

M.E. at Sea 2025

Breast Cancer in Younger Women

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Objectives

- List statistics related to breast cancer diagnosis and mortality rates in younger women
- Define appropriate screening and diagnostic recommendations and guidelines
- Discuss imaging options for this patient population



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Holly's Story



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How Young is “Too Young”?

- Most medical journals and scientific papers regarding breast cancer in younger women refer to persons between the ages of 15-39.
- Other documentation refers to women up to the age of 45.
- Information regarding the term “young women” is subjective.



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Breast Cancer in Younger Women is Becoming More Common



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Statistics: Breast Cancer in Young Women

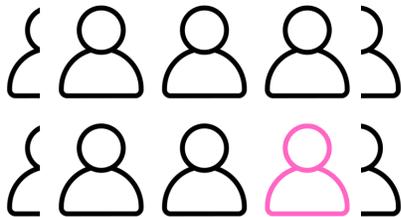
- About **9%** of all new cases of breast cancer are found in women **under 45**.
- Younger people, particularly those **under 35** at the time of their original breast cancer diagnosis, face a higher risk of breast cancer recurrence.



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Statistics: Breast Cancer in Young Women



1 in 6 women aged 20-49 will be
with breast cancer in their lifetime



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Statistics: Breast Cancer in Young Women

- In the **US** between 2010 and 2019:
 - Breast cancer among people aged 30 to 39 increased 19.4%
 - Breast cancer among people aged 20-29 increased 5.3%
- In **Canada**:
 - From 1984 to 2019, there was a relative increase of 18% in breast cancer found in women between the ages of 30 to 39



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Statistics: Breast Cancer in Young Women

- Each year, approximately 85,980 men and women ages 15 to 39 are diagnosed with cancer in the US.
- In this age group (15-39), breast cancer is the most common cancer diagnosed.



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Statistics: Breast Cancer in Young Women

- Compared to older women, young women generally face more aggressive cancers and lower survival rates.
- Breast cancer found in a younger woman is more likely to be hereditary than breast cancer found in older women
- Nearly 80% of young adults find their abnormality themselves.



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Factors Contributing to Risk

Biggest risks for the development of breast cancer:

- Sex (female)
- Reproductive hormones – the average age of menstruation is decreasing (US: 11; Canada: 12)



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Risk Factors

- Ethnicity
- Age at first pregnancy
- Genetic mutations



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Ethnicity and Breast Cancer Incidence

Note incidence rates of breast cancer among non-Hispanic white patients are just slightly higher than non-Hispanic black patients, but overall similar. Black women have 40% higher breast cancer death rates than white women despite lower incidence rates.

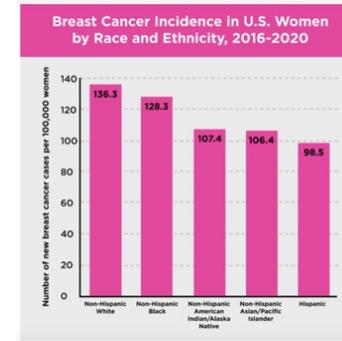
Race and ethnicity	Lifetime risk of breast cancer
Non-Hispanic White	14%
Non-Hispanic Black	12%



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Ethnicity and Breast Cancer Incidence



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Source: Susan G. Komen (2022)

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Ethnicity and Breast Cancer Mortality

- In the US alone, there is estimated to be over 42,000 breast cancer related deaths (all ethnic backgrounds).
- Among women under 50, the disparity is even greater – while young women have a higher incidence of aggressive cancers, young black women have double the mortality rate of young white women.



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Ethnicity and Breast Cancer Mortality

Black women have a higher risk of triple-negative breast cancer, more than any other racial or ethnic group.



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Breast Cancer and Pregnancy

- More women are delaying their first pregnancy.
- Getting pregnant for the first time at age 35 or later is a risk factor for breast cancer.
- Breast cancer occurs 1 in every 3,000 pregnancies.



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Breast Cancer and Pregnancy

- Breast cancer is the most common form of cancer in women who are pregnant or have recently given birth.
- Estimated 30% or more of all breast cancer in young women is diagnosed in the few years after a woman has had a baby



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Genetic Mutations

- If the patient has BRCA1 or BRCA2 genetic mutations, or had close relatives with these genetic mutations, even if patient hasn't been tested
- Other genetic mutations: TP53, PTEN, STK11, PALB2 and CDHI, other TBD



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Other Factors Contributing to Risk

- Immediate family member diagnosed with breast cancer before age 45
- When patient has more than one close relative diagnosed with breast cancer
- Male relative diagnosed with breast cancer



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Other Factors Contributing to Risk

- Patient has a close relative diagnosed with ovarian cancer
- Ashkenazi Jewish heritage
- Radiation therapy to the breast or chest during childhood or early adulthood



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Other Factors Contributing to Risk

- Personal history of breast cancer or certain other breast abnormalities: LCIS, DCIS, ADH, or ALH
- Li-Fraumeni syndrome, Cowden syndrome, or Bannayan-Riley-Ruvalcaba syndrome, or have had a first-degree relative with one of these syndromes
- Dense breast tissue



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Dense Breast Tissue



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Dense Breast Tissue

More and more patients are learning about dense breast tissue and they may already know that they have it. However, they don't often know exactly what it is or what it means in terms of breast cancer screening.



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Dense Breast Tissue

Talk to your patients about breast density – it is often inherited, but other factors can influence it.



Hormone therapy and a low BMI



Increased age and having children



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Dense Breast Tissue

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Breast Cancer Incidence Among Social Groups



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Social Groups and Breast Cancer Incidence

- Data is mixed, but transgender women appear to be at an increased risk during hormone treatment compared to cisgender men.
- Transgender men have a higher risk of breast cancer compared to cisgender men.



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Cisgender and Transgender

- **Cisgender** means your gender identity matches the sex you were assigned at birth.
- **Transgender** means your gender identity is different from the sex you were assigned at birth.



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Social Groups and Breast Cancer Incidence

Compared to heterosexual cisgender women:

- 10% higher breast cancer risk among bisexual women
- 6% higher risk among lesbian women



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Breast Cancer in 2025

Noninvasive breast cancer:

- DCIS and LCIS – 59,080 new cases
- LCIS – women have 7-12 times higher risk of developing invasive cancer in either breast



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Breast Cancer in 2025

- Invasive Breast Cancer
- Invasive Ductal Carcinoma (IDC):
 - 317,000 new cases IDC expected in 2025 in the US
 - IDC Most common type of breast cancer
 - 8 out of 10 breast cancers are IDC
- Invasive Lobular Carcinoma (ILC):
 - 2nd most diagnosed cancer, after IDC, representing 10-15% of invasive breast cancer



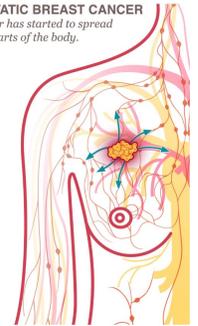
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Breast Cancer in 2025

- Triple Negative Breast Cancer (TNBC)
- Metastatic Breast Cancer

METASTATIC BREAST CANCER
The cancer has started to spread to other parts of the body.



Source: National Breast Cancer Organization



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Breast Cancer Risk Factors We CAN Control

- Maintain a healthy weight
- Exercise
- Limit alcohol
- Plant-forward diet
- First child before age 30
- Breastfeed
- Minimize Toxicity



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Breast Cancer Risk Factors We CAN'T Control

- Being female
- Getting older
- Family history
- Genetic mutations
- Dense breast tissue
- Personal history of breast cancer, or ADH, LCIS
- Chest wall radiation for childhood cancers



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What is “High Risk”?

Lifetime risk of breast cancer of 20% - 25% or greater



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Assessing Breast Cancer Risk

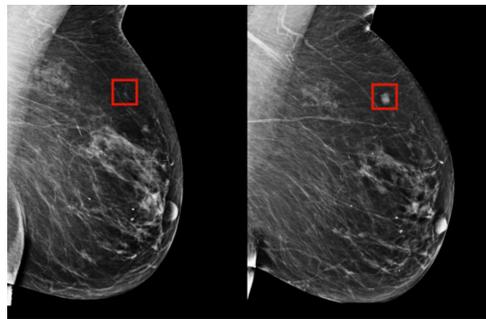


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Assessing Breast Cancer Risk

- EMR
- Risk Assessment
- AI



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ACR Recommendations on Risk Assessment

Updated May 3, 2023:

“All women especially Black and Ashkenazi Jewish women who are considered high risk, **should have a breast cancer risk assessment by the of age 25** to determine if they need to start regular screening earlier than age 40.”



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Source: American College of Radiology

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Current Screening Guidelines

Group	Start/Frequency	End
ACR & SBI	Risk Assessment by 25 / screening annually at age 40	No end, as long as in good health
NCCN	Risk Assessment by 25 / screening annually at age 40	No end, as long as in good health
ACOG	Start age 40 / screening 1-2 years	Until at least age 75
ACS	Start btwn 40-44, annual option, 45-54 annually, 55+ screen 1-2 years	Healthy w/ life expectancy 10+ yrs
USPSTF	40 / screen every 2 years	74



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Current Screening Guidelines

Annual screen mammograms at age 40:

- American College of Radiology (ACR)
- Society of Breast Imaging (SBI)
- Canadian Association of Radiologists (CAR)



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Current Screening Guidelines

May 2023: United States Preventive Services Task Force (USPSTF) updated recommendations to screening mammography at age 40, rather than 50

- USPSTF has not amended current recommendation for screening frequency (yet)
- Current recommendation is screening every 2 years



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Current Screening Guidelines

- Based on risk factors such as personal history, breast density and others
- Your patient may benefit from starting screening mammography, US, MRI, etc. earlier than age 40!



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Current Screening Guidelines



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3 Commonly Used Risk Assessment Models

- Gail
- Tyrer-Cuzick
- Breast Cancer Surveillance Consortium (BCSC)



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Gail Model

- Uses personal medical and reproductive history
- History of first-degree relatives
- Able to estimate the risk of developing invasive breast cancer over the next 5 years and up to age 90



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Tyrer-Cuzick

- Uses personal and family history to determine risk
- Results display 10-year risk and lifetime risk scores
- Risk scores:
 - Average (less than 15%)
 - Intermediate (15-19%)
 - High (over 20%)



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Breast Cancer Surveillance Consortium (BCSC)

- Offers a 5-year risk calculation
- Not effective in measuring risk of women under 35 or with a previous dx of breast cancer



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Risk Models

Model	Gail	Claus/Ford ^a	Tyrer-Cuzick/manual
Age	Age	Age	Age
Reproductive	Reproductive	Reproductive	Reproductive
Age menarche	None	None	Age menarche
Age first live birth			Age menopause
			Age first live birth
Personal history	Personal history	Personal history	Personal history
biopsy	None	None	Biopsy
ADH ^b			Atypical hyperplasia
			LCIS
Family history	Family history	Family history	Family history
First degree relative	First degree relative	First degree relative	First degree relative
	Second degree relative	Second degree relative	Second degree relative
	Age of onset	Age of onset	Age of onset
	Ovarian cancer (Ford)	Ovarian cancer	Ovarian cancer
	Male breast cancer (Ford)	Male breast cancer (Ford)	Male breast cancer (Manual)
Lifestyle	Lifestyle	Lifestyle	Lifestyle
None	None	None	BMF (Tyrer-Cuzick)



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Source: Thompson et al. (2008)

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Risk Models



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Risk Model Tutorial

Health Care Provider: Risk Models For Breast Cancer, A Primer

Several breast cancer risk assessment tools have been developed that combine known major risk factors. Risk models can be useful in stratifying patients into risk categories to facilitate personalized screening and surveillance plans for clinical management of the patient.

1. How are the models used?

2. Risk model explanations

3. Diagnostic considerations

4. Risk Models Table (includes live links)



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Risk Reporting in Electronic Medical Record (EMR)

- Not a 100% accurate method of determining risk
- Ensures accuracy in risk-related history questions
- Ensures accuracy in documentation
- Inaccuracies may contribute to erroneous risk rates



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Limited Research and Underrepresentation

- Younger women remain underrepresented in many research studies
- Breast cancer occurs at a much lower rate among young adults than in our older counterparts



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How Can You Help?

- Get educated:
 - Know and understand how recommendations and guidelines have changed
 - Ensure your facility remains up to date in reporting requirements
- Be an advocate:
 - Talk to your family, friends, patients and colleagues about breast cancer risk factors, signs and symptoms



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Advocacy

- Mammography Technologists have a responsibility to their patients and physicians
 - Responsibility that shouldn't be taken lightly
 - Relationship w/ patients is built upon trust in such a sensitive exam
 - Be an advocate for your patients, friends, and family



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How Can You Help?

- Bust the myths!
- Know your facility's resources
- Support organizations

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Perspectives

Correcting Decades of Misinformation About Breast Cancer Screening: An Open Letter to Women and Those Who Advise Them About Screening for Breast Cancer

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Myth vs. Fact

If you don't tell your patient, they may never hear the facts... before it's too late:

- Discuss screening guidelines
- Talk about risk assessment, what it means to have dense breasts, and the importance of self Breast Exams (SBE)
- No family history does not mean your patient isn't at risk
- 85-90% of patients with breast cancer diagnosis have no known family history



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Educational Materials

- Educate yourself on what materials your facility offers or needs
- Create educational content in multiple patient languages
- Education on breast density



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Support Organizations for Young Adults

- Supportorgs.cancer.gov
- StupidCancer.org
- Young Survival Coalition
- Cactus Cancer Society
- Living Beyond Breast Cancer
- Social Media Groups
- Annual Conferences, retreats and YA recreational activities



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So How Young is “Too Young”?



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