LosAngeles Center for Women's Health

We Specialize in You!

Breast Cancer Assessment and Risk-Based Screening

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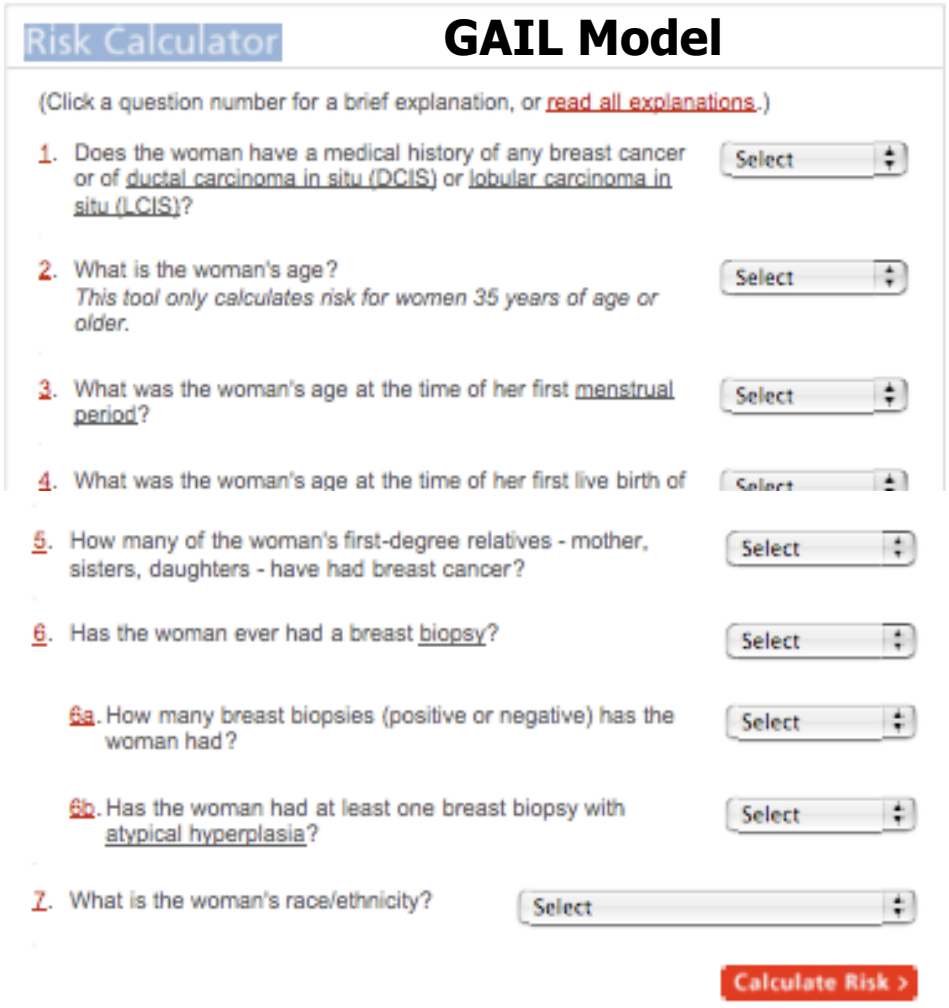
Risk Assessment and Risk-Based Screening

Risk Varies, So Should Screening

Gail Model
Estimates 5-Yr & Lifetime Risk

- **Prior Breast Biopsies**
- **Age**
- **1st Degree Relatives**
- **Menstrual history**
- **Age at first childbirth**
- **Race & Ethnicity**
- **Does not include Paternal hx, OvCA**
- **http://www.cancer.gov/bcrisktool/**

5-Yr and Lifetime Risk of BC



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Hall Detailed Breast Cancer Risk Calculator Includes Other Risk Modifiers

http://www.halls.md/breast/risk.htm

Questions 7 to 12 below are additional risk modifiers.

The results will re-calculate automatically when you choose the pop-up menu items.

7. I am likely to undergo regular mammography screening. **Yes**

Your chance of being diagnosed with carcinoma increases with regular (annual or biennial) mammographic screening, which is a good thing, because early diagnosis will probably save your life.

8. I am taking Tamoxifen. **No**

Tamoxifen is a medicine that can reduce the risk of developing breast cancer in high risk women. It's benefit to normal risk women is unknown.

9. My mammograms show dense breast tissue. How dense? **Unknown**

Risk increases when breasts contain mammographically dense fibroglandular tissue. Here's how you can find out your mammographic density.

10. Do you drink alcohol? **Not specified**

Risk increases with amount of alcohol consumed. (One beer has 13 grams of alcohol, a glass of wine has 11 grams and a shot of liquor has 15 grams, on average in the USA.)

11. Have you had a breast biopsy showing "lobular carcinoma in situ" (LCIS)? If so, how old were you? **Not applicable**

Risk increases if you had a previous breast biopsy showing LCIS (also called lobular neoplasia).

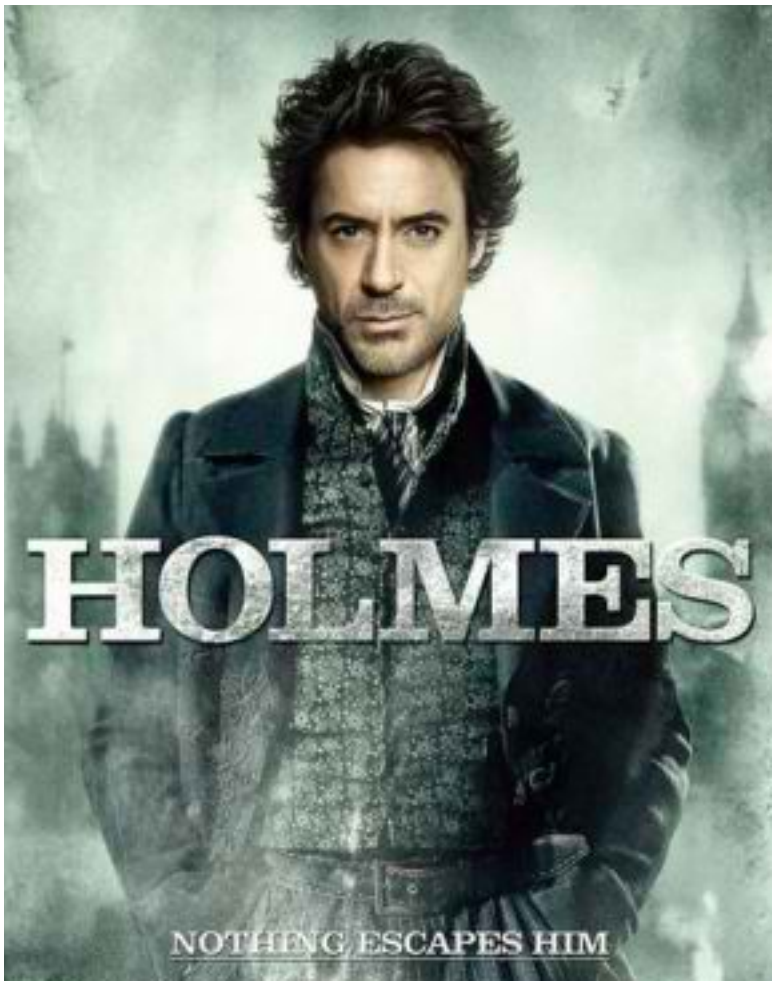
12. Have you used Birth Control Pills (BCPs)?

When did you start using BCPs? **Never used BCPs**

When did you stop using BCPs? **Not Applicable**

Oral contraceptive Birth Control Pills can slightly increase your risk, but the extra cancers are mostly small and curable, and the slight risk gradually disappears when BCPs are no longer used.

Hereditary Breast Cancer (e.g., BRCA1 or BRCA2)



The Clues

- **Cancer in multiple generations**
- **≥2 people with cancer in 1 generation**
- **Earlier than average ages of diagnosis (<50)**
- **Individuals with >1 diagnosis of cancer**
- **Cancers that run together**
  - **Example - Breast and ovarian**

Risk Assessment Tools
(Suspected Hereditary Breast CA)

BRCAPRO

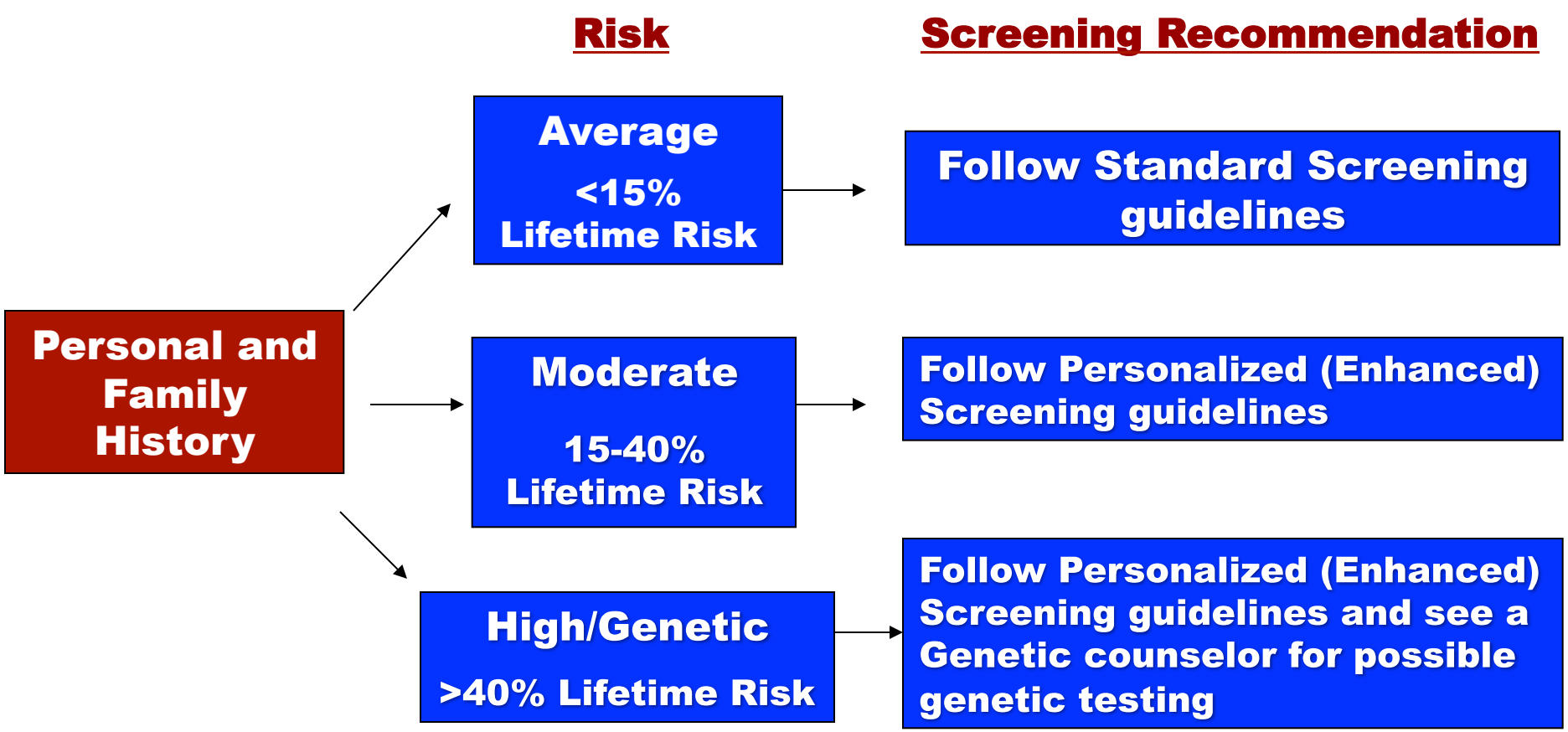
- Assesses risk of carrying a mutation or developing breast or ovarian cancer
- Family history of breast & ovarian CA; pedigree
- www4.utsouthwestern.edu/breasthealth/cagene
  (Google: BRCAPro)

Myriad Risk Tables

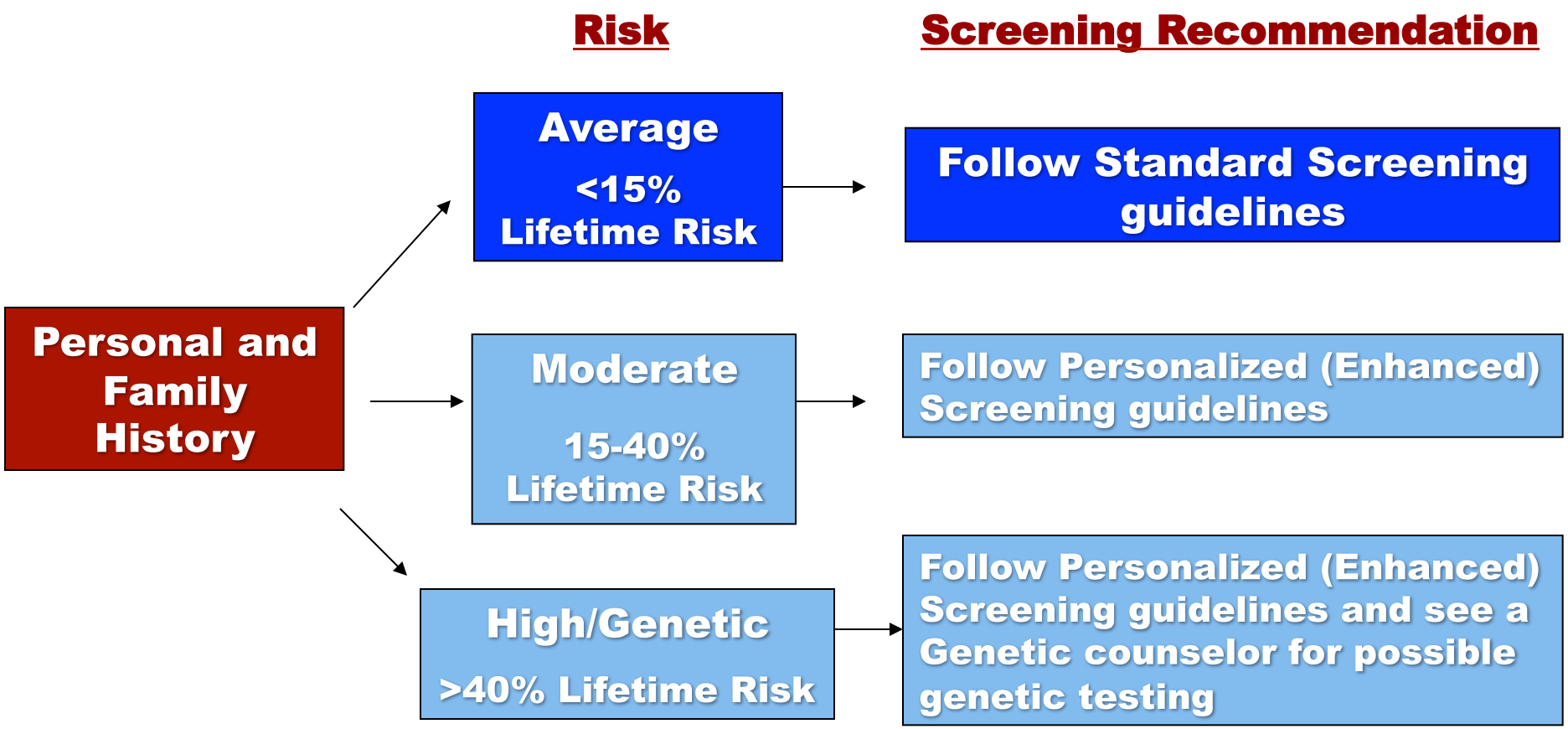
- Assesses risk of BRCA1 or BRCA2 mutation
- Family history of Breast and/or Ovarian Cancer
- Breast Cancer >50 not considered
- www.myriad.com

Or Refer to Genetic Counselor

Understanding Level of Risk



Average Level of Risk



CLINICAL GUIDELINES | Annals of Internal Medicine

Screening for Breast Cancer: U.S. Preventive Services Task Force Recommendation Statement

U.S. Preventive Services Task Force*

Description: Update of the 2002 U.S. Preventive Services Task Force (USPSTF) recommendation statement on screening for breast cancer in the general population.

Methods: The USPSTF examined the evidence on the efficacy of 5 screening modalities in reducing mortality from breast cancer: film mammography, clinical breast examination, breast self-examination, digital mammography, and magnetic resonance imaging in order to update the 2002 recommendation. To accomplish this update, the USPSTF commissioned 2 studies: 1) a targeted systematic evidence review of 6 selected questions relating to benefits and harms of screening, and 2) a decision analysis that used population modeling techniques to compare the expected health outcomes and resource requirements of starting and ending mammography screening at different ages and using annual versus biennial screening intervals.

Recommendations: The USPSTF recommends against routine screening mammography in women aged 40 to 49 years. The decision to start regular, biennial screening mammography before the age of 50 years should be an individual one and take into account patient context, including the patient's values regarding specific benefits and harms. (Grade C recommendation)

The USPSTF recommends biennial screening mammography for women between the ages of 50 and 74 years. (Grade B recommendation)

The USPSTF concludes that the current evidence is insufficient to assess the additional benefits and harms of screening mammography in women 75 years or older. (I statement)

The USPSTF concludes that the current evidence is insufficient to assess the additional benefits and harms of clinical breast examination beyond screening mammography in women 40 years or older. (I statement)

The USPSTF recommends against clinicians teaching women how to perform breast self-examination. (Grade D recommendation)

The USPSTF concludes that the current evidence is insufficient to assess additional benefits and harms of either digital mammography or magnetic resonance imaging instead of film mammography as screening modalities for breast cancer. (I statement)

Ann Intern Med. 2009;151:716-726. www.annals.org

For author affiliation, see end of text.

* For a list of the members of the USPSTF, see the **Appendix** (available at www.annals.org).

2009 US Preventive Task Force Breast Cancer Screening Recommendations

AGAINST	**Annual screening mammography in women age 40-49**
AGAINST	**Annual screening mammography in women age 75 and older**
AGAINST	**Annual screening mammography in women age 50-74**
FOR	**Only screening ages 50-74 every other year**

2009 US Preventive Task Force Breast Cancer Screening Recommendations-REVISED

ASK YOUR DOCTOR	**Annual screening mammography in women age 40-49**
ASK YOUR DOCTOR	**Annual screening mammography in women age 75 and older**
ASK YOUR DOCTOR	**Annual screening mammography in women age 50-74**
ASK YOUR DOCTOR	**Only screening ages 50-74 every other year**

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USPSTF: Ask Your Doctor?

USPSTF Position

- **Rejected by**
  - **American Cancer Society**
  - **American Society of Breast Surgeons**
  - **American Society of Breast Diseases**
  - **American College of Obstetricians & Gynecologists**
  - **American College of Radiology**
  - **Healthcare Reform Bill**

Standard Screening Guidelines
for the average risk woman

- **Age 20-39**
  - **Discuss +/- BSE, technique**
  - **Prompt reporting of Symptoms**
  - **CBE Q 3 yrs**
- **Age 40 and older**
  - **Optional BSE**
  - **CBE Annually**
  - **MMG Annually**

American Cancer Society 2010

BSE

- **NO Level I Evidence Support Use of BSE**
- **BUT!**
- **Absence of Level I Evidence is not evidence of absence**

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U.S. National Library of Medicine
NIH National Institutes of Health

TUESDAY, Sept. 6 (HealthDay News)

Annual Breast Exams, Mammograms Still Key to Detecting Breast Cancer

Third of tumors were spotted in a breast exam by a doctor or a self-exam, study finds

- Presented at 2011 Breast Cancer Symposium
- 6000 Women in Michigan
- Overall, 2/3 MMG detected, 1/3 Palpation-Detected (90% by patient, 10% by HCP)
- Women under 50: 48% palp, 46% MMG
- Lumpectomy rate: 73% (MMG) vs 54% (palp)

Breast Cancer Mortality Reduction Depends on Screening Frequency

Screening Frequency	Patient Ages (Yrs) 40-49	50-59
Biennial	24%	39%
Annual	35%	46%

Smart et al. Cancer 1995; Feig: Cancer, 1995; Tabar et al: Int J Cancer, 1997

Breast Cancer Mortality Reduction Depends on Length of Follow-up

Year	Follow-up Years	Mortality Reduction	R.R. (95% C.I.)
1993	7-12	13%	0.87 (0.63-1.20)
1996	10-15	23%	0.77 (0.54-1.01)
1997	11.4-15.2	29%	0.71 (0.57-0.89)

Nystrom et al, Lancet 1993;
Tabar. Int J. Cancer 1996, Hendrick et al, JNCI 1997)

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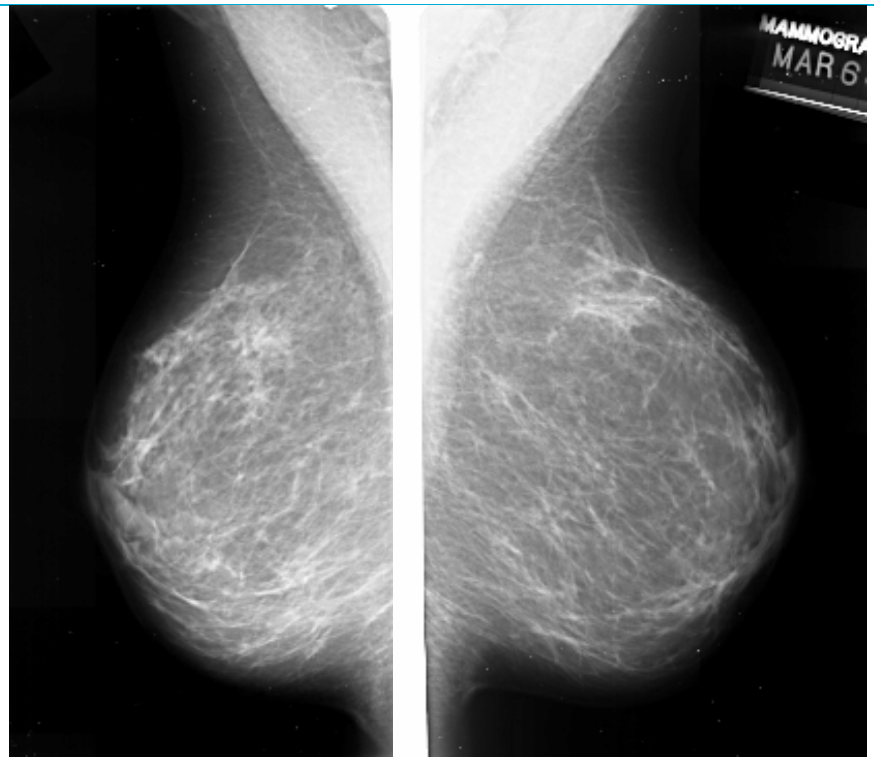
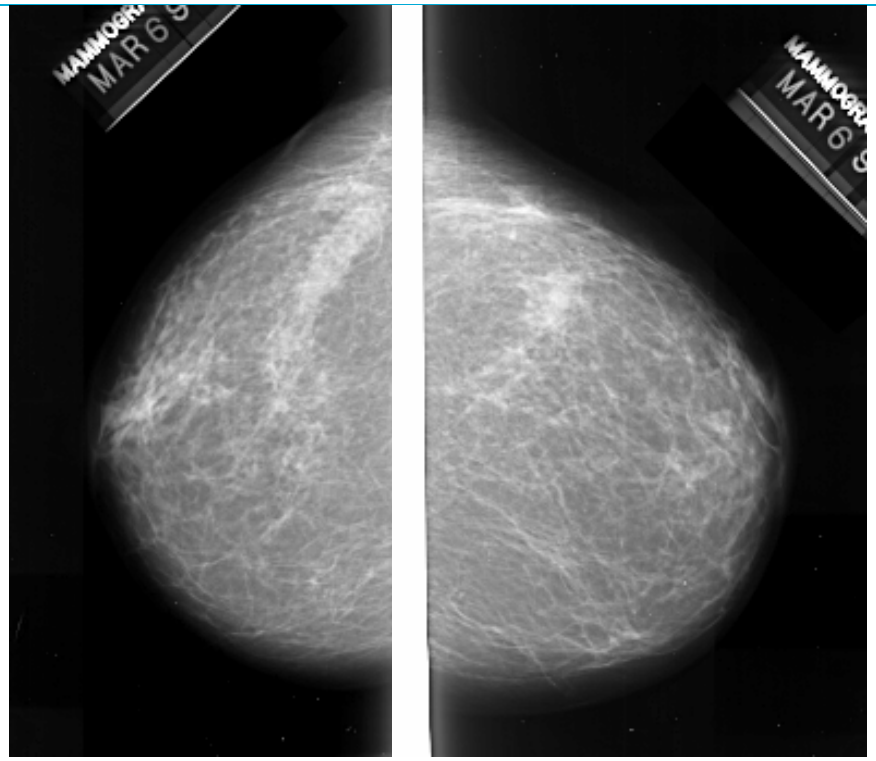
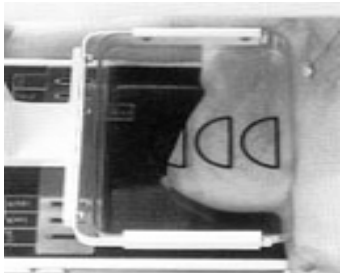
Screening Mammograms Standard 2-View



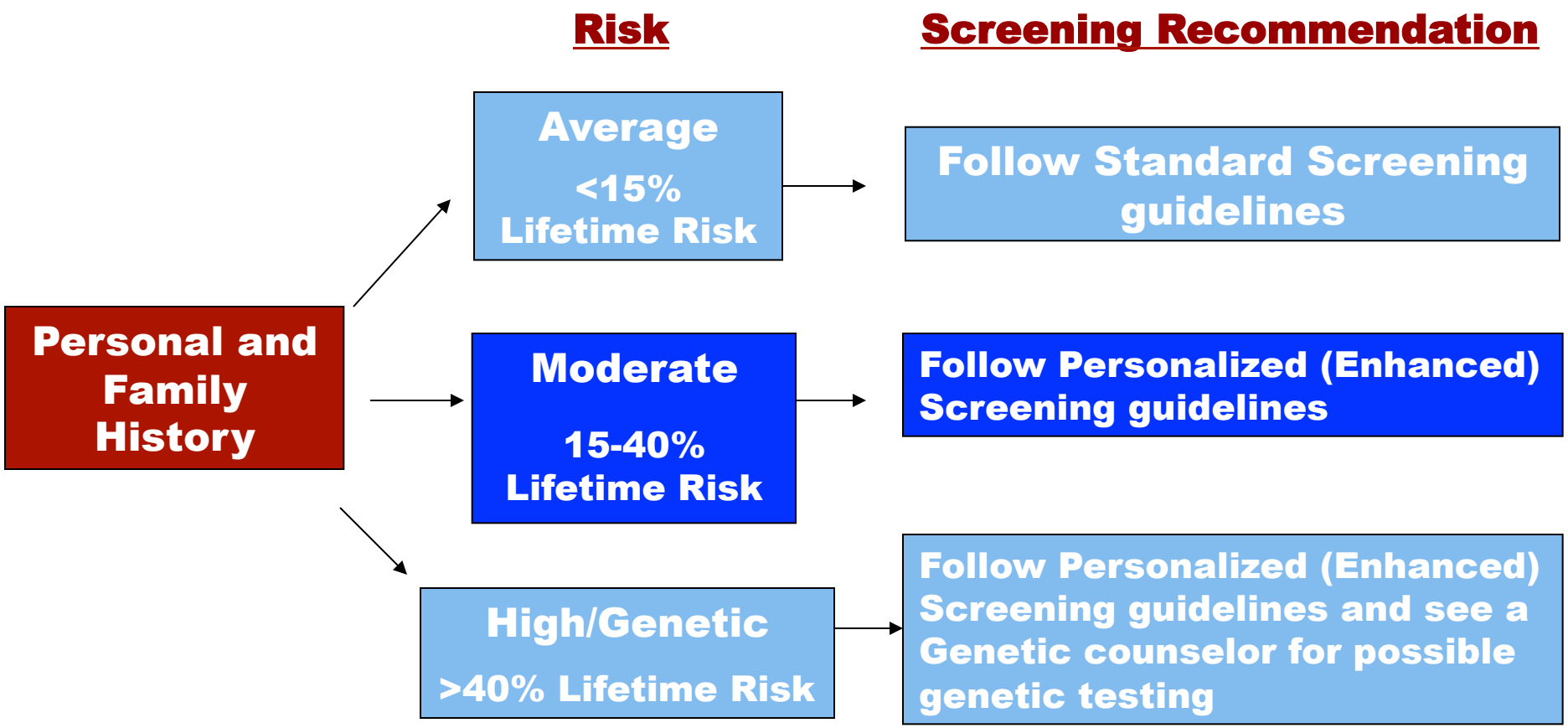


MLO Projection
Medio-Lateral Oblique



CC Projection
Cranial-Caudal

Moderate Level of Risk



Risk-Based Management
Moderate Risk

- **Enhanced Screening recommendations:**
  - **Starting Age 18**
    - **Optional Monthly BSE**
  - **Starting Age 25**
    - **Annual or semi-annual CBE**
  - **Starting Age 35***
    - **Mammograms yearly***
    - **MRI Annually* (if 20% or higher lifetime risk)**
  - **Chemoprevention**

(* Or beginning 5-10 yrs prior to earliest age of breast cancer diagnosed in a 1st degree relative)

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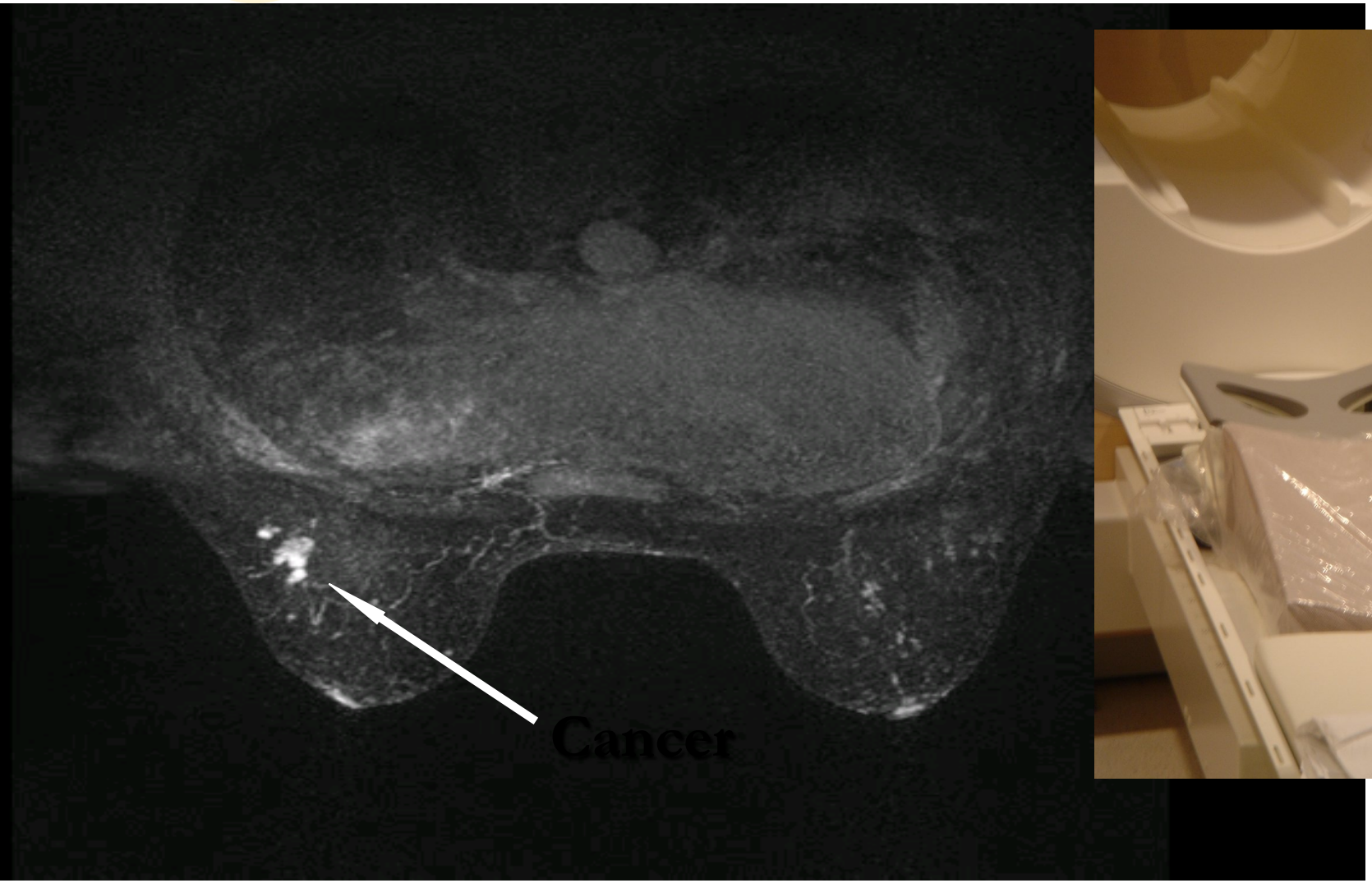
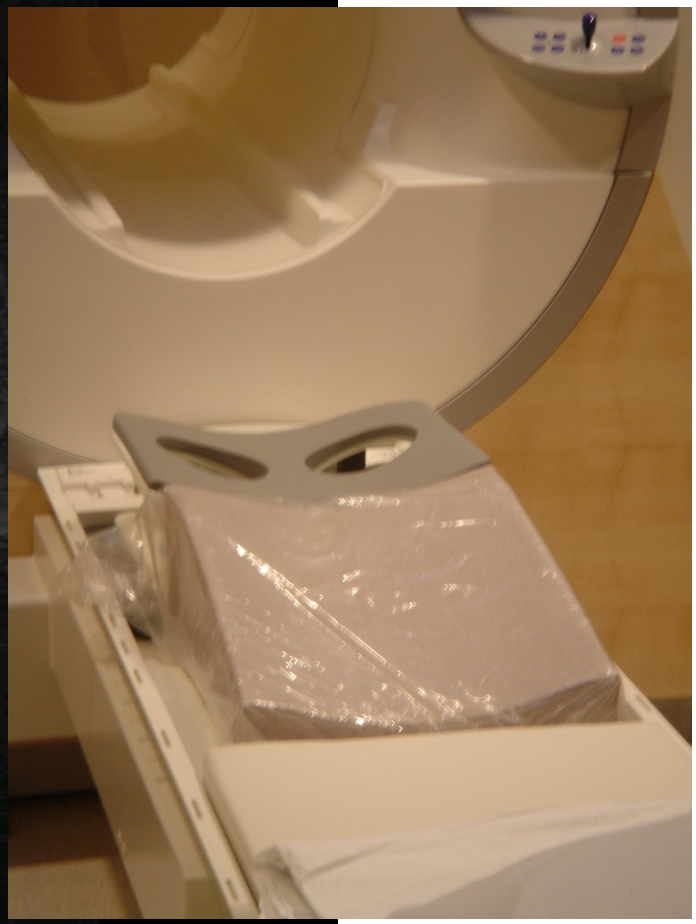
Screening Breast MRI For Early Detection





Screening Breast MRI
Along With Mammography

- **BRCA 1 or BRCA 2 Mutations**
- **1st Degree Relative w/ BRCA 1 or 2 Mutation**
- **Lifetime risk of Breast Cancer >20-25%**
- **Chest XRT between age 10-30**
- **Cancer syndromes [e.g., Cowden Syndrome PTEN)]**

American Cancer Society, 2007.

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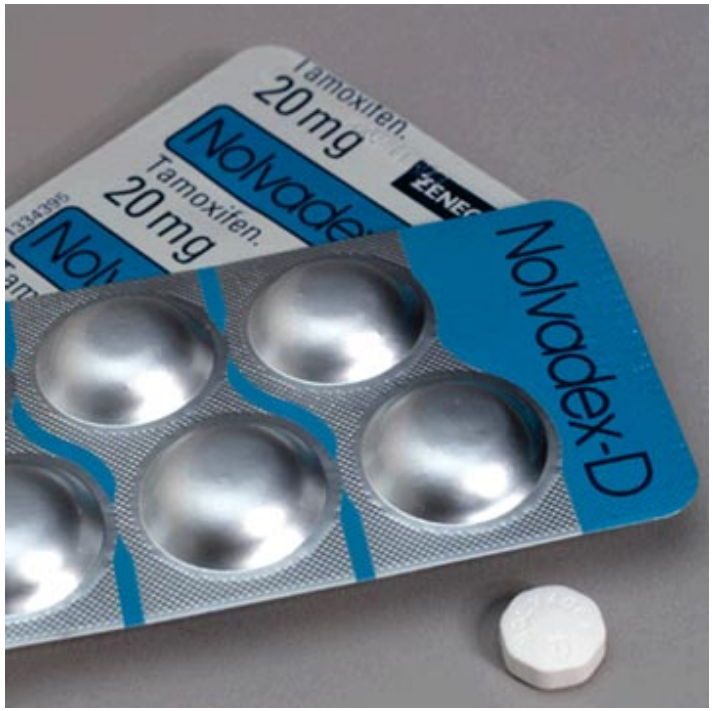
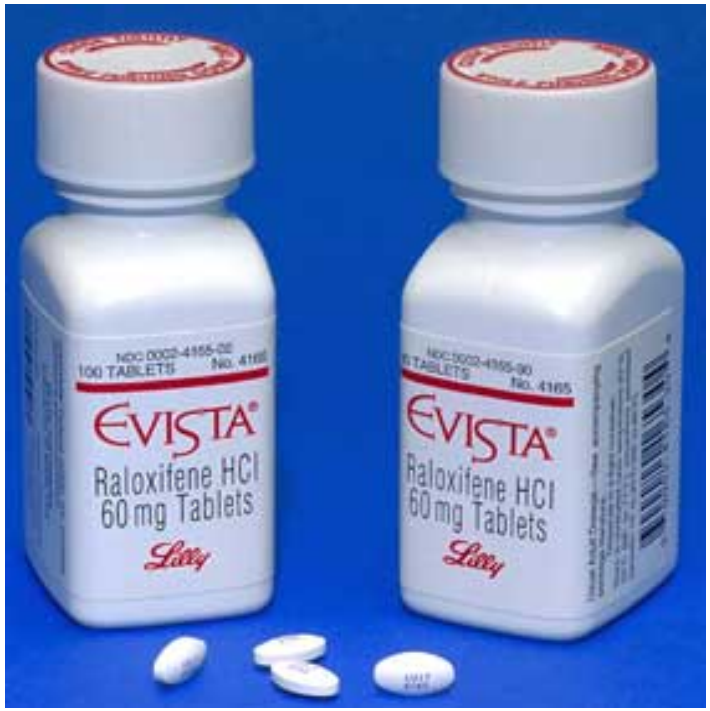
Chemoprevention Drugs

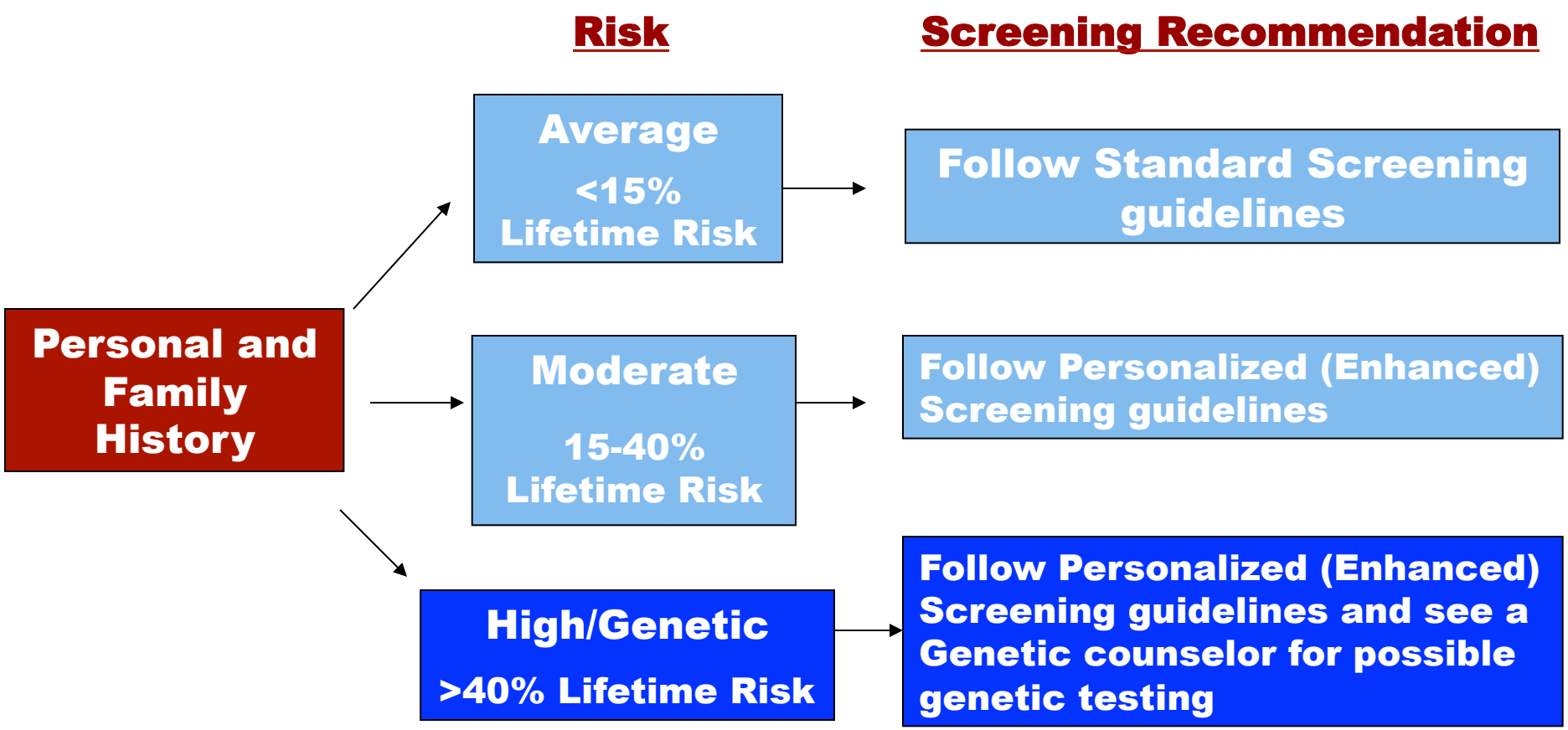




Tamoxifen (Nolvadex) **Raloxifene (Evista)**

Decrease Risk of Estrogen Sensitive Cancers by 50%
Taken by mouth daily for 5 years

High Level of Risk



Risk-Based Management
High Risk

- **Enhanced Screening recommendations:**
  - **Starting Age 18**
    - **Optional Monthly BSE**
  - **Starting Age 25**
    - **Annual or semi-annual CBE**
  - **Starting Age 30**
    - **Annual Mammograms**
    - **Annual MRI**
- **Risk-Reduction Therapy**
  - **Chemoprevention**
  - **Prophylactic Mastectomy and Oophorectomy**

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