Breast Health, Screening and Breast Cancer Prevention

Presenter name:
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What we’ll be talking about today...

- Breast anatomy – what’s inside of a breast?
- Breast cancer facts
- Breast changes that are normal and non harmful
- What is cancer? What causes it?
- What is breast cancer?
- What is breast cancer risk?
- How to reduce breast cancer risk?
- What is breast cancer screening?
- Breast cancer screening guidelines based on risk
- Additional information
The female breast is made up mainly of:

**Lobules**—the milk-producing glands

**Ducts**—tiny tubes that carry the milk from the lobules to the nipple

**Stroma**—fatty tissue and connective tissue surrounding the ducts and lobules, blood vessels, and lymphatic vessels
Important things to know about breast cancer

- Breast cancer is the **most common cancer** in women in New York State (after skin cancer) and the **second most common** cause of **cancer death**

- Age differences: Over 75% of women who are diagnosed with breast cancer are age **50 or older**. Younger women (6%) get more **aggressive types** of breast cancer

- Ethnic differences: Although **Caucasian** women have a slightly **higher rate** of breast cancer than African American, **African American** women **get it at younger ages than Caucasian women**. **Hispanic** women have a lower rate but tend to get diagnosed with **more advanced** cancers

- More women are surviving breast cancer in recent years due to 1) **early detection**, 2) finding breast cancer before it spreads and 3) because of **improvements in treatment**
Normal breast changes

- Fullness and/or pain before menstrual period and during pregnancy
- Changes in size and shape after menopause

Breast changes that are not cancer – (Benign)

- Fibrocystic changes
- Cysts (little sacs filled with liquid)
- Common benign changes:
  - Hyperplasia
  - Fibroadenomas
- Benign calcifications
- Clear or milky nipple discharge
What is cancer?

- Cancer cells are damaged cells that can multiply without stopping, creating tumors that can spread into other parts of the body.
What causes cancer?

➢ It is thought that a combination of **harmful exposures** in the environment, **gene mutations** and **lifestyle** that can lead to cancer.

➢ There are hundreds of types of cancers and the causes of many of those cancers are still **unknown**.
What is breast cancer?

Breast cancer most often begins with cell changes in the breast milk ducts and may grow and spread from there.

Normal milk duct

Non invasive cancer:
Cancer cells stay inside the duct

Invasive cancer:
Cancer cells spread out of the duct to other parts of the breast
Recognizing the signs and symptoms of breast cancer

- The most common symptom is a lump or mass in the breast
- One breast suddenly larger or misshapen as compared to the other (new breast asymmetry)
- Bloody nipple discharge
- Nipple inversion
- Crusting around nipple
- Redness, heat or swelling of the breast
- Orange peel skin
Something that can make you *more likely* to develop a condition, like breast cancer is called a *risk factor.*
Family health and risk

- When your doctors ask you about which diseases run in your family, they are asking you about your **family history**
- Telling your doctor about any diseases that run in your family is very important

- Family members share genes, behaviors, lifestyles and environments
- Having a close family member with a chronic disease may increase your risk of developing that disease
What risk factors can make someone more likely to develop breast cancer?

- Older age
- Obesity & obesity after menopause
- Inherited gene mutation
- Lack of exercise
- Unhealthy diet
- Breast cancer in self/family
- Older age
- Breast density
- Drinking Alcohol
- Birth after 30
There is no sure way to prevent breast cancer but there are lifestyle changes all women can make to reduce their breast cancer risk.

- Learn your family history of breast cancer and share with doctors
- Get regular screening - mammograms
American Cancer Society Recommendations for the Early Detection of Breast Cancer
Guideline for women at **average risk** for breast cancer

**Ages 40 - 44**
Woman should have the choice to start annual breast cancer screening with mammograms if they wish to do so.

**Ages 45 - 54**
Woman should get mammograms every year.

**Age 55 and older**
Women can switch to mammograms every two years, or can continue yearly screening. Screening should continue as long as a woman is in good health and is expected to live 10 more years or longer.
If one is at **high risk**, what can be done to reduce risk?

If a woman is known to be at increased risk due to:

1) genetic mutations
2) previous breast cancer
3) family history

She can:

- **Start mammography screening at an earlier age**
- **See a genetic counselor to determine need for genetic testing** (providing a blood sample so to look for genes linked to breast cancer)
- **Chemoprevention** - the use of medicine to reduce the risk of breast cancer
- **Preventive surgery** - surgery to remove breasts (for women with very high breast cancer risk)
Recommendations for women at high risk for breast cancer

Women at high risk for breast cancer include those with a family or personal history, genetic mutation for the breast cancer genes BRACA 1 and BRACA 2.

They should speak with their doctors about:

- Screening with mammography before age 40
- Getting additional breast imaging with breast ultrasound or MRI
- Genetic counseling and testing
- Referral to high risk clinic to talk further with doctors
What is breast cancer screening?

- Breast cancer screening with a mammogram looks for changes in the breast over time.

- If the screening test identifies a problem, more testing may be needed.

- A mammogram may find cancer before someone can feel a lump or have any signs or symptoms of the disease.
Mammogram

- A 2D digital mammogram is a low dose x-ray of the breast
- The breast is pressed between 2 plates to flatten and spread the tissue for better visualization of the structures
- This produces an image most often seen on a computer screen
Regular screening with mammogram is important because...

- It can find breast cancer early, before it has had time to spread which means:
  - the cancer is easier to treat
  - it reduces the risk of dying from breast cancer
3D Mammogram/Tomosynthesis

- Digital tomosynthesis is a new kind of mammogram that creates a 3D picture of the breast using X-rays.

- Radiation dosage is low, similar to digital 2D mammograms.

- 3D mammograms are not a regular part of screening but may become more commonly used over time.
How to prepare for a mammogram

- Do not use deodorants or body powders on the day of the mammogram
- Wear two piece clothing
- Make a mammogram appointment the week after your menstrual period
Screening methods for breast cancer for high risk women

- Screening mammogram every year
- Ultrasound (sonogram)
- Breast MRI
- Genetic counselling and testing
Breast ultrasound

- A breast ultrasound is used to see whether a breast lump is filled with fluid (a cyst) or if it is a solid mass.

- An ultrasound is used in women with mammographic breast density.
Breast MRI (Magnetic Resonance Imaging)

- An MRI uses magnetic fields and radio waves to create images of the organs of the body. A breast MRI uses a dye that is injected into your veins, called contrast, and increases the ability for doctors to diagnose breast cancer.
Genetic testing and family history

- Women who have close **family members diagnosed with breast cancer**, and in some cases women who have themselves been diagnosed with breast cancer can benefit from consultation with a genetic counselor.

- The counselor will chart who in the family has been diagnosed with breast cancer and determine the level of risk for the women developing breast cancer. Women at high risk will be recommended for genetic testing.

- **Genetic testing**, done by providing a small blood sample can tell doctors if you have the genes that can lead to breast cancer.
Understanding mammographic breast density

- Mammographic breast density is a measure used to describe the amount of glandular and connective tissue in the breast as compared with fat.

- **High breast density** finds a greater amount of glandular and connective tissue compared to fat.

- **Low breast density** finds a greater amount of fat compared to breast and connective tissue.

- Breast density does **NOT** describe how a breast feels to touch.

- Higher breast density is linked to an increased breast cancer risk.
Understanding mammographic breast density

1. The breasts are almost entirely fatty.
2. There are scattered areas of fibroglandular density.
3. The breasts are heterogeneously dense.
4. The breasts are extremely dense.
Free cancer screening for uninsured New Yorkers

Manhattan Cancer Services Program
New York Presbyterian, Columbia University Medical Center

212.851.4516
To call for genetic counseling/testing

Columbia Doctors
Genetic Counseling

212-305-6731
THANK YOU
What are your questions?