Screening, Risk Factors, Presentation and Prevention of Breast Cancer

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October 7th, 2010

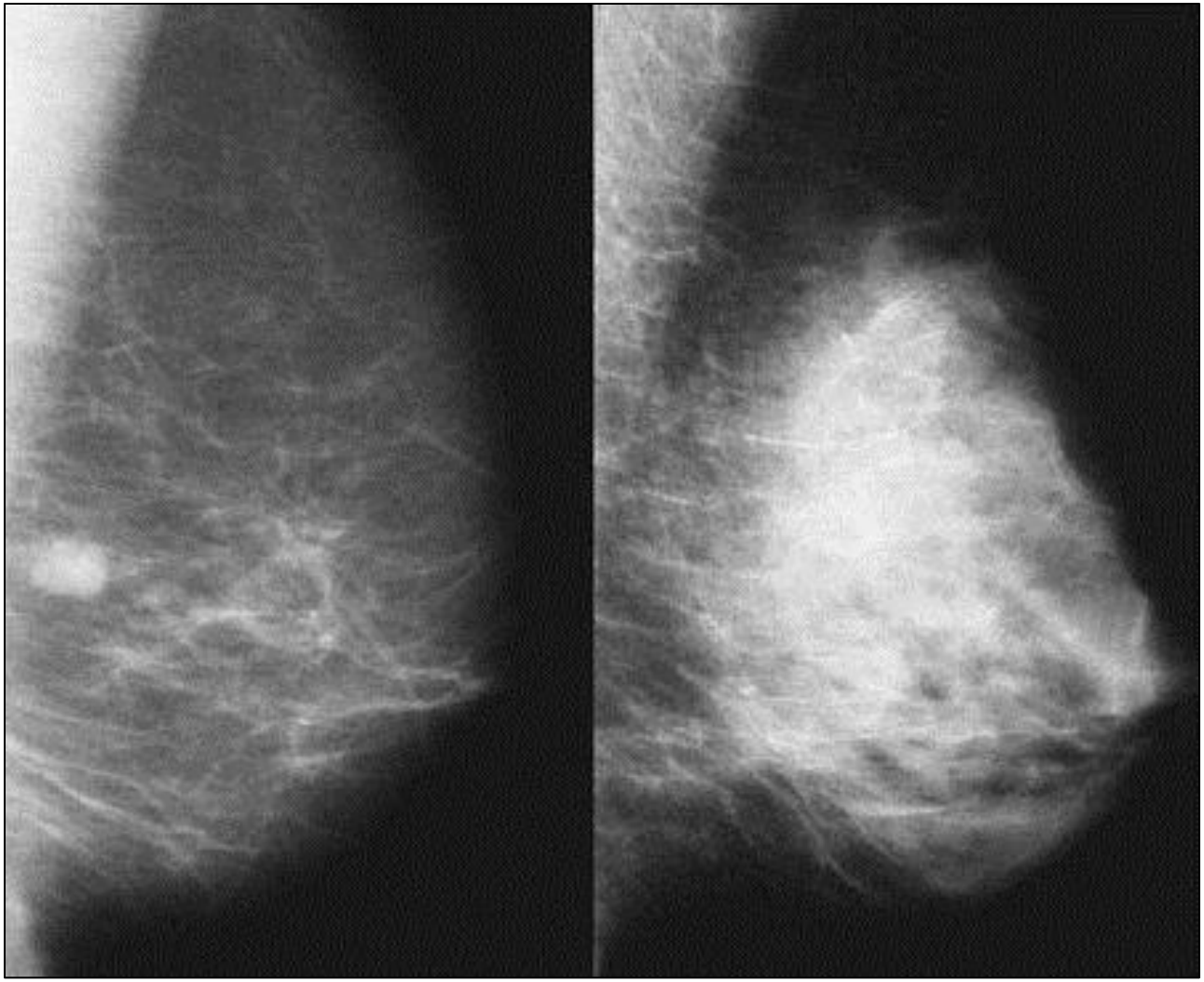
Overview

- Screening
- Risk Factors
- Presentation
- Prevention

Screening

- Subject of recent debate
- Guidelines:
  - Clinical breast examination age 20 and thereafter
  - Annual mammography age 40 and above
    - Digital mammography preferable in premenopausal women and individuals with “dense breast tissue.”
  - Breast “awareness” is important

Dense Breast Tissue



Breast Examination

- Newly published technique:
  - http://www.cancer.org/Cancer/BreastCancer/DetailedGuide/breast-cancer-detection
    - Google: "ACS breast self exam"

3 Important Features

- Visual inspection supine or standing, whereas palpation performed supine
- Pads of 3 fingers for palpation
- Three levels of pressure
- Vertical search pattern

Clinical breast exam

A clinical breast exam (CBE) is an exam of your breasts by a health care professional, such as a doctor, nurse practitioner, nurse, or doctor's assistant. For this exam, you undress from the waist up. The health care professional will first look at your breasts for abnormalities in size or shape, or changes in the skin of the breasts or nipple. Then, using the pads of the fingers, the examiner will gently feel (palpate) your breasts.

Special attention will be given to the shape and texture of the breasts, location of any lumps, and whether such lumps are attached to the skin or to deeper tissues. The area under both arms will also be examined.

The CBE is a good time for women who don't know how to examine their breasts to learn the proper technique from their health care professionals. Ask your doctor or nurse to teach you and watch your technique.

Breast awareness and self exam

Beginning in their 20s, women should be told about the benefits and limitations of breast self-exam (BSE). Women should know how their breasts normally look and feel and report any new breast changes to a health professional as soon as they are found. Finding a breast change does not necessarily mean there is a cancer.

A woman can notice changes by being aware of how her breasts normally look and feel and by feeling her breasts for changes (breast awareness), or by choosing to use a step-by-step approach (see below) and using a specific schedule to examine her breasts.

If you choose to do BSE, the information below is a step-by-step approach for the exam. The best time for a woman to examine her breasts is when the breasts are not tender or swollen. Women who examine their breasts should have their technique reviewed during their periodic health exams by their health care professional.

Women with breast implants can do BSE, too. It may be helpful to have the surgeon help identify the edges of the implant so that you know what you are feeling. There is some thought that the implants push out the breast tissue and may actually make it easier to examine. Women who are pregnant or breast-feeding can also choose to examine their breasts regularly.

It is acceptable for women to choose not to do BSE or to do BSE once in a while. Women who choose not to do BSE should still be aware of the normal look and feel of their breasts and report any changes to their doctor right away.

How to examine your breasts

- Lie down and place your right arm behind your head. The exam is done while lying down, not standing up. This is because when lying down the breast tissue spreads evenly over the chest wall and is as thin as possible, making it much easier to feel all the breast tissue.
- Use the finger pads of the 3 middle fingers on your left hand to feel for lumps in the right breast. Use overlapping dime-sized circular motions of the finger pads to feel the breast tissue.

Risk Factors

- Multiple factors, the most important are:
  - Gender
  - Age
  - Family history – especially 1st degree relatives
  - Past history of atypical change
  - Age of onset of menses and first live birth

Presentation

- Mammographic abnormality
- Palpable mass
- Nipple discharge
- Other: Almost never seen isolation of the above:
  - Skin dimpling
  - Skin redness or rash
  - Enlarged axillary lymph node
  - Focal pain

Recommended Guidelines

- A palpable mass must be explained, even in the setting of a normal mammogram.
- An abnormal mammogram must be evaluated with additional imaging (additional mammographic views and ultrasound) **AND** with physical examination.

Recommended Rules (contd.)

- Only single duct spontaneous nipple discharge in an individual >40 y.o is significant. In general, this will require surgical excision even if all imaging studies are normal.
- Consider referral to a breast specialist before advanced imaging (MRI, BSGI, screening US, PET mammography) is performed.

Prevention

- Lifestyle – Simple
  - Don’t smoke
  - Don’t drink
  - Adhere to a “good diet” (ACS recommendations)
  - Exercise

Risk Models

- Statistical models to assess breast cancer risk:
  - Gail Model:
    - Age, race, age of menses and 1st live birth, number of biopsies, pathological atypia
    - Predicts a 5 year and lifetime risk.
  - Claus Model:
    - Based on age of onset of breast cancer in first and second degree relatives
    - Better estimate of lifetime risk.

Prevention

- Chemoprevention:
  - Tamoxifen for high risk pre- and post-menopausal patients (Gail 5 year risk > 1.66)
  - Evista for high risk post-menopausal patients
- Patient is increased risk based on the Claus model may benefit from screening MRI.
- All high risk patients require age appropriate annual mammograms and every 6 month clinical examination

Summary

- Screening with mammography and clinical examination.
- Unexplained abnormalities require evaluation.
- Some patients are at increased risk for development of breast cancer and benefit from increased surveillance and chemoprevention.
- Most people DO NOT develop breast cancer and appropriate evaluation of patient concerns may be best to address patient fears.