

A Family Physician's Role in the Prevention, Diagnosis, and Management of Breast Cancer

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Abstract

Family physicians have an integral role in the prevention, diagnosis, and management of breast cancer. Breast cancer is the greatest medical threat to a woman's health. The risk of breast cancer in a woman's lifetime is 1 in 8. Physicians must be familiar with risk factors for breast cancer, be confident in examining the breasts, evaluating breast masses, and referring for treatment. This paper summarizes a family physician's role in patients with breast cancer.

Introduction

Breast cancer continues to be the greatest threat to a woman's health besides trauma. Breast cancer is the most common cancer in women. The risk of a woman developing breast cancer in her lifetime is 1 in 8, and it appears to be increasing. There are about 217,000 new cases of breast cancer diagnosed in the United States yearly.¹ About 40,000 women die from breast cancer yearly in this country.¹ Increasing age increases the risk of breast cancer. About 85% of women with breast cancer have a negative family history. Survival depends more on size of the tumor rather than cell type. The majority of breast cancers are infiltrating duct carcinoma.

Breast cancer appears to be two different diseases: those with disease older than 40 and those with disease younger than 40. Younger women with breast cancer generally have less differentiated, more aggressive, harder to treat malignancies that are more apt to recur and metastasize. Younger women have a more virulent disease.

Role of Family Physicians

Family physicians have an integral role in the prevention, diagnosis, and management of breast cancer. Primary care physi-

cians are the gatekeepers to health care in the United States. Women should have the best access to their family physician than any other physician. Patients see their primary physician more than any specialists. Family physicians usually have a long-term, trusted and valued relationship with patients. Patients rely on their family physician for the advice given them by other specialists and subspecialists.²

Family physicians must be competent in examining the breasts to be able to recognize abnormalities. Concomitantly, they must be able to teach breast self-examination to patients. Physicians must also be familiar with risk factors for breast cancer, how to evaluate breast masses, imaging techniques, and when to refer to breast surgeons for further evaluation.

Risk Factors for Breast Cancer

Table 1 lists the Risk Factors for Breast Cancer below. Primary Care Physicians should be familiar with these risk factors.^{2,3}

Breast Examination

The physician must be competent at examining breasts of women, men, adolescents, children, and newborns. The primary method of screening for breast cancer is the physical examination, both by a physician and breast self-examination by the patient. Obviously, a physician must be competent in examining the breasts in order to teach breast self-examination to a patient. The breasts should be very easy to examine.

The real advantage to starting breast self-examination early is teaching self-examination when the patient is young with normal smooth breast tissue unadulterated by fibrocystic changes that ensue with time. Patients learn what is always there, and, subsequently, what is new, hard, tender, and has not been there. Some 90% of breast masses are found by women themselves.

Table 1: Things that cannot be asked in a medical school application interview

- Premenopausal first degree relative with bilateral breast cancer
- Inherited genetic mutation for breast cancer
- Age>65
- Two or more first degree relatives with breast cancer
- Personal history of breast cancer
- Nodular densities in >3/4 breast volume on mammogram
- Ovaries not surgically removed at <35
- Personal history of cancer of major salivary glands
- Atypical hyperplasia on breast biopsy
- One first-degree relative with breast cancer
- Recent hormone replacement therapy
- Recent oral contraceptive use
- Never breastfed a child
- History of cancer of the endometrium, ovary, or colon
- No full-term pregnancies
- First full-term pregnancy after age 35
- Menopause after age 55
- Menarche <age 12
- Term pregnancy before age 35
- Oophorectomy before age 35
- Menopause before age 45
- Menarche >age 17²

Recently, the American Cancer Society has stated that they no longer recommend breast self-examination, because it does not make any difference in long term survival.¹ Fortunately, in the last three decades, women have taken a role in examining their breasts.

Knowledge of Screening Tests

Knowledge of what screening tests are available and what is recommended at what age is important. While mammography is the gold standard for visualizing the breast, it may not be useful for an 18-year-old with a tender two centimeter new mass. Mammograms, compression views, ultrasound, digital mammography, and MRI are all used to visualize breast tissue. MRI screening is now recommended for women at high risk for breast cancer. Interpretation of tests is also essential. For example, a negative breast ultrasound only means that no cystic masses were seen.

BRCA1 and BRCA2 screening is available. Women who carry these genes have a 50-80% lifetime risk of developing breast cancer. BRCA1 and BRCA 2 account for 50% of inherited breast cancers.¹ Women with these genes are high risk and need MRI screening.¹

Evaluation of Breast Masses

Evaluation of a breast mass begins with attention to family history and/or personal history of breast cancer and breast disease. Physician examination includes the mass, any areas in question by the patient, and palpation of the axillary and supraclavicular areas for lymph nodes. A breast mass is a mass until proven otherwise. All masses and mammographic abnormalities must be referred for further assessment. Even if a physician cannot feel a mass, a mass felt by a patient must be assumed and pursued to whatever extent is possible. The physician must examine the breasts and decide what screening tests are appropriate for the patient.

A palpable mass must be explained by consultation, aspiration, biopsy, or excision. The gold standard of diagnosis remains an excisional biopsy. Referral to a breast or general surgeon who is experienced in breast evaluation, breast biopsy, and both conservative and radical surgery including lymphadenectomy is important. The surgeon must also be able to appropriately stage the patient if a malignancy is found and refer the patient for adjuvant therapy if indicated. It is important to explain to the patient what to expect from the referral. It is equally important not to try to speculate what the surgeon may or may not do. Any diagnostic studies and x-rays should be sent to the surgeon. Lastly, the patient should be strongly encouraged to keep the appointment. Table 2 lists some of the pitfalls in evaluation of breast masses.²

Breast Imaging

Originally, mammography was developed to detect breast cancers that were too small to be felt. In fact, mammograms were supposed to be able to detect cancers that otherwise would take five years to become palpable. Mammography will not detect all breast cancers. Mammograms have reduced the

Table 2: Pitfalls in the Evaluation of Breast Masses²

- Mammogram is negative, so don't worry.
- I cannot afford a mammogram.
- I do not want a mammogram—it hurts.
- Physician cannot feel mass, so don't worry.
- Mammogram is negative; no need for exam.
- Come back in six months; don't worry.
- It is probably OK.
- You are too young to have cancer.

mortality from breast cancer by 35%. If all women over 40 had a yearly mammogram, the mortality could be reduced by 50%.³ The current recommendations for mammography are listed in Table 3 below.¹

Table 3: Current Guidelines for Mammography¹

- Screening Mammogram at age 35
- Screening Mammogram at age 30 if Family History
- Annual Mammogram beginning at age 40

In Alabama the radiologist who reads the mammogram is required to send a letter to the patient with an explanation of the results, what, if anything, needs to be done, and when the mammogram needs to be repeated. If the results are inconclusive, what diagnostic tests need to be done next. A report is also sent to the requesting physician. The Guidelines are for *normal breasts*. The radiologist may request a compression or “magnified” view or an ultrasound. The radiologist may recommend a tissue biopsy.

Special considerations include: if the breast are too small for screening, if the breasts or portions thereof have been removed, if the breasts are too large, or if there are breast implants present. It also makes a difference if the implants are above or below the pectoralis muscles. Other considerations include supernumerary breasts and nipples, male breasts, and gynecomastia. Still other challenges include tram flap reconstruction and transgender reassignment surgery. Male breasts with implants and high-dose estrogen hormone replacement therapy raise other questions.⁴ The explanation of the Birads Mammographic Diagnoses is listed in Table 4.³

Table 4: Birads Mammography Diagnoses

Category 0	Additional imaging needed
Category 1	Negative
Category 2	Benign finding
Category 3	Probably benign; short-term follow-up
Category 4	Suspicious; needs biopsy
Category 5	Malignant; needs action

Ultrasound is useful for determining if a mass is cystic or solid. A negative ultrasound does not mean that there is no mass present. Ultrasounds sometimes are useful for masses in women under 30. There is a growing interest in MRI of the breast as the standard of care for women at high risk for malignancy of the breast.¹

Chemoprophylaxis

Tamoxifen reduces the risk of breast cancer by 50% if the malignancy is estrogen receptor positive.¹ It also increases the risk of endometrial hyperplasia. Any abnormal uterine bleeding or increase in size of the uterus while on Tamoxifen therapy must be evaluated by an endometrial sampling. Evista reduces the

risk of breast cancer by 70% with no increase in endometrial hyperplasia.¹ Cox 2 Inhibitors are currently being evaluated for receptor negative cancers.¹

Treatment of Breast Cancer

The primary treatment of breast cancer is surgical. Chemotherapy, radiation, and hormonal therapy are also used to treat breast cancer. **PRIMARY BREAST CANCER IS OFTEN CURABLE. RECURRENT AND METASTATIC BREAST CANCER IS TREATABLE BUT NOT CURABLE!** All the effort is placed in the initial treatment. Doing everything recommended is essential. The larger the breast cancer, the greater the risk of metastasis and also the lesser the risk of cure.

Table 5: Surgical Treatment of Breast Cancer

- Lumpectomy
- Quadrant Resection
- Simple Mastectomy
- Modified Radical Mastectomy
- Radical Mastectomy
- Axillary Lymph Node Dissection
- Sentinel Lymph Node Biopsy

Table 6: Staging of Breast Cancer

Stage I	Tumor<2 cm; negative nodes; no metastasis
Stage II	Tumor<5 cm; nodes, if palpable, not fixed; no distant metastasis
Stage III	Tumor>5 cm or invasion of chest or skin; supra-clavicular nodes
Stage IV	Distant metastasis

Table 7: Common Pitfalls in Breast Cancer Treatment

- Not enough treatment
- Stopping treatment
- False security with negative nodes
- Too conservative surgery
- Lack of aggressive treatment under age 40
- Not treating long enough
- Stopping surveillance
- Individual patient limitations in treatment
- Cosmetic considerations
- Need for hormone replacement therapy
- Unproven therapy
- Failure to take Tamoxifen
- Health problems limiting therapy²

Table 8: Common Questions about Breast Cancer Treatment

- Prophylactic bilateral total mastectomies
- Prophylactic subcutaneous mastectomies
- Do I really need a lymph node dissection?
- I am concerned about my arm swelling.
- Will my husband still want sex with me?
- Can I take estrogen?
- My breast cancer was 20 years ago; can I take estrogen?
- My hot flashes are awful; I will sign a release not to sue you, if you will give me some premarin.
- I hate sex and it hurts.
- What can I do about hot flashes?
- What about Evista?
- Can I use vaginal estrogen?
- Is testosterone safe?
- Will progesterone help my hot flashes?
- Can I take the estrogen patches since they are low dose?
- What about Ozone therapy?
- I am BRCA1 and BRCA2 positive and so are my daughters; what should they do?
- Tamoxifen makes me feel bad; can I stop it?
- Is death from breast cancer painful?
- When do I stop treatment?
- When will I die from this?
- What about going to Mexico for experimental treatment?
- Do I need to go to hospice?
- What if I get addicted to narcotics?
- How much is enough adjunctive treatment?
- Should I get my final affairs in order?
- I have unresolved conflicts with my children; should I address those with them?
- Do I need a will?
- Should I have had more extensive surgery?
- I am unsure about my religious beliefs.
- Will death hurt?
- What if I wake up dead tomorrow?
- Is all this suffering in vain?
- Do you believe that I will go to Heaven?

Surgical treatments for breast cancer are listed in Table 5. Surgical treatment ranges from breast-conserving lumpectomy and quadrant resection to variations of mastectomy and lymph node dissection.² Table 6 lists the staging of breast cancer.³ Table 7 lists the common pitfalls in the treatment of breast cancer.² As a general rule, patients with a malignancy have better long-term results with treatment at a large cancer treatment center than with an individual physician.

Patients have a longstanding relationship with their family physician. Despite what other specialists and subspecialists tell patients, most patients want confirmation from their own physician. Table 8 lists common primary care questions about breast cancer treatment. Often, patients will ask questions of their primary physician that they will not ask other physicians.

Patients ask these questions of their primary physician and not their treating oncologist. Many of these are straightforward and many are not. Many of these will be answered over time. Very personal questions are truly better left with one's family physician.

Family physicians have an important role in the prevention, diagnosis, and management of breast cancer.

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