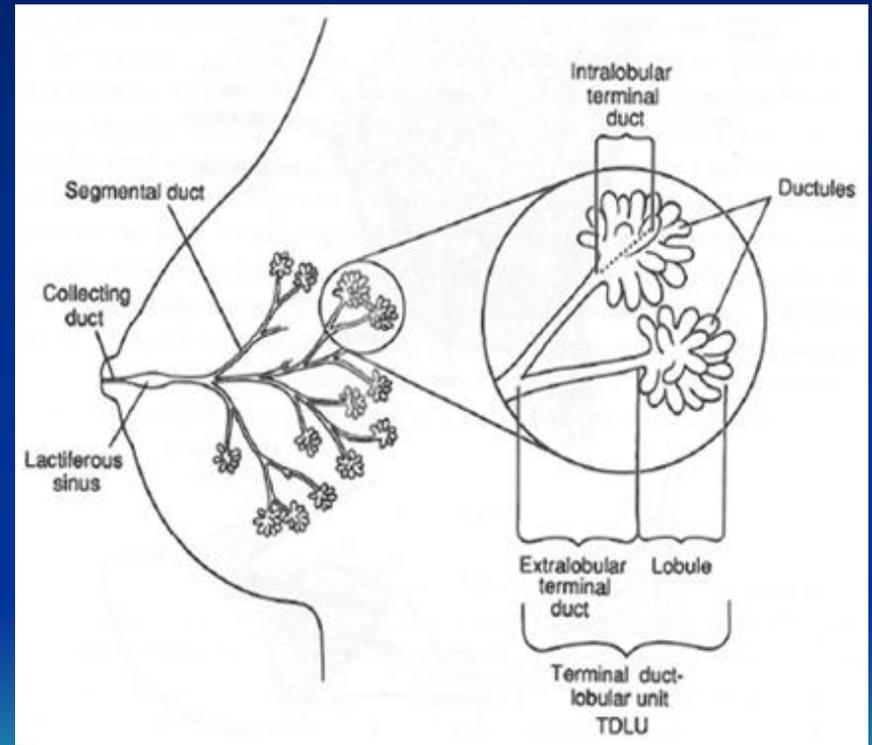


Anatomy of the Breast

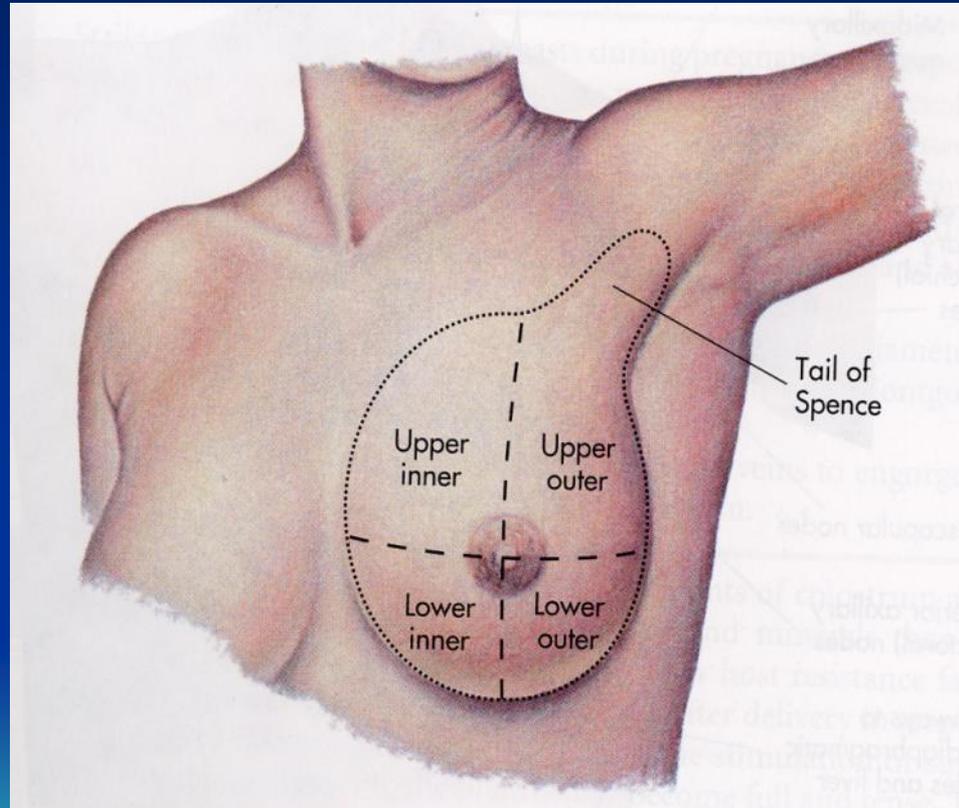


Anatomy of the Breast

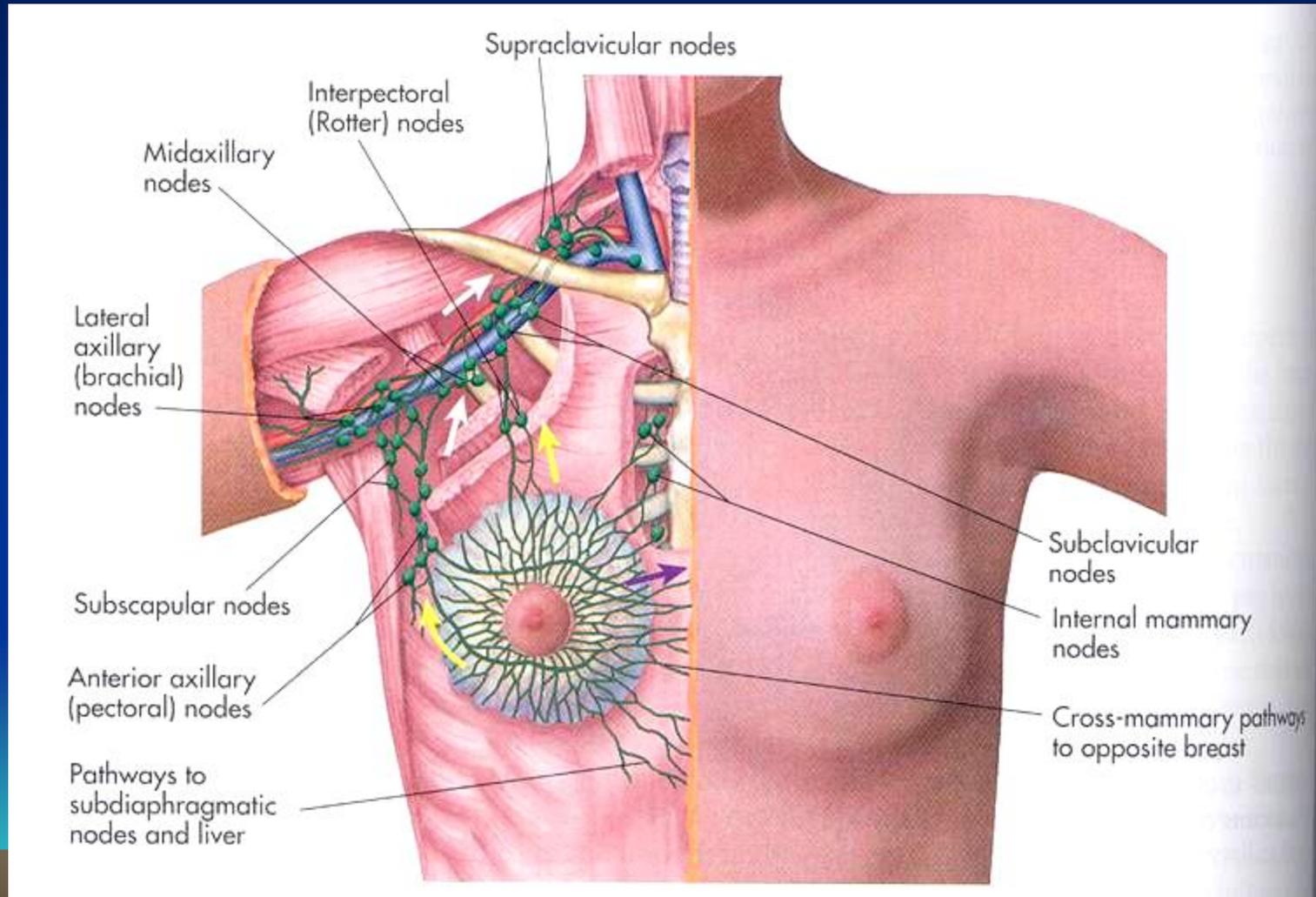
- Most breast cancer originates in the terminal ductal lobular unit (TDLU)



Anatomy of the Breast



Anatomy of the Breast



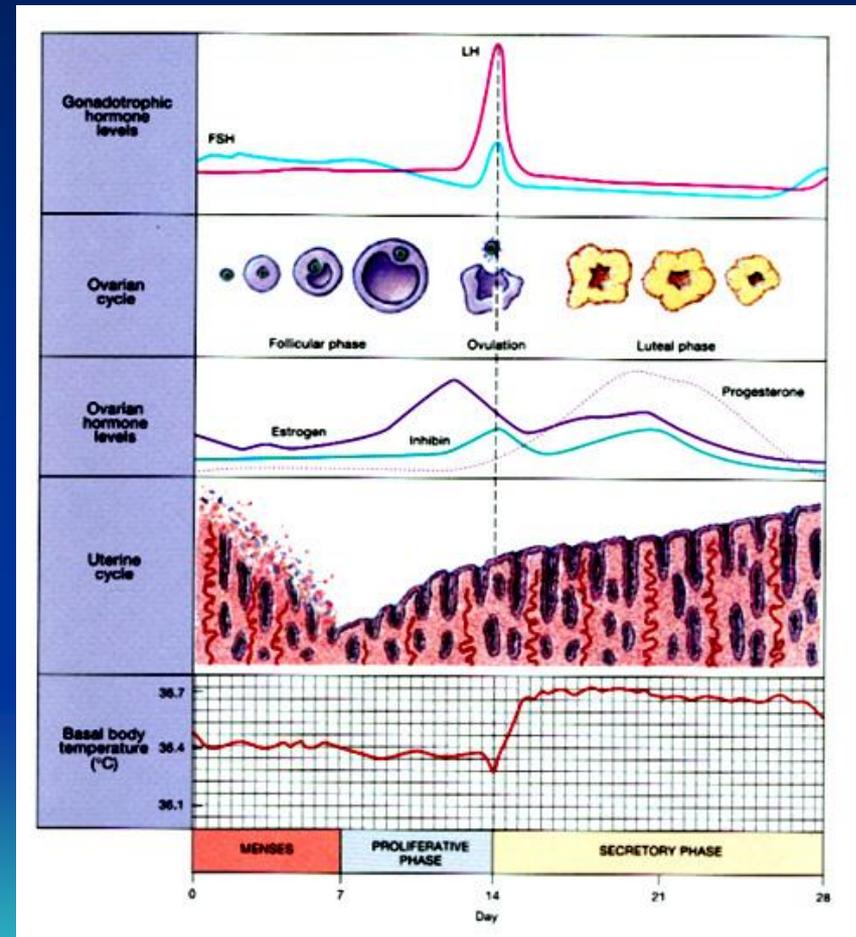
Clinical Points

- All women, regardless of breast size, have the same number of lobes, 15-20, and 6-10 major ducts exiting the nipple
- Half of the terminal ductal lobular units (TDLU) occur in the upper outer quadrant → ~50% of breast cancer occurs there
- Another 18% of breast cancer occurs around or under the nipple



Cyclic Breast Changes

- Increasing estrogen and progesterone levels after ovulation → Increased edema and inflammation → Increased breast swelling, tenderness, and prominence of glands
- Best time for exam is post-menstrual, when hormone levels are at their lowest

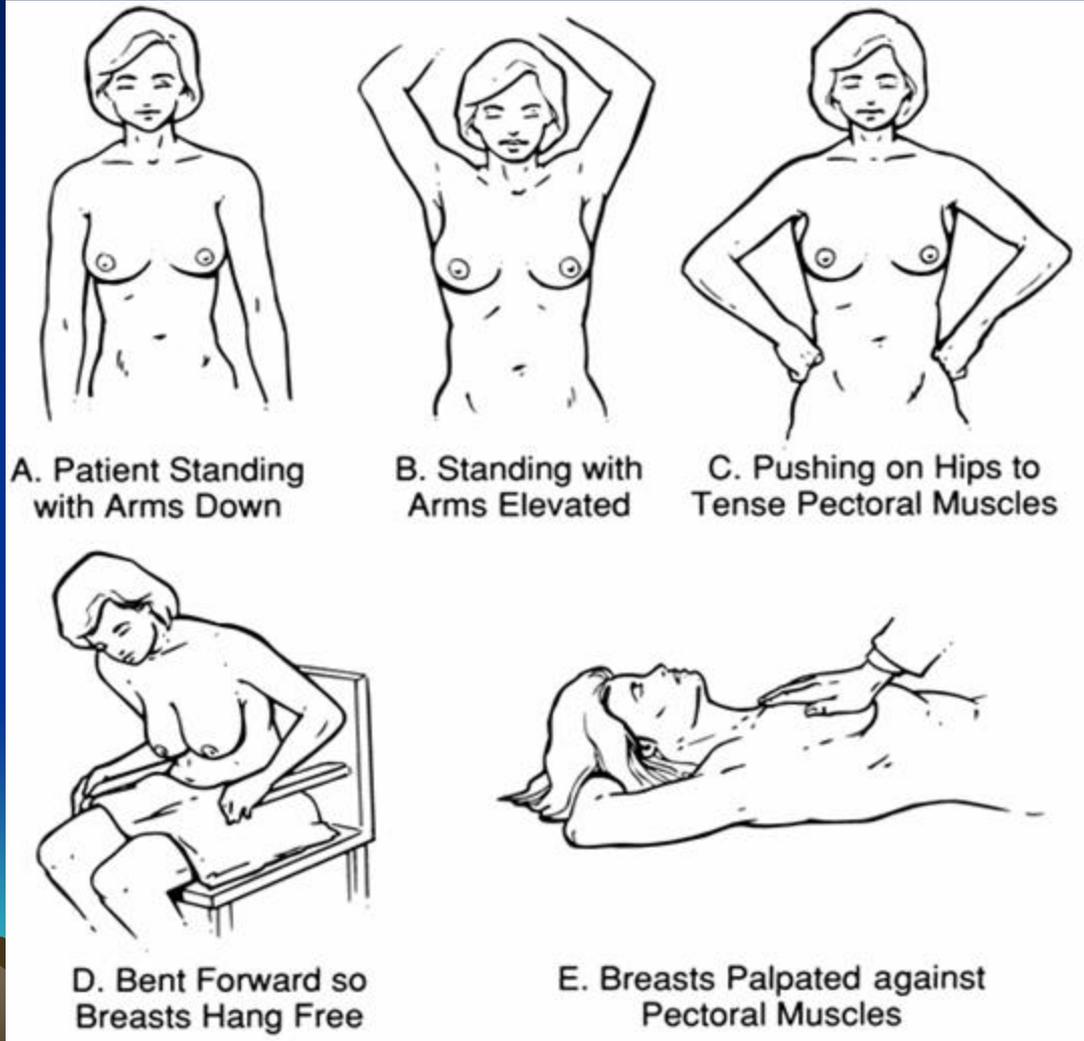


The Clinical Breast Exam

- Observation
 - In different positions
- Palpation
 - Lymph nodes
 - Entire breast, rotating fingers
 - Vertical strip (“Lawn mower”) technique
 - Superficial then deep
 - Tail of Spence (Axillary Tail)
 - Nipple

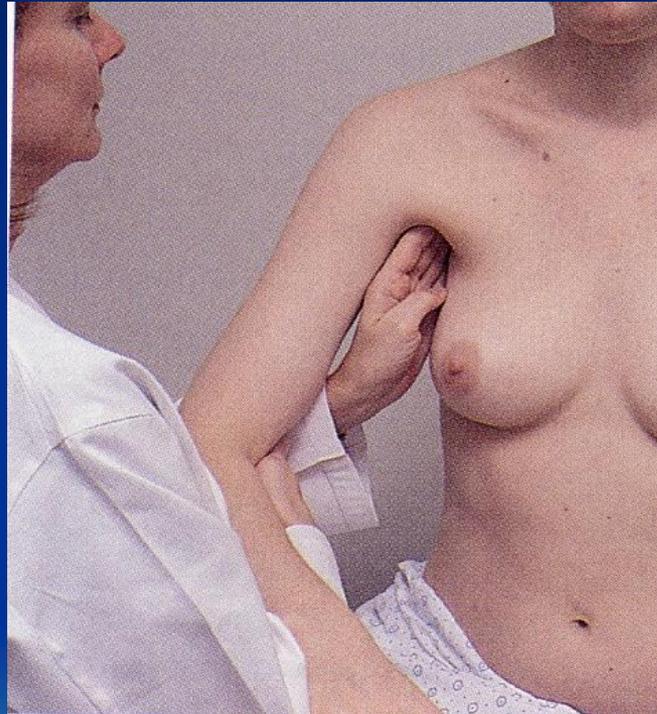


The Clinical Breast Exam: Observation



The Clinical Breast Exam: Palpation for Lymph Nodes

- Axillary



- Clavicular

PATIENT POSITIONING

Cahan



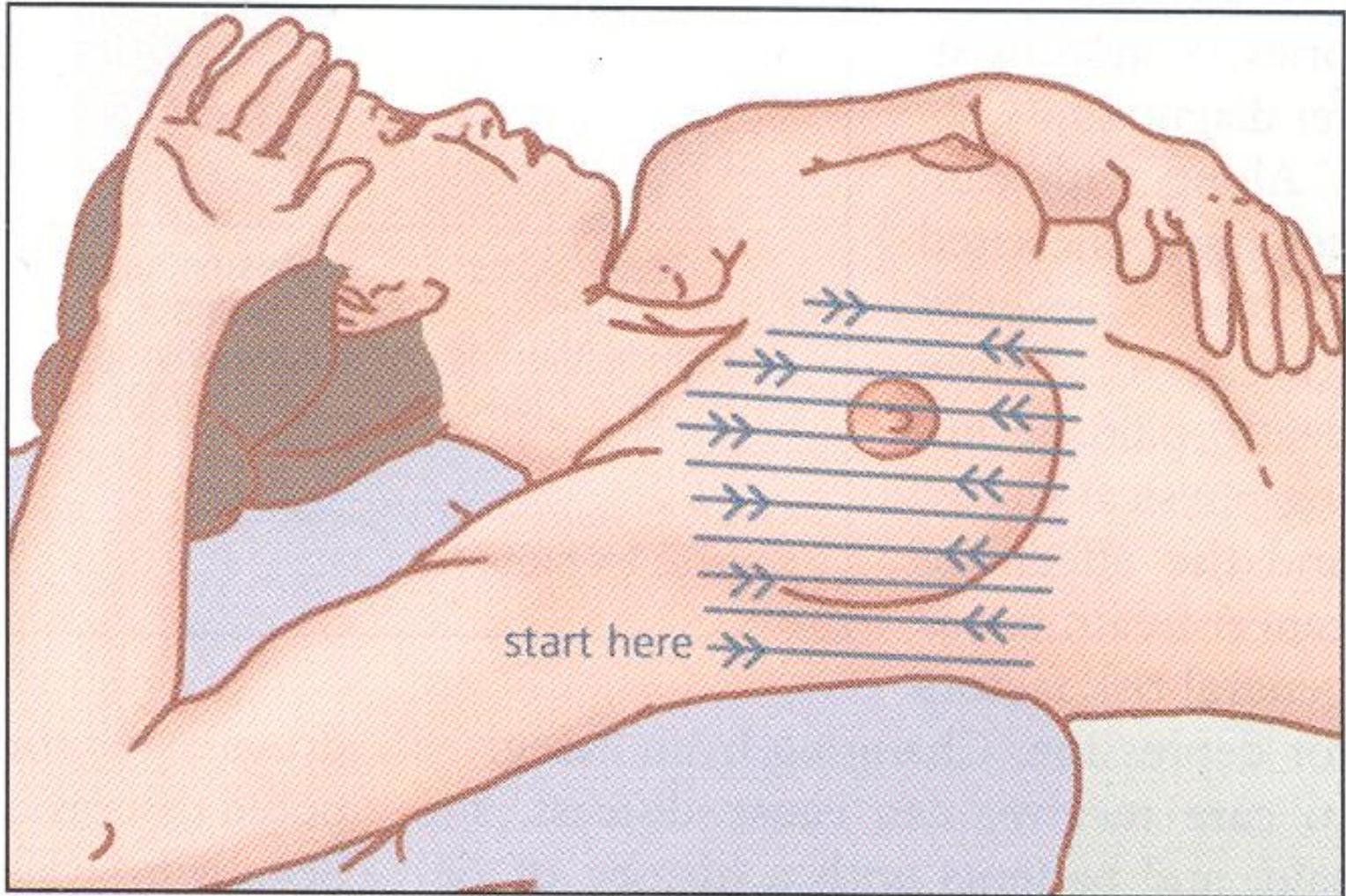
- ⌘ Hip elevated 90°
- ⌘ Knees flexed
- ⌘ Support lower back or shoulder
- ⌘ Elbow - 90° angle, back of hand on forehead

Supine



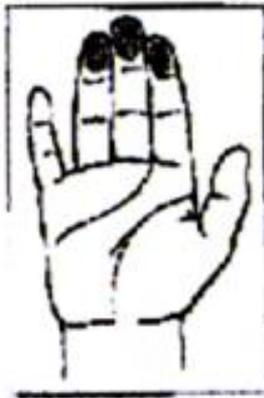
- ⌘ Elbow - 90° angle

The Breast Exam: Palpation



The vertical strip pattern allows consistent examination of the entire breast tissue area across the chest wall.

PALPATION



Pads of three middle fingers



Dime size circles

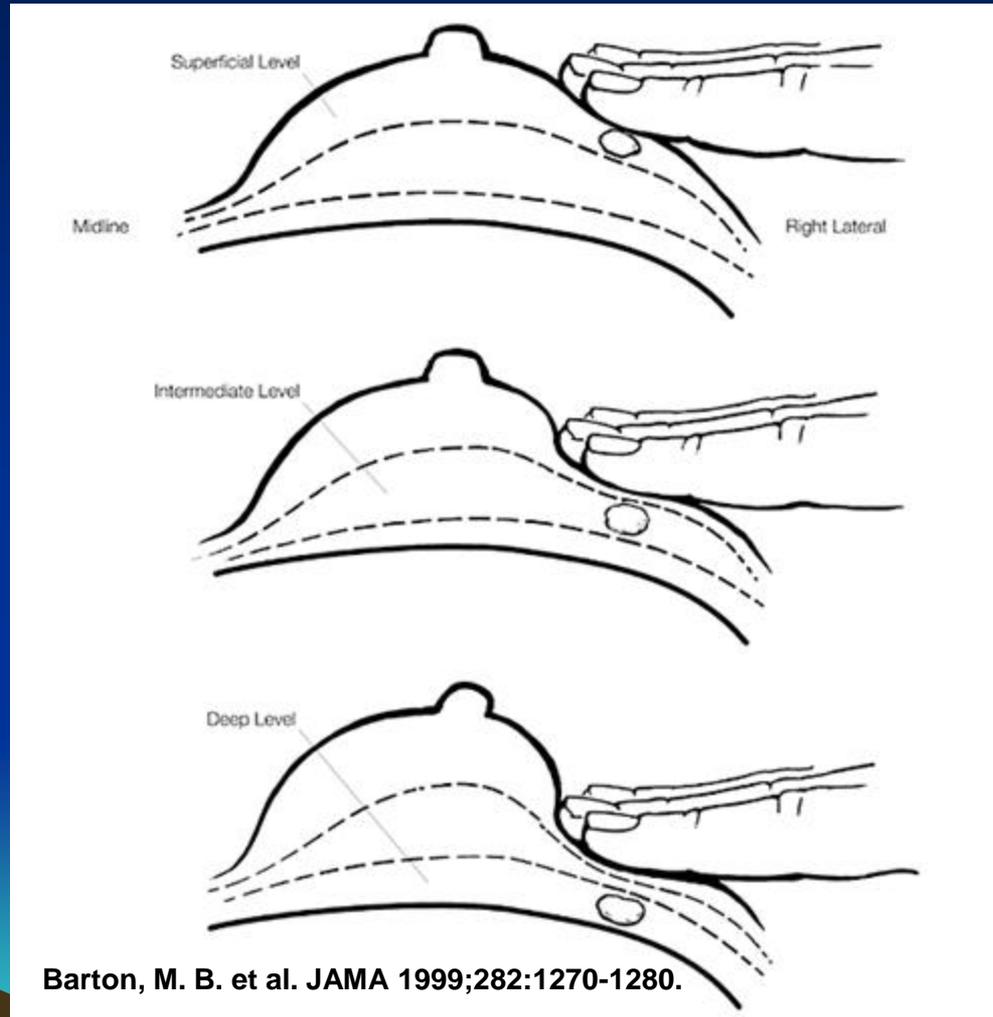
JAMA, Vol. 282, No 13, Oct. 1999



Slide or walk between palpations without lifting fingers

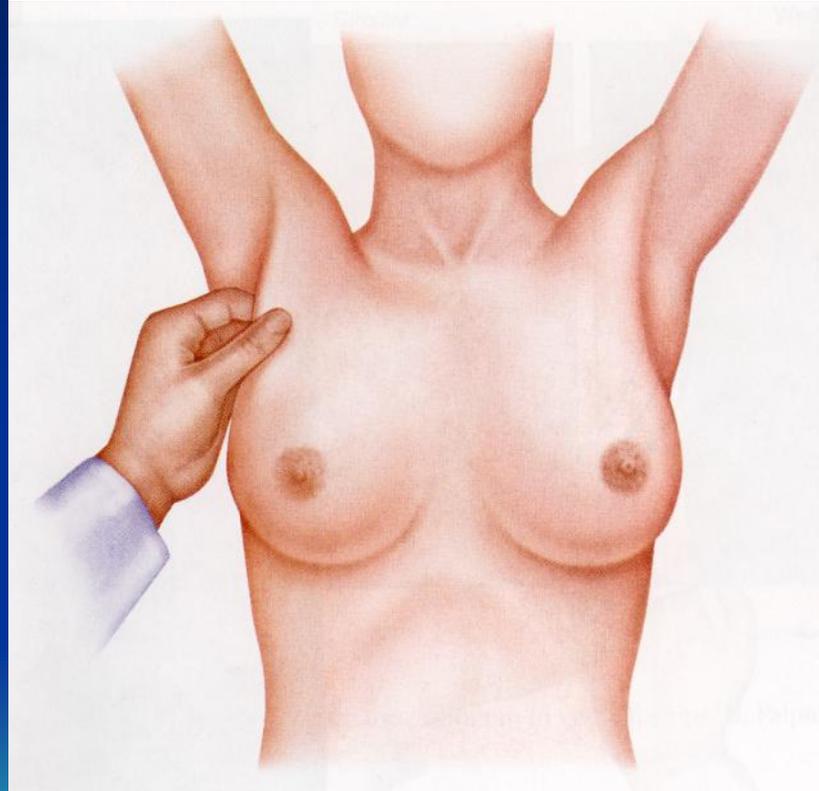
Levels of Pressure for Palpation of Breast Tissue Shown in a Cross-Sectional View of the

Palpation of the Breast

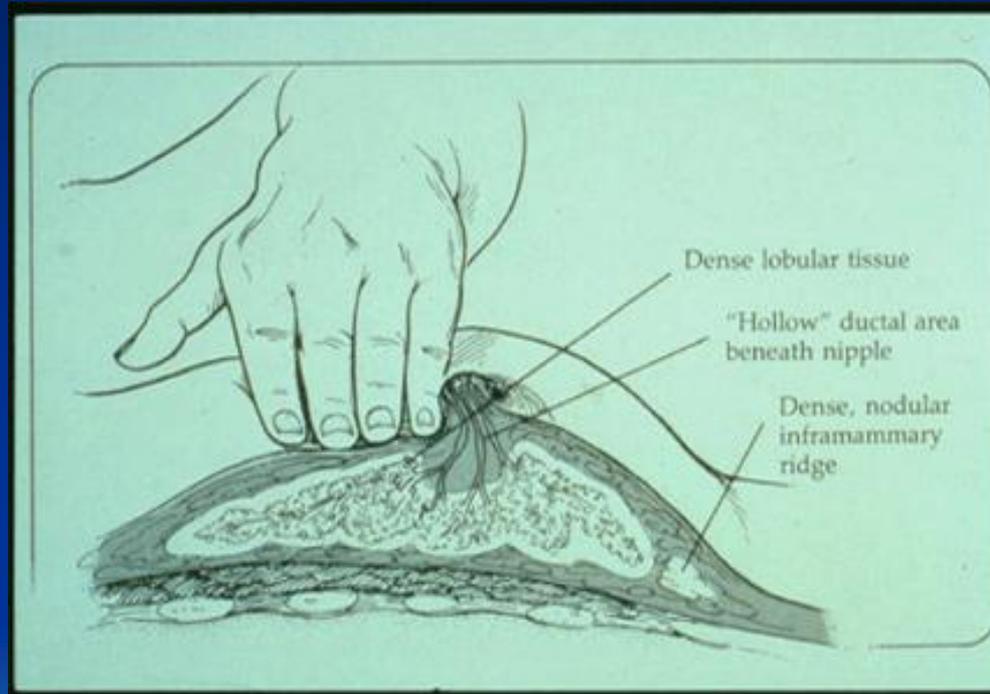


*For irregularities, compare symmetry between the breasts

The Clinical Breast Exam: Palpation of Axillary Tail

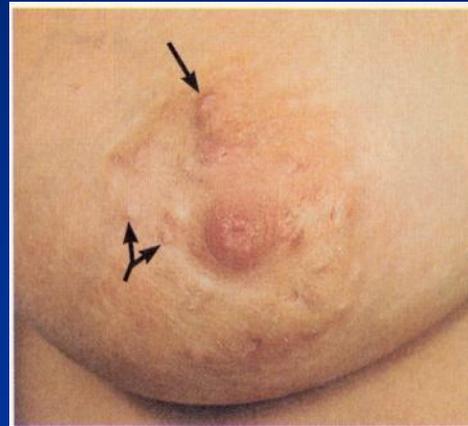


Palpation of the Nipple



Benign Nipple Findings

- Montgomery tubercles



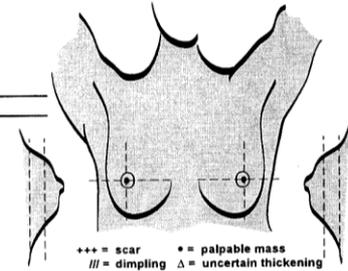
- Duct ectasia – blocked, dilated ducts containing necrotic debris

Describing a Breast Mass

- Location
- Shape
- Margins
- Size
- Consistency
- Mobility
- Tenderness



CBE RESULTS DOCUMENTATION FORM

Breast Health History	Purpose of Visit <input type="checkbox"/> Annual screening <input type="checkbox"/> Recall <input type="checkbox"/> Short-term F/U ___ mos. <input type="checkbox"/> Other: _____	Date of Last CBE _____ <input type="checkbox"/> Negative <input type="checkbox"/> Abnormal <input type="checkbox"/> Unknown	Breast Cancer History Mother/Sister/Daughter Age(s) ___/___/___ Self-Age ___ <input type="checkbox"/> R <input type="checkbox"/> L <input type="checkbox"/> Lumpectomy <input type="checkbox"/> Radiation <input type="checkbox"/> Mastectomy <input type="checkbox"/> Chemo <input type="checkbox"/> Axillary node dissection			
	Patient Concerns <input type="checkbox"/> Lump <input type="checkbox"/> Nipple discharge <input type="checkbox"/> Nipple skin retraction <input type="checkbox"/> Erythema / swelling <input type="checkbox"/> Rash / scaling <input type="checkbox"/> Breast pain <input type="checkbox"/> Other: _____ <input type="checkbox"/> None	R L Cyclic <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Related Breast History _____ Date: Last menstrual period _____ Date: Previous biopsy(s) _____ Date: Start HRT _____ Date: Augmentation/reduction _____ Date: Reconstruction			
Physical Exam	Breasts Fine nodularity Dense nodularity Skin edema Nipple/aerolar change Tenderness Nipple discharge Mass Symmetry	R L O'Clock Distance from Nipple Depth of Pressure <input type="checkbox"/> <input type="checkbox"/> _____ <input type="checkbox"/> <input type="checkbox"/> _____ Yes No <input type="checkbox"/> <input type="checkbox"/>				
	Discrete Mass Shape <input type="checkbox"/> round <input type="checkbox"/> well-defined <input type="checkbox"/> oval <input type="checkbox"/> ill-defined <input type="checkbox"/> irregular	Margins <input type="checkbox"/> well-defined <input type="checkbox"/> ill-defined	Size <input type="checkbox"/> <5 mm <input type="checkbox"/> 5-10 mm <input type="checkbox"/> 1-2 cm <input type="checkbox"/> 2-4 cm <input type="checkbox"/> >4 cm	Texture <input type="checkbox"/> soft <input type="checkbox"/> hard <input type="checkbox"/> rubbery	Mobility <input type="checkbox"/> fixed <input type="checkbox"/> mobile	Other <input type="checkbox"/> _____
Results	Lymph Nodes WNL Enlarged Fixed Mobile	Axillary R L <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Clavicular Supra Infra R L R L <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	CBE Result Date _____ <input type="checkbox"/> No breast abnormality <input type="checkbox"/> Benign breast condition <input type="checkbox"/> Probably benign breast condition <input type="checkbox"/> Abnormal: suspicious for cancer	Imaging Referral Date _____ <input type="checkbox"/> Screening mammogram <input type="checkbox"/> Diagnostic mammogram <input type="checkbox"/> Ultrasound <input type="checkbox"/> Other	Patient Education <input type="checkbox"/> Importance of annual screen <input type="checkbox"/> Referral follow-up <input type="checkbox"/> Breast self-examination <input type="checkbox"/> Other
	Overall Summary _____					
Case Management	Date _____ CBE & imaging results concordant _____ CBE & imaging discordant _____ Patient notified of mammogram results _____ Patient informed and referred _____ Referral for risk assessment counseling	Date _____ Radiology/imaging workup _____ Surgical consult _____ Return for CBE in 1 2 3 mos. _____ Return for CBE in 6 mos. _____ Return in one year for annual CBE Other _____				
	Final Diagnosis Date _____ Diagnosis _____ Clinician Signature _____					

PLAN OF ACTION & PATIENT ED



- ⌘ Determine next steps for abnormal results
- ⌘ Stress importance of adherence to f/u
- ⌘ Emphasize rescreening
- ⌘ Impart cultural sensitivity
- ⌘ Discuss/teach BSE

DOCUMENTATION

- ⌘ Patient concerns
- ⌘ Exam findings
- ⌘ Plan of action
- ⌘ Referrals made
- ⌘ Patient education
- ⌘ Results notification
(tests/procedures)



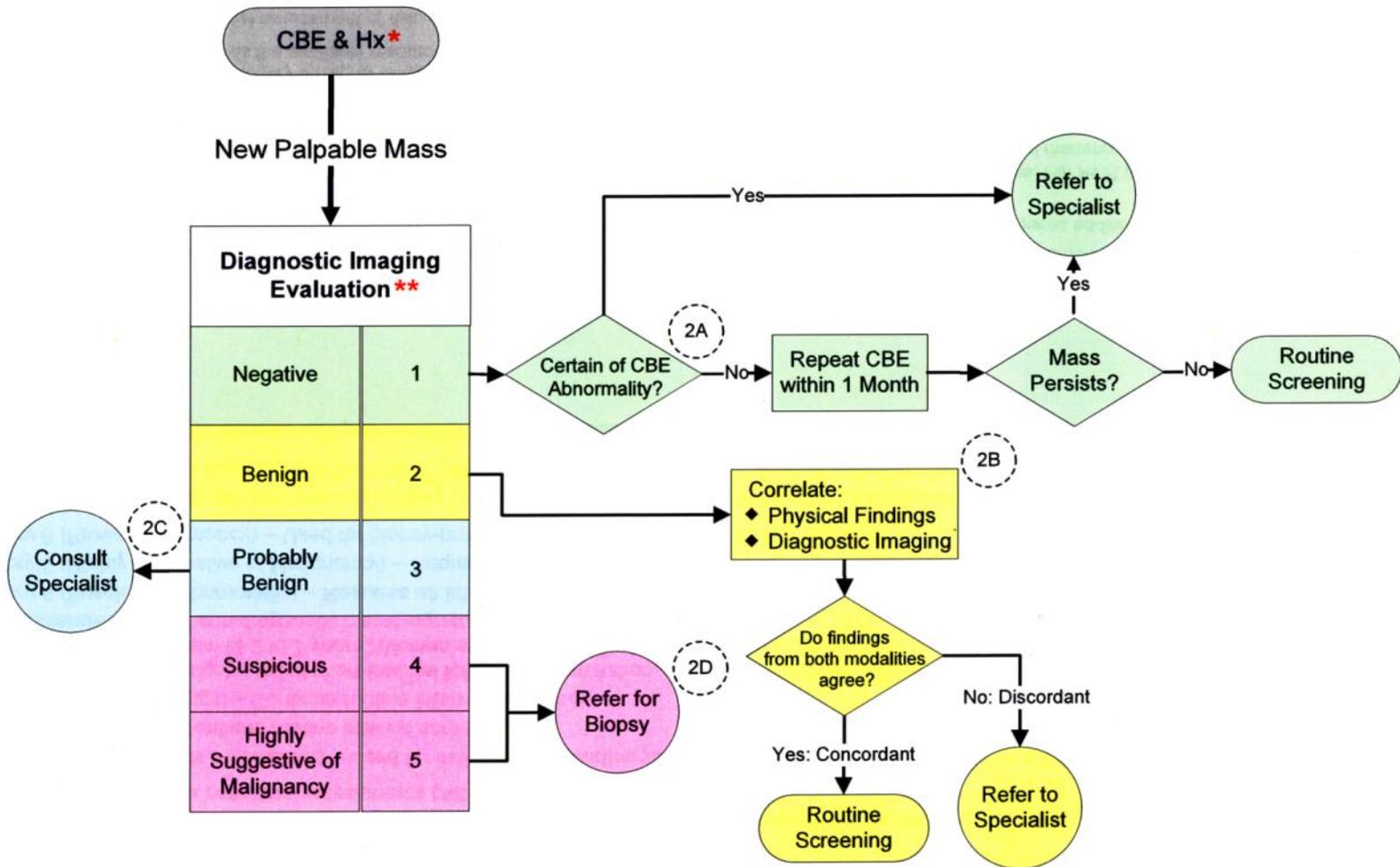
Discreet Mass

- ✓ Location
- ✓ Size
- ✓ Shape
- ✓ Margins
- ✓ Mobility
- ✓ Consistency
- ✓ Tenderness

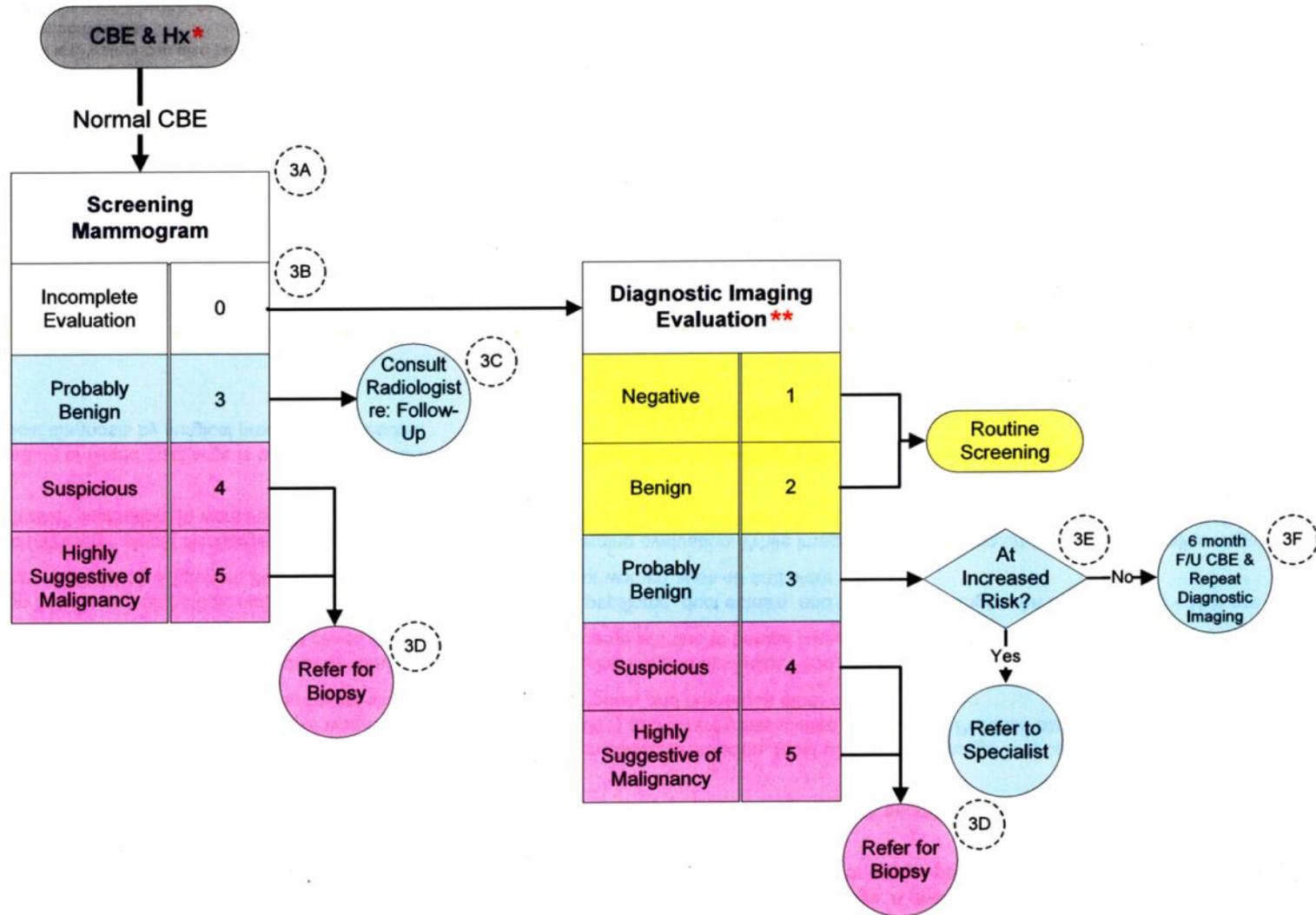
The New Algorithms



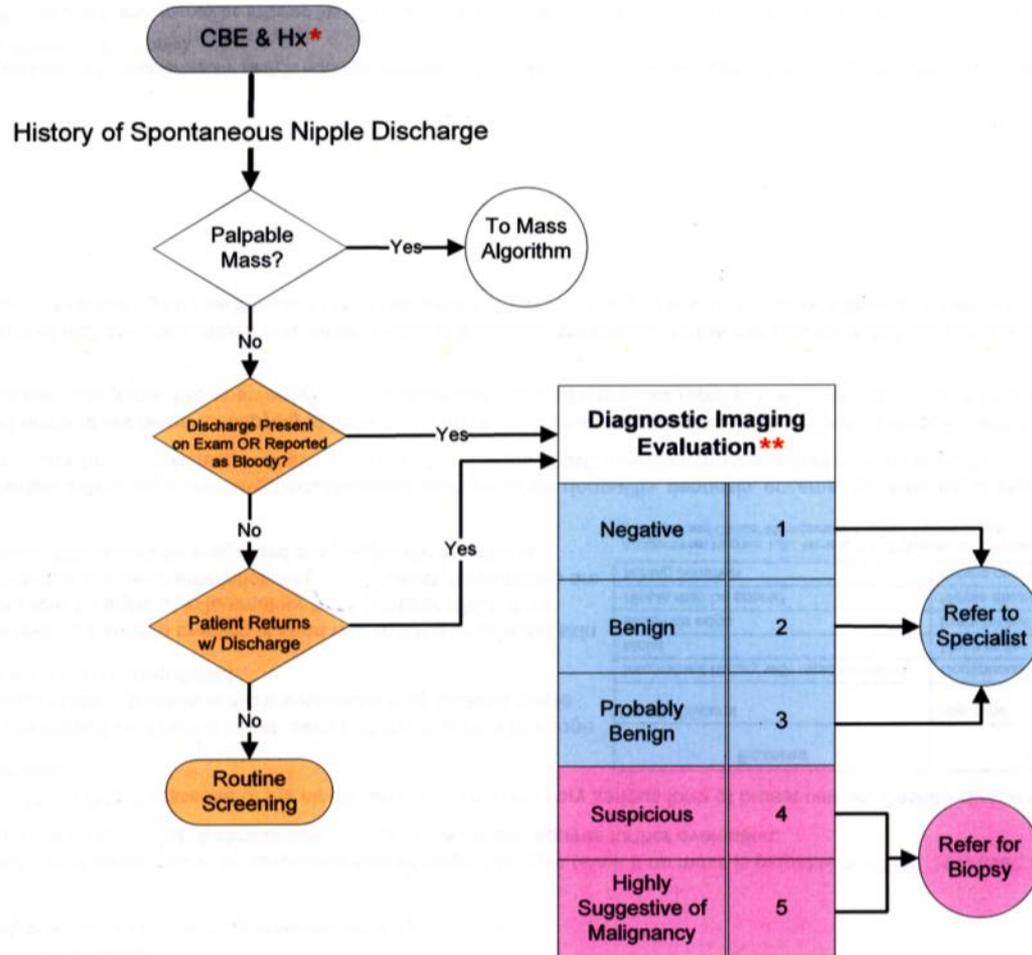
New Palpable Mass



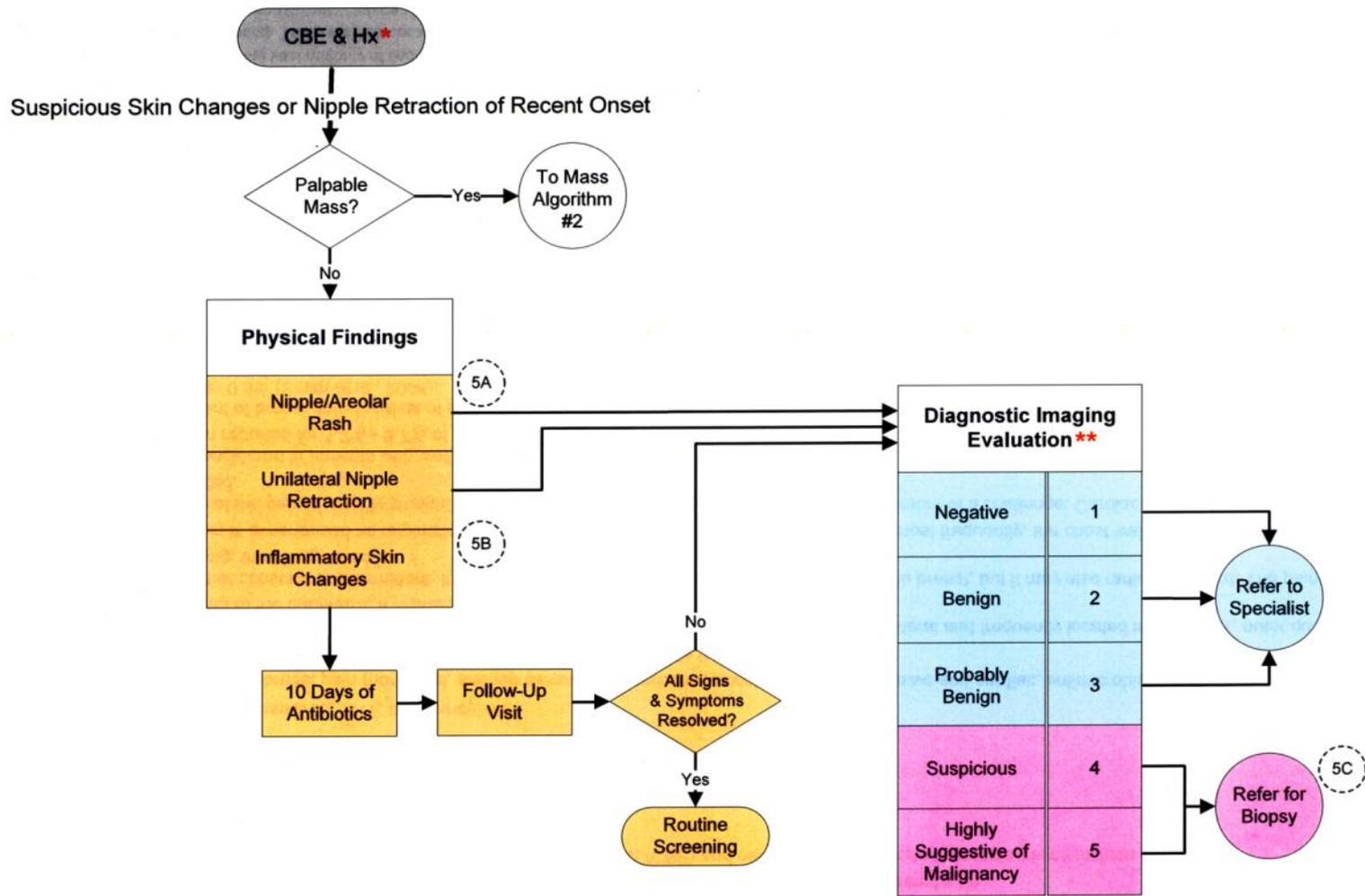
Abnormal Screening Mammogram with Normal CBE



Spontaneous Unilateral Nipple Discharge (Non-Lactating)



Breast Skin Changes or Nipple Retraction



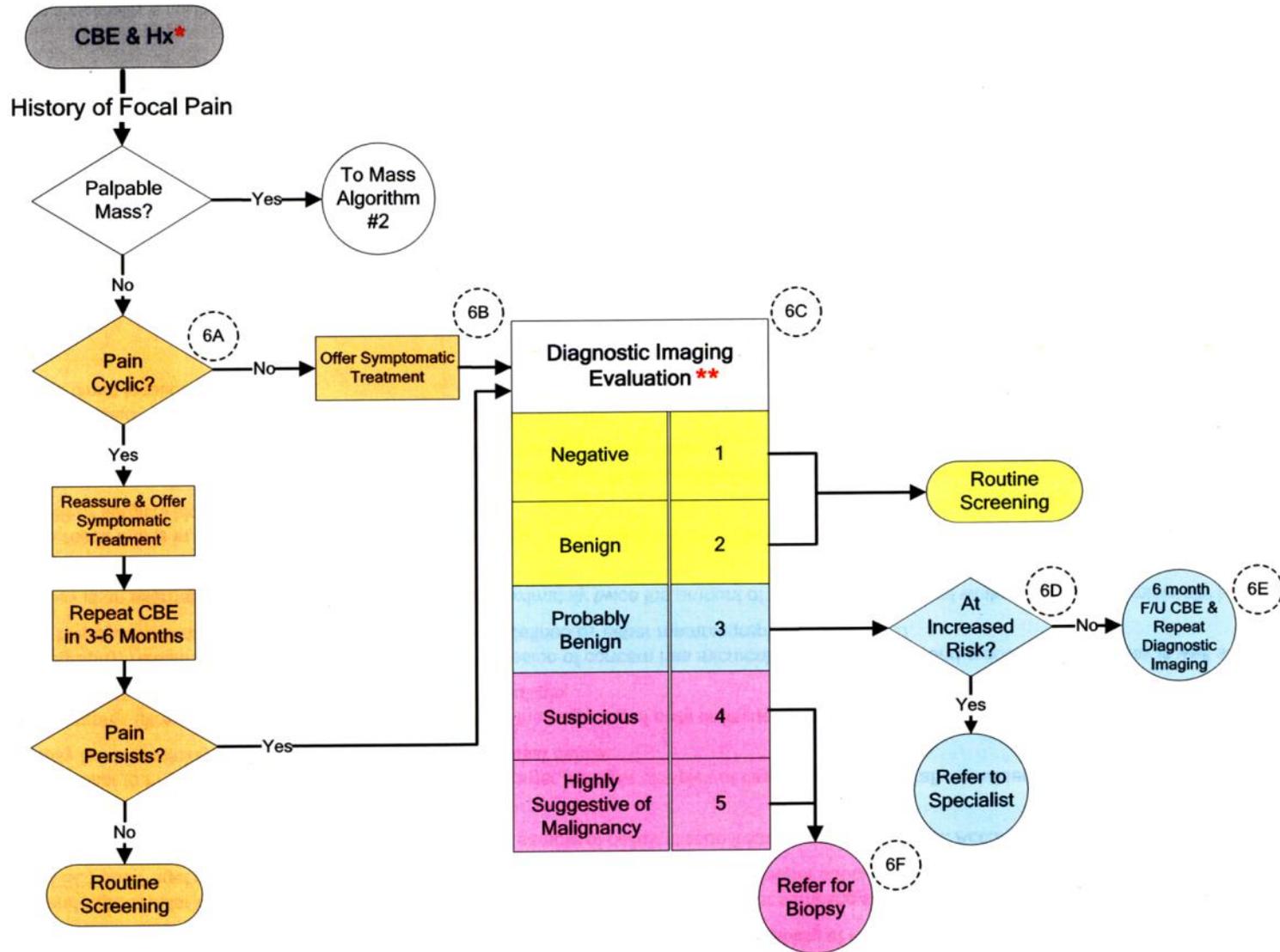
Additional Recommendations from MAC

- With breast rash or inflammatory skin changes, r/o inflammatory breast cancer
 - Highly aggressive
 - 1-5% of breast cancers in US women



Start antibiotics and schedule mammogram at the same time, follow-up visit essential

Breast Pain in a Non-Lactating Woman



Additional Recommendation from MAC

- 1.2-6.7% of breast cancers present with pain as the only symptom
 - Non-cyclic
 - Unilateral, well-localized
- With this kind of pain, even if mammogram negative



Follow-up visit essential

Strategies to Avoid Delay in Diagnosis of Breast Cancer



Delay in Diagnosis: Common Causes

- #1 – Patient assured that a mass is benign based on CBE
- Breast mass with a negative mammogram
- Woman finds mass herself, clinician does not confirm it
- Patient < 50, lesion presumed benign
- Use of HRT, clinician attributes change to hormones



Reducing Risk of Delay

- Thorough CBE on every woman every year and mammograms according to Guidelines
- Evaluate and f/u patient-reported symptoms
- Evaluate and/or f/u “unimpressive” CBE findings
- Obtain tissue diagnosis on all palpable masses regardless of negative mammography
- Be sure patient understands required f/u
- Track patient f/u and test results
- **DOCUMENT**



Breast Diagnostic Algorithms

Systematically developed decision points based on scientific data and professional consensus that visually guide the clinician toward referral to a breast specialist for definitive diagnosis when indicated



Benefits of Algorithms

- Efficient way to incorporate accumulated scientific knowledge into daily practice
- Ensure adherence to standard guidelines
- Improve quality of care by reducing missed diagnoses
- Enable efficient use of valuable healthcare resources



Questions? Comments?

