Breast Management Issues for Clinicians

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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

<table>
<thead>
<tr>
<th>Current Age</th>
<th>Chance of Breast Cancer in Next 10 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>1/1,760</td>
</tr>
<tr>
<td>30</td>
<td>1/229</td>
</tr>
<tr>
<td>40</td>
<td>1/69</td>
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<tr>
<td>50</td>
<td>1/42</td>
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<tr>
<td>60</td>
<td>1/29</td>
</tr>
<tr>
<td>70</td>
<td>1/27</td>
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<tr>
<td>Lifetime</td>
<td>1/8</td>
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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 ≥ 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

\[
\text{5-yr risk} \geq 1.67\% \rightarrow \text{enhanced measures}
\]

www.cancer.gov/brrisktool/
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 (≥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

- **BRCA1-2 mutation**
- Early menarche
- Late age at birth of 1st child
- Benign breast disease
- Hormone replacement therapy
- Alcohol use
- Family history
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

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

Cancer Detection Programs: Every Woman Counts
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

• Most breast cancer originates in the terminal ductal lobular unit (TDLU)
Anatomy of the Breast
Anatomy of the Breast

- Supraclavicular nodes
- Interpectoral (Rotter) nodes
- Midaxillary nodes
- Lateral axillary (brachial) nodes
- Subscapular nodes
- Anterior axillary (pectoral) nodes
- Pathways to subdiaphragmatic nodes and liver
- Subclavicular nodes
- Internal mammary nodes
- Cross-mammary pathways to opposite 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

A. Patient Standing with Arms Down
B. Standing with Arms Elevated
C. Pushing on Hips to Tense Pectoral Muscles
D. Bent Forward so Breasts Hang Free
E. Breasts Palpated against Pectoral Muscles
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 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

DIME

Slide or walk between palpations without lifting fingers
Palpation of the Breast

- For irregularities, compare symmetry between the breasts

The Clinical Breast Exam: Palpation of Axillary Tail
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

## Purpose of Visit
- Boxed options: Annual screening, Recall, Short-term F/U, Other

## Date of Last CBE
- Boxed options: Negative, Abnormal, Unknown

## Breast Cancer History
- Mother/Sister/Daughter
- Age (s) __ __ __
- Self-Age R L
- Lymphectomy, Radiation
- Mastectomy, Chemo
- Axillary node dissection

## Related Breast History
- Date: Last menstrual period
- Date: Previous biopsy(s)
- Date: Start HRT
- Date: Augmentation/reduction
- Date: Reconstruction

## Breasts
- Fine nodularity, Dense nodularity, Skin edema
- Nipple/aerolar change, Tenderness, Nipple discharge
- Mass

## Discrete Mass
- Round, Well-defined, Oval, Ill-defined, Irregular
- Size: < 5 mm, 5-10 mm, 1-2 cm, 2-4 cm, > 4 cm
- Texture: Soft, Hard, Rubbery
- Mobility: Fixed, Mobile
- Other:

## Lymph Nodes
- Axillary, Clavicular
- WNL, Enlarged, Fixed

## CBE Result Date
- Boxed options: No breast abnormality, Benign breast condition, Probably benign breast condition, Abnormal: suspicious for cancer

## Imaging Referral Date
- Boxed options: Screening mammogram, Diagnostic mammogram, Ultrasound, Other

## Patient Education
- Importance of annual screen, Referral follow-up, Breast self-examination, Other

## Overall Summary

## Case Management
- CBE & imaging results concordant
- CBE & imaging discordant
- Patient notified of mammogram results
- Patient informed and referred
- Referral for risk assessment counseling

## Final Diagnosis
- Boxed options: Diagnosis, Other

## 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

Breast Cancer Diagnostic Algorithms for Primary Care Providers
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

Algorithm #2, Page 5.
Abnormal Screening Mammogram with Normal CBE

Algorithm #3, Page 7.
Spontaneous Unilateral Nipple Discharge (Non-Lactating)

Algorithm #4, Page 9.
Breast Skin Changes or Nipple Retraction

Algorithm #5, Page 11.
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

Algorithm #6, Page 13.
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?