

# Evaluation of Common Breast Problems: Guidance for Primary Care Providers

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## Background

In 1990, Congress enacted the Breast and Cervical Cancer Mortality Prevention Act, which authorized the Centers for Disease Control and Prevention (CDC) to establish comprehensive cancer screening programs administered through state health departments.

The National Breast and Cervical Cancer Early Detection Program (NBCCEDP) was the first nationwide opportunity for states to build a public health infrastructure for cancer control. State health departments receive funds from the federal government to provide breast and cervical cancer screening tests,

diagnostic evaluations, and referral for treatment services to low-income, uninsured women.<sup>1</sup> The NBCCEDP ensures that women who have abnormal results of a screening test receive appropriate and timely diagnostic evaluation services.

Strategies for the management of abnormal cervical screening tests were available,<sup>2,3</sup> but guidelines useful to primary care providers for evaluating and managing common breast problems were needed. To develop such guidelines, the CDC asked the Commission on Cancer of the American College of Surgeons and the Society of Surgical Oncology to convene a group of general surgeons with the relevant expertise.

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The group of surgeons expanded upon an algorithm first developed by Dr. Barbara L. Smith and colleagues.<sup>4</sup> The governing bodies of both organizations approved the draft guidelines, which were then circulated to professionals experienced in breast evaluation, including persons from several disciplines who were active in state breast cancer screening programs. These guidelines are designed for primary care physicians, nurse practitioners, and physician assistants who evaluate women with common breast problems. The guidelines are summarized in the Appendix at the end of this article. Referral surgeons should be knowledgeable about and experienced in breast disease and evaluation of breast abnormalities.

degree premenopausal relative had breast cancer, the eventual breast cancer risk for the patient may be eight to ten times the risk for the general population.<sup>7</sup>

Several relatives who are second degree or more distant may transmit risk, including men with breast cancer and women with ovarian cancer, even if these relatives are postmenopausal. Such risk, although not quantifiable, is suggested.

The examiner should obtain a specific history from the patient about previous breast biopsies, the pathology discovered, and the presence of a previous breast cancer, as well as any history of endometrial, ovarian, or colon cancer. Ten percent or more of women diagnosed with breast cancer develop a second primary breast cancer during their lifetimes. In the past,

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## Medical History

### RISK ASSESSMENT

Evaluation should begin with a thorough risk assessment, although the examiner should realize that more than 75% of women with newly diagnosed breast cancer have no identifiable risk factors.<sup>5</sup>

The most obvious risk factor is age; the incidence of breast cancer increases as age increases.<sup>6</sup> A family history should identify any first-degree relatives (mother, sisters, or daughters) with breast cancer and the age at which they developed cancer. Patients who have a premenopausal first-degree relative diagnosed with breast cancer have a threefold to fourfold greater risk of developing breast cancer than women who do not have such a family history. If a first-degree relative had bilateral cancer before menopause or if more than one first-

after mastectomy, all of these occurred in the contralateral breast.<sup>8</sup> As breast-conserving treatment becomes the most common treatment for breast cancer, however, many second cancers are appearing in the same breast.

The examiner also should obtain information from the patient about her parity and age at delivery of her first child. A woman who has no children or whose first full-term pregnancy occurred after age 35 has an increased risk of breast cancer<sup>6</sup> compared with a woman whose childbearing occurred when she was younger. Other risk factors for breast cancer include early menarche (younger than 12 years) and late age at menopause (older than 53 years). Documentation of hormone or contraceptive use and the possibility of current pregnancy or new symptoms suggesting the onset of menopause may be important in evaluat-

ing symptoms and physical findings in the breast.

Radiation exposure of the breast area in childhood is associated with a significantly increased risk of cancer. A history of malignant disease in childhood or adolescence, particularly Hodgkin's disease, should alert the physician to the need for screening and evaluation for breast cancer because of the inclusion of breast tissue within the field of radiotherapy.

#### SYMPTOM ASSESSMENT

By definition, women are asymptomatic when screened for breast disease. However, many patients present with minor common symptoms, such as breast nodularity; breast tissue thickening; pain, soreness, or sensitivity; changes in the nipples, areola, or surrounding skin; and nipple discharge. If such symptoms are substantial, mammograms are diagnostic, not screening, studies. Screening is performed on asymptomatic populations, not on symptomatic patients.

The examiner should determine the duration and fluctuation of symptoms and their association with the menstrual cycle. Any mass in the breast reported by a postmenopausal woman must be considered suggestive of cancer until proven otherwise, even if the patient is taking replacement hormones.

Suspicious nipple discharges that require prompt referral to a surgical consultant include spontaneous, unilateral, or postmenopausal discharges; those confined to one duct; and those with clear, serous, bloody, or serosanguineous characteristics. Occasionally patients report vague or poorly defined changes in breast texture, sensation, outline, or appearance that should be noted and evaluated. An obvious infection with abscess should be treated with incision and drainage or repeated aspiration by needle and consideration of antibiotic use.

An inflammatory appearance in any woman older than 40 years should be

considered inflammatory breast cancer until proven otherwise. The first evaluation in such a patient should include a biopsy of the breast and skin.

#### Physical Examination of the Breast

Physical examination of the breast and its interpretation are subject to variation among observers. The examination may be difficult to perform and may lead to diagnostic uncertainty because breast tissue is naturally diffusely lobulated, and irregularity to palpation may not be abnormal.

The examination is frequently uncomfortable for sensitive patients, particularly during menstrual cycle periods of breast stimulation. The venue and conduct of the examination are critical. It should be done unhurriedly in a setting that allows for minimal distraction and complete patient privacy. The examination gown should be adjusted to reduce unnecessary or unintended exposure.

The patient should be examined in both supine and upright positions, and the examination should be conducted coherently and comprehensively. The examiner first inspects the breasts visually, looking for distortions, asymmetry, or masses. The patient may be asked to bend forward so that pendulous breasts may be examined for skin retraction or distortions.

The patient should lie in the supine position first, with the corresponding arm put over the head to stretch out the breast tissue over the chest wall. When sitting, the patient should place both arms over her head or press her hands together to create tension on the pectoral muscles and to stretch out the breast tissue. When the axilla is examined for lymph nodes, support of the arm with relaxation of the shoulder girdle musculature is important.

The examiner next slides his or her fingers over the breast to compress the tissue against the chest wall. Circular, up-and-down, or back-and-forth motions to

cover sequentially all breast tissue are most effective. The breast skin must be dry to provide the best sliding motion for evaluation of the underlying breast tissue. The approximate measured or estimated size, location, mobility, and consistency of any mass or abnormal area should be recorded. Each nipple should be inspected and gently squeezed to show any reported discharge. Sequential radial compression may show discharge from one duct or area.

Lymph nodes in the axillae and supraclavicular space should be examined. The examiner should note whether any nodes are palpable, and if so, whether the nodes are clinically negative (normal size, soft, and mobile) or suggestive of malignant disease (large, firm, hard, or fixed). The consis-

tors. Many areas of thickening, nodularity, irregularity, and lumpiness that are not suspicious clinically do occur, many of which may be described by patients as a "mass" because their technical vocabulary is not adequate to describe these changes.

## Screening for Breast Cancer

### SCREENING MAMMOGRAPHY

The American Cancer Society and the National Cancer Institute now recommend mammography every year for asymptomatic women 40 years and older, regardless of risk group. Although some experts do not support screening mammography in women from 40 to 49 years old, recent analyses<sup>9,10</sup> do show a

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tency of palpable nodes and whether they are single, multiple, movable, or fixed also should be noted. The breast and regional nodal examination should be carefully documented even if findings are normal.

A clinically suspicious mass is solitary, discrete, and firm or hard; it may or may not be fixed to adjacent tissue. A suspicious mass is unilateral and usually not tender, but it may be sensitive. Only about 1% of breast cancers are bilateral at presentation. Therefore, bilateral masses are usually less suggestive of malignant disease.

Breast cancers present clinically in considerably varied ways; thus, if a mass is found, it is important to consider relevant clinical factors such as patient age, menstrual cycle, hormone use, trauma, duration, changes over time, and risk fac-

significant reduction in mortality from screening women in this age group.<sup>11</sup> Scientific data previously clearly supported screening mammography in women 50 to 75 years old because it substantially reduces the death rate from breast cancer.<sup>12</sup>

Controversy exists concerning the frequency of examination and the ages at which to start and stop.<sup>13</sup> No reduction in deaths from breast cancer has been associated with screening women older than 75 years,<sup>12</sup> although the number of women in this age range is small in reported trials. Women younger than 40 years should not undergo routine screening mammography unless they have risk factors for early-onset breast carcinoma; cancer is more difficult to detect in dense, active breast tissue than in fatty breast tissue.

More frequent screening of younger women (yearly) and less frequent screening of older women (every other year) may prove to be most efficacious, but such a screening schedule has not been totally validated; thus, yearly screening is standard.

#### PHYSICAL EXAMINATION

Examination of the breast should be part of all routine physical examinations for women 30 years of age and older and should be encouraged for younger women.

Routine physical examination by primary care providers such as internists, family practitioners, gynecologists, obstetricians, and nurse practitioners should always include examination of the breasts.

## Diagnostic Evaluation

#### DIAGNOSTIC MAMMOGRAPHY

The work-up of a patient with a solid, dominant mass (suspicious mass) should include a bilateral mammogram and may also include ultrasonography or aspiration. In this situation, the primary purpose of the mammogram is to screen the normal surrounding breast tissue and the opposite breast for nonpalpable cancers, not to make a diagnosis of the palpable mass.

Mammography for a palpable mass should not be performed initially on women younger than 30 to 35 years. Cancer is rare in this age group, and the examination is ineffective because of increased breast density. Exceptions may occur, such as a young woman

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#### BREAST SELF-EXAMINATION

The benefit of breast self-examination in early detection of breast cancer has not been proved. Pressure from physicians and nurses on women to perform breast self-examination may not increase its use and frequently causes patient anxiety.<sup>14</sup> Breast self-examination should be taught, demonstrated, and encouraged but not overemphasized. If a patient values the role of breast self-examination in breast cancer screening, however, and is comfortable and confident in its use, the practice should be reinforced and encouraged.<sup>15</sup> A woman who finds a mass or abnormality during breast self-examination should be seen promptly for appropriate clinical evaluation.

with a clinically suspicious mass, a family history of premenopausal breast cancer, or a proven breast cancer whose remaining breast tissue should be inspected.

*A normal mammogram at any age does not eliminate the need for further evaluation of a palpable suspicious mass.*

#### ULTRASONOGRAPHY

The chief value of an ultrasound examination is its ability to differentiate between solid and cystic masses. Ultrasonography may be useful when a palpable mass is partially or poorly seen on a mammogram, especially in a young woman. Ultrasonography can diagnose a simple cyst if the following four criteria are fulfilled: round or oval shape, sharply defined margins, lack of internal echoes, and posterior acoustic enhancement.<sup>16</sup> A

mural nodule in a cyst visualized by ultrasound should arouse suspicion of a rare intracystic carcinoma or carcinoma adjacent to a cyst.

Ultrasonography is contraindicated for routine breast cancer screening because of its inability to depict microcalcifications.

#### OTHER IMAGING TECHNIQUES

Currently, thermography has no role in breast cancer screening or diagnostic evaluation. Magnetic resonance (MR) imaging, computed tomography, positron emission tomography, and other imaging techniques are not appropriate for routine screening or diagnosis of breast lesions presently. MR imaging is useful in detecting silicone implant ruptures that

as high as 15% to 20%.<sup>17</sup> Any mass remaining after aspiration of a cyst should be excised. Negative findings of fine-needle aspiration in the presence of a suspicious mass mean nothing and should not preclude further diagnostic biopsy.

#### STEREOTACTIC BIOPSY

Two types of stereotactic biopsies are available. Stereotactic cutting-needle biopsy provides a core of tissue for histologic study. Stereotactic needle aspiration, which is now less frequently used, provides material for cytologic study. Currently, the role of stereotactic biopsy is not completely defined, but its use is increasing rapidly. Its indiscriminate application in all breast lesions detected by mammography is unjustified, and its use

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cannot be recognized or excluded otherwise.

#### FINE-NEEDLE ASPIRATION

Fine-needle aspiration for cytologic analysis is extremely useful as an adjunct to clinical evaluation of a palpable mass. Fine-needle aspiration can diagnose and eliminate a fluid-filled cyst or aspirate tissue for cytologic evaluation of a solid mass.

Many palpable thickenings and all suspicious masses should be considered for fine-needle aspiration, which can diagnose and treat cysts and provide aspirated cellular material for cytologic examination of noncystic masses. However, physicians and patients need to understand the limitations of fine-needle aspiration. Although the false-positive rate is negligible, the false-negative rate may be

in obvious cancers to confirm diagnosis before surgical excision is probably not cost-effective because it adds an expensive step.

Stereotactic biopsy is used to obtain tissue mainly in two situations. One is an area of clustered microcalcifications seen on a mammogram and considered sufficiently suspicious that cancer has to be ruled out. The other is a lesion that has a low risk of being cancer but has changed during repeated mammograms in a patient who wants to avoid open biopsy.

Lesions in which the risk of cancer is low but not nonexistent also may be appropriately sampled by stereotactic biopsy to relieve patient or physician concern in selected cases.<sup>18</sup> Stereotactic core cutting-needle biopsy often removes only part of the lesion; the same area of concern may be present in subsequent mam-

mograms and require repeated stereotactic biopsy or mammographic needle or wire localization followed by excisional biopsy.

Stereotactic core cutting-needle biopsy can effectively sample suspicious clustered calcifications, which usually have a 20% or greater risk of being a cancer, and at least half of those that are cancers are in situ cancers.<sup>19</sup> The tissue cores obtained should undergo careful specimen radiography to confirm removal of some calcifications. Use of stereotactic biopsy should decrease the number of excisional biopsies for benign mammographic calcifications to justify its wide application. This procedure has a small but definite risk of a false-negative result; its widespread use should be carefully

ment of a breast lesion is an open surgical excisional biopsy (lumpectomy). The procedure may be performed on palpable lesions or on nonpalpable lesions after stereotactic or ultrasound-guided biopsy or mammographic localization. Excisional biopsies of lesions suggestive of cancer should satisfy the requirement of a "lumpectomy;" that is, they should be removed with at least a 1-cm margin of grossly normal tissue.<sup>20</sup> Palpable lesions that are almost certainly benign but require removal need only minimal margins. In fact, apparent fibroadenomas can be shelled out of the surrounding compressed breast tissue.

Because the exact location within the breast of nonpalpable lesions found by mammography is uncertain, excision

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***The ultimate complete pathologic  
assessment of a breast lesion is open surgical  
excisional biopsy, or lumpectomy.***

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evaluated until its role is clearly established.

Whether stereotactic biopsy will ultimately be cost-effective depends on adherence to appropriate indications for its use, its sensitivity and specificity, whether indications for biopsy increase substantially because of either patient demand or physician need to eliminate uncertainty, and how its costs can be reduced. Stereotactic biopsy is less expensive than excisional biopsy, results in less morbidity, and leaves no noticeable scar. Ultrasonography is gaining in popularity for guidance of needle biopsies, and furthermore, ultrasound-guided biopsies do not require expensive dedicated biopsy imaging equipment.

#### OPEN SURGICAL BIOPSY

The ultimate complete pathologic assess-

ment of these lesions, which requires needle localization, may be more extensive than that of clearly palpable lesions. All needle-localization biopsies should be accompanied by a specimen radiograph to confirm that lesions seen on the screening and localization mammograms were actually removed. Postexcision mammography may be considered to document complete removal of calcifications.

All biopsies or lumpectomies for palpable or nonpalpable breast lesions should produce a single, intact tissue specimen. Biopsy should not be done piecemeal. In addition, the margins of the breast tissue specimen should be coated with ink, preferably with several colors, after the initial specimen is removed. This is best done by the surgeon so that the histologic margins around any cancer can be accurately defined. The tissue should



be excised by a knife; if cautery is used, analysis of the margins may be inaccurate because of tissue destruction from cautery artifact.

## Evaluation and Management of Common Breast Problems

Thorough communication with patients (which should be documented in writing) about clinical assessment, test results, associated risks, and management options is very important for high quality care.<sup>21</sup>

### PALPABLE MASSES

#### Cysts

Cysts are commonly found in premenopausal and perimenopausal women older than 40 years. Physical examination

should be discarded.

The most efficient and cost-effective method of diagnosing a cyst should be used. If a woman has a physical examination that reveals a probable cyst, simple needle aspiration can be done because it is both diagnostic and therapeutic. Aspiration should relieve a painful cyst. If the mammogram shows a mass that may be a nonpalpable cyst, confirmatory ultrasound can be done. If the cyst is obviously benign and nonpalpable, the patient should be informed about it, but no intervention should be offered, except perhaps ultrasound-guided aspiration for relief of pain.

#### Solid Masses

A patient with a palpable, discrete solid mass (suspicious mass) should be re-

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***The association of pain with a mass does not eliminate the possibility of cancer.***

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alone does not distinguish between solid and cystic masses. A palpable mass suspected of being a cyst can be confirmed most rapidly and easily by fine-needle aspiration. If the primary care provider does not routinely perform needle aspirations, the patient should be referred to a surgeon.

If a cyst is aspirated, the patient should be reexamined for recurrence. If a cyst recurs after aspiration, the patient should be referred for surgical consultation. Ultrasonography also can be diagnostic but is more costly and time consuming and provides no more diagnostic information than does office aspiration.

If the mass does not disappear completely with aspiration or if the aspirated fluid is grossly bloody, the fluid should be sent for cytologic analysis, and the patient should be referred for radiologic and surgical consultation. Otherwise, cyst fluid

ferred to a surgeon even when the mammographic findings are negative. Open excisional surgical biopsy is preferred for any solid, dominant, suspicious, persistent mass. Few exceptions exist. Fine-needle aspiration biopsy may be an alternative preliminary diagnostic approach, if it is recognized that negative results of fine-needle aspiration of a suspicious mass mean nothing and an excisional biopsy is required.

Many "masses" reported by patients, however, are not confirmed by careful physical examination by a physician or primary care provider. Such patients should be encouraged to return after a short interval for a repeat examination.

Young women in their teens or twenties with a palpable mass most likely have a fibroadenoma; cancer is rare in this age group. Fine-needle aspiration or



ultrasound may be done to complete the diagnostic evaluation. Such a mass should be excised if the patient wishes to have it removed for her peace of mind. Despite the age of the patient, a clinically suspicious lesion should be evaluated completely. All palpable, discrete, solitary, or suspicious noncystic masses should be excised unless they undergo biopsy.

An area of thickening that is not a suspicious mass and that is judged to be (1) clinically negative by the surgeon, (2) negative cytologically (no malignant cells seen in the fine-needle aspiration specimen), and (3) negative mammographically (negative triad)<sup>22</sup> may be closely observed by the surgeon until it resolves or is excised. However, the surgeon and patient should recognize the unlikely possi-

mary fold may contain small palpable nodules of normal breast tissue that are not suspicious and do not require biopsy.

If the patient is concerned or anxious, she should be advised to return bi-monthly or quarterly for reexamination until she and the examiner are convinced of the benign nature of the change. In menstruating women, return visits should occur at midcycle. If the thickness persists after 3 months and can be distinguished from the remaining breast tissue, the patient should be referred to a surgeon.

If the patient or examiner is uncertain about the nature of a vague mass or thickening, fine-needle aspiration, mammography, or ultrasonography should be considered. Imaging should be consid-

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***The finding of any skin breakdown on the nipple-areola complex should be considered suggestive of cancer, and the patient should be referred to a surgeon.***

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bility of a delayed diagnosis of breast cancer and keep the area under surveillance. This approach is appropriate only for surgeons and physicians thoroughly experienced in the evaluation of breast masses.

#### *Vague Nodularity*

A discrepancy may exist between what the patient perceives to be a breast mass and what the examiner finds on careful physical examination of the breast. Where the patient feels a "lump," the examiner may find only slightly lobulated breast tissue. The patient may note the lump during the premenstrual phase. It may be a diffuse, poorly defined thickening or an area of irregularity or prominence, such as normal but nodular breast tissue that may or may not be matched in the opposite breast. The areolar margin and the area beneath the inframam-

mary fold may contain small palpable nodules of normal breast tissue that are not suspicious and do not require biopsy. If the patient is concerned or anxious, she should be advised to return bi-monthly or quarterly for reexamination until she and the examiner are convinced of the benign nature of the change. In menstruating women, return visits should occur at midcycle. If the thickness persists after 3 months and can be distinguished from the remaining breast tissue, the patient should be referred to a surgeon.

#### MAMMOGRAPHIC ABNORMALITY

The six categories of mammography results specified by the American College of Radiology<sup>23</sup> are shown in the Table. The patient should be referred to a surgeon if her mammography results are reported as category 4 or 5. If further mammographic evaluation with spot compression or magnification is suggested or if ultrasonography is advised (category 0), the imaging studies should be completed before surgical referral because many equivocal mammographic

### American College of Radiology Categories of Mammography Results

- |   |                                                                     |
|---|---------------------------------------------------------------------|
| 0 | Assessment is incomplete; additional imaging evaluation needed      |
| 1 | Negative finding                                                    |
| 2 | Benign finding                                                      |
| 3 | Probably benign finding; short follow-up interval suggested         |
| 4 | Suspicious abnormality; biopsy should be considered                 |
| 5 | Highly suggestive of malignancy; appropriate action should be taken |

Information from American College of Radiology.<sup>23</sup>

abnormalities may be resolved with additional radiologic work-up.

If the mammogram result is category 3 (probably benign; short follow-up interval suggested), the lesion is almost certainly benign, with a maximum 2% possibility of cancer.<sup>23</sup> The patient should have a careful breast examination before the decision is made to follow with sequential mammograms, because clinically suspicious masses associated with any mammographic abnormality may mandate biopsy.

Follow-up for these patients may include sequential physical examination and imaging studies; the radiologist should determine the interval and type of technical follow-up. The very low but possible risk of a delayed diagnosis of breast cancer should be clearly communicated to the patient. If she is unwilling to accept this risk or if she is a high-risk patient, she should be referred to a surgeon.

Nonpalpable cysts detected by mammography and confirmed to be simple cysts by ultrasonography need not be aspirated except for relief of pain. A nonpalpable cyst that does not fulfill completely the criteria for a simple cyst should be aspirated with image guidance. If ultrasonography shows that the mass has suspicious characteristics, an imaging-

directed biopsy (stereotactic, ultrasonographic, or open surgical) should be done.

The type of biopsy appropriate for a nonpalpable lesion found by mammography or ultrasonography should be decided by a surgeon in consultation with a radiologist and according to the patient's wishes. The options that should be discussed with the patient include stereotactic or ultrasound-guided fine-needle aspiration, core cutting-needle biopsy, or open surgical biopsy after needle localization, preferably under local anesthesia.

#### BREAST PAIN

Breast pain is a common and usually non-specific symptom. The most common cause of an uncomfortable or painful area or mass is a cyst or region of fibrocystic change. A common cause for delay in the diagnosis of breast cancer, however, is failure to recognize the potential significance of a painful mass.<sup>4</sup> Pain associated with a mass does not eliminate the possibility of cancer.

If results of the physical examination and mammography are not suggestive of cancer, the most likely explanation of breast pain is fibrocystic changes or functional menstrual cycle influences. An explanation of the effects of menstrual hormonal cycling or postmenopausal

estrogen effect reassures most patients.

A trial of non-narcotic analgesics such as ibuprofen, acetaminophen, or aspirin and the use of a brassiere that provides good support are suggested. Eliminating caffeine, chocolate, or sodium from the diet has no scientifically proven benefit, although some women seem to experience less discomfort when restricting caffeine or sodium intake. Therapy with androgens has no role. The patient should be referred to a surgeon if localized pain persists and does not respond to conservative measures.

#### NIPPLE DISCHARGE

The patient with a suspicious nipple discharge should be referred to a surgeon, even if no palpable mass is present or mammography findings are normal. Patients with any nipple discharge and a palpable accompanying mass should be referred to a surgeon immediately.

Mammography should be done for a suspicious nipple discharge even though positive results are uncommon. If a non-suspicious nipple discharge is present, screening mammography should be recommended as appropriate for the patient's age.

Cytologic analysis of nipple discharge is rarely useful and is not cost-effective. Galactography (injection of contrast medium into spontaneously discharging ducts to delineate intraluminal abnormalities) is not widely available and is of questionable value because false-negative results occur. Medical work-up of galactorrhea may be appropriate for the unusual case of bilateral, profuse, persistent milky discharge, but pituitary microadenomas are rare.

Milky, green, gray, or black discharge that is unilateral or bilateral and expressed from several ducts is normal and not suggestive of cancer. Referral of the patient is not necessary. A spontaneous bloody nipple discharge occurring

in the third trimester of pregnancy may not be suspicious but is seen occasionally. Such an abnormal discharge that persists after delivery should be carefully evaluated.

#### SKIN OR NIPPLE CHANGES

Findings of any skin breakdown on the nipple-areola complex should be considered suggestive of cancer, and the patient should be referred to a surgeon. Paget's disease of the nipple (the presence of in situ or invasive breast cancer with in situ involvement of the nipple) may be the source of this finding. Eczema may involve the areola, but it is rare. Patients with skin abnormalities should undergo screening mammography.

#### OTHER PROBLEMS

##### *Persistently Worried Patient with Negative Work-up*

A persistently worried patient who has no clinically diagnosed breast problems should be referred to a surgeon for a second opinion.

##### *Difficult Breast Examination*

A patient should be referred to a surgeon for evaluation when breast examination is difficult because of reduction mammoplasty or augmentation implantation, extremely large or dense multinodular breasts, scarring from multiple biopsies, pregnancy, or lactation.

Any pregnant or lactating woman with a clinically suspicious lesion should be referred to a surgeon without delay. Approximately 1 in 2,000 pregnant or lactating women has breast cancer, and 1% to 2% of breast cancers are diagnosed in pregnant women.<sup>24</sup> Ultrasound imaging or fine-needle aspiration of a palpable mass or thickening can confirm a cyst or galactocele, a drainable abscess, or a solid mass requiring biopsy.

##### *High-Risk Patients*

Patients with a history of breast cancer

should have careful follow-up with regularly scheduled clinical and mammographic examinations.

Other patients at high risk of developing breast cancer include those with a diagnosis of atypia on breast biopsy and those with a family history of breast cancer among premenopausal first-degree relatives or several relatives, both first and second degree. These patients also may require different screening regimens. In such instances, a referral to a surgeon or physician who is expert in diagnosing breast cancer is appropriate.

## Conclusion

The evaluation of common breast problems requires not only an assessment of patient risks and symptoms and a careful physical examination but also, when indicated, appropriate imaging studies, referral to a surgeon or breast specialist, and use of operative interventions. The detection of early-stage breast cancers and the prevention of unnecessary morbidity and mortality associated with benign and malignant breast disease should be the primary goal of health care providers when evaluating women's breast problems. **CA**

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## Appendix, "Evaluation of Common Breast Problems"

### Management of Common Breast Problems

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Prepared by the Commission on Cancer of the American College of Surgeons and the Society of Surgical Oncology

- Thorough communication with patients about all management options,

their risks, and all test results, as well as written documentation of these discussions, is very important to the provision of quality care.

### Palpable Mass

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#### CYST

- Ultrasound or cyst aspiration is useful to differentiate between solid mass and cystic mass.
- With aspiration, if mass does not disappear or fluid is bloody, send for cytologic study and refer to surgeon. Fluid can otherwise be discarded. Re-examine breast in 6 weeks for recurrence. If cyst recurs, refer to surgeon. Otherwise, follow routinely.

cytologic examination and mammography, patient may be followed by a surgeon every 3 months until biopsy or resolution of problem.

- Women younger than 30 years most likely have cyst or fibroadenoma. Ultrasound or needle aspiration may be used to confirm. Refer to surgeon for solid, dominant, persistent mass because biopsy is almost always indicated.

#### SOLID

- Refer patient to surgeon for solid, dominant, persistent mass because biopsy is almost always indicated.
- A patient with a suspicious mass should have a bilateral mammogram to screen the rest of both breasts for nonpalpable cancers. A normal mammogram does not eliminate need for further evaluation of a clinically suspicious mass. However, if mass is clinically benign on breast examination, and this is confirmed by

#### VAGUE NODULARITY

- If significant doubt exists about nature of mass, consider mammogram or ultrasound first and then fine-needle aspiration for cytologic examination. If mass appears benign—slightly lobulated breast tissue or poorly defined thickening not matched in opposite breast—recheck bimonthly or quarterly. If mass persists after 3 months and can be distinguished from remainder of breast tissue, refer to surgeon.

## Mammographic Abnormality

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- For American College of Radiology (ACR) categories 4 (suspicious abnormality; biopsy should be considered) and 5 (highly suggestive of malignancy), refer to surgeon.
- For ACR category 3 (probably benign; short follow-up interval suggested), patient may be followed with sequential imaging at an interval suggested by the radiologist. Clearly communicate to woman need for clinical and imaging follow-up.
- For ACR category 0 (assessment is incomplete; additional imaging evaluation needed), obtain recommended imaging studies to better characterize the abnormality.
- Nonpalpable simple cysts confirmed by ultrasound do not need aspiration except for pain relief. Cysts having suspicious characteristics need to be biopsied.

## Breast Pain

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- Perform clinical breast examination and mammography, if age appropriate.
- If examination and mammography are negative, fibrocystic change is most likely. Reassure patient, offer a trial of a non-narcotic analgesic, and recommend use of a well-supporting brassiere.
- If conservative measures do not relieve pain symptoms, referral to surgeon is indicated.

## Skin/Nipple Change and Nipple Discharge

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- Women with skin breakdown on the nipple or areola should be referred to a surgeon.
- Patient with palpable mass and any nipple discharge should be referred to a surgeon.
- If discharge suggestive of neoplasm (spontaneous; unilateral; confined to single duct; occurring in older patient; clear, bloody, serous, or serosanguineous) send patient for mammography and surgical consult.
- Nipple discharge—particularly if bilateral or multiductal, or milky, green, gray, or black—is not suggestive of cancer and needs no referral. If milky discharge is profuse, medical work-up for galactorrhea may be indicated.

## The Worried Patient with a Negative Work-up

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- Refer patient to a surgeon for a second opinion.

## **Difficult Breast Examinations**

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- May refer to surgeon if woman has had reduction mammoplasty or augmentation implantation, if breasts very large or multinodular, or if several biopsies have severely scarred the breasts.
- All women who are pregnant or lactating and have a breast mass or area of patient concern should be referred to a surgeon.

## **High-Risk Patients**

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- Consult breast cancer specialist for a woman with history of breast cancer, strong first-degree family history, or history of atypia or multiple biopsies.
- Such women may need special follow-up regimens.