

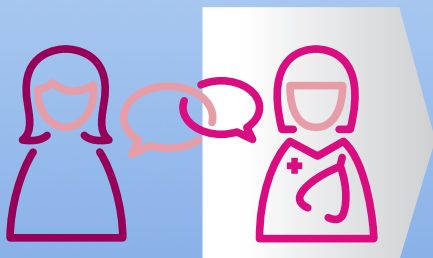
Breast Disease: What PCPs Need to Know

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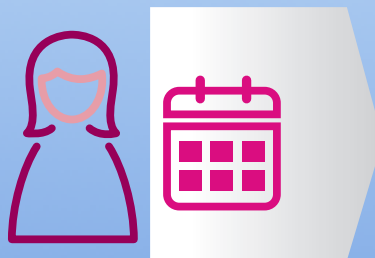
New Breast Cancer Screening Guideline

for women with average risk



AGE 40

Talk with your doctor about when to begin screening. **Women should have the opportunity to begin screening** if they choose.



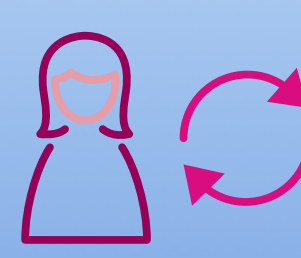
AGE 45

Begin **yearly mammograms** by age 45.



AGE 55

Transition to mammograms **every other year** at age 55 or continue with annual mammography, depending on your preferences.



AGE 55 +

Continue to have regular mammograms for as long as you're in good health.

[LEARN MORE ABOUT BREAST CANCER SCREENING](#)

ACS Recommendation For Breast Surveillance

- Average women (lifetime risk <15%)
 - Annual mammogram starting at 45
 - Mammogram every other year at 55
 - Regular mammogram as long as in good health
 - Choice to start at age 40 and to continue annual mammogram after age 55
 - No clinical or self breast examination

Management of Patients With Increased Risk of Breast Cancer

- Annual Mammogram
- Annual Breast Examination
- Monthly Self Breast Examination
- Annual MRI if lifetime risk >20%
- Chemoprevention

Chemoprevention

- Tamoxifen
 - Selective estrogen receptor modulator (SERM)
 - NSABP trial: 69% risk reduction in ER+ breast cancer and 50% reduction in DCIS
 - Approved for high risk patients
 - LCIS
 - 1.66% 5 year risk of breast cancer
 - Family history
 - Adverse effects include thromboembolic event and endometrial cancer
- Raloxifine
 - SERM
 - Also approved for prevention of osteoporosis
 - NSABP trial: equivalent to tamoxifen for risk reduction for invasive breast cancer but less for DCIS
- Aromatase Inhibitor
 - Appears to have less serious side effects than SERMs
 - Can cause bone loss, joint/muscle pain
 - Only for postmenopausal women

Risk Calculator

- Gail
 - <https://www.cancer.gov/bcrisktool/>
 - Simple and easy to use and well validated
 - Limited family history
- Tyrer-Cuzick (IBIS) www.ems-trials.org/riskevaluator/
 - Family history with age
- BRCAPRO
 - For women with strong family history
 - Accounts for ethnicities
- Claus
 - First and second degree family history
- BOADICEA
 - Strong family history
- BCSC (Breast Cancer Surveillance Consortium)
 - Age, race, family history in first degree relative, history of breast biopsy, breast density

Breast Cancer Risk Assessment Tool

An interactive tool to help estimate a woman's risk of developing breast cancer



Last modified date: 05/16/2011

Get Started with the Risk Tool

About the Tool

Breast Cancer Risk Factors

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[Breast Cancer Home Page](#)

[Breast Cancer: Prevention, Genetics, Causes](#)

[Current Clinical Trials: Breast Cancer in Situ, Treatment](#)

[Current Clinical Trials: Breast Cancer Prevention](#)

[Current Clinical Trials: Breast Cancer Screening](#)

[Breast Cancer Risk in American Women](#)

Need Help?

Contact us by phone, Web, and e-mail
1-800-4-CANCER

The Breast Cancer Risk Assessment Tool is an interactive tool designed by scientists at the National Cancer Institute (NCI) and the [National Surgical Adjuvant Breast and Bowel Project \(NSABP\)](#) to estimate a woman's risk of developing [invasive breast cancer](#). See [About the Tool](#) for more information.

The Breast Cancer Risk Assessment Tool may be updated periodically as new data or research becomes available.

Risk Tool

(Click a question number for a brief explanation, or [read all explanations.](#))

1. Does the woman have a medical history of any breast cancer or of ductal carcinoma in situ (DCIS) or lobular carcinoma in situ (LCIS) or has she received previous radiation therapy to the chest for treatment of Hodgkin lymphoma?
2. Does the woman have a mutation in either the *BRCA1* or *BRCA2* gene, or a diagnosis of a genetic syndrome that may be associated with elevated risk of breast cancer?
3. What is the woman's age?
This tool only calculates risk for women 35 years of age or older.
4. What was the woman's age at the time of her first menstrual period?
5. What was the woman's age at the time of her first live birth of a child?
6. How many of the woman's first-degree relatives - mother, sisters, daughters - have had breast cancer?
7. Has the woman ever had a breast biopsy?
- 7a. How many breast biopsies (positive or negative) has the woman had?
- 7b. Has the woman had at least one breast biopsy with atypical hyperplasia?
8. What is the woman's race/ethnicity?
- 8a. What is the sub race/ethnicity?

Calculate Risk >

Risk Calculator

- <http://www.crahealth.com/risk-express>
- Calculates Gail, Claus, Tyrer-Cuzick, BRCAPRO

Risk Modifiers

- Increases risk
 - Age, female gender, white race
 - Family History
 - Weight
 - Postmenopausal: higher BMI and perimenopausal weight gain
 - Premenopausal: BMI $>31\text{kg}/\text{m}^2$ associated with lower risk of breast cancer
 - Tall stature
 - High estrogen levels, earlier menarche or later menopause
 - Nulliparity, increasing age at first pregnancy
 - Alcohol intake, smoking
 - Night shift work
 - Exposure to therapeutic ionizing radiation
- Protective
 - Breastfeeding
 - Physical activity

Palpable Breast Mass

- History
 - Risk factor breast breast cancer
 - Symptoms
 - Prior studies
- Physical examination
 - Breast
 - Axilla
- Document exact location and size
- If no palpable abnormality, reassure patient
- If palpable abnormality, obtain imaging
 - Mammogram
 - Ultrasound

Palpable Breast Mass

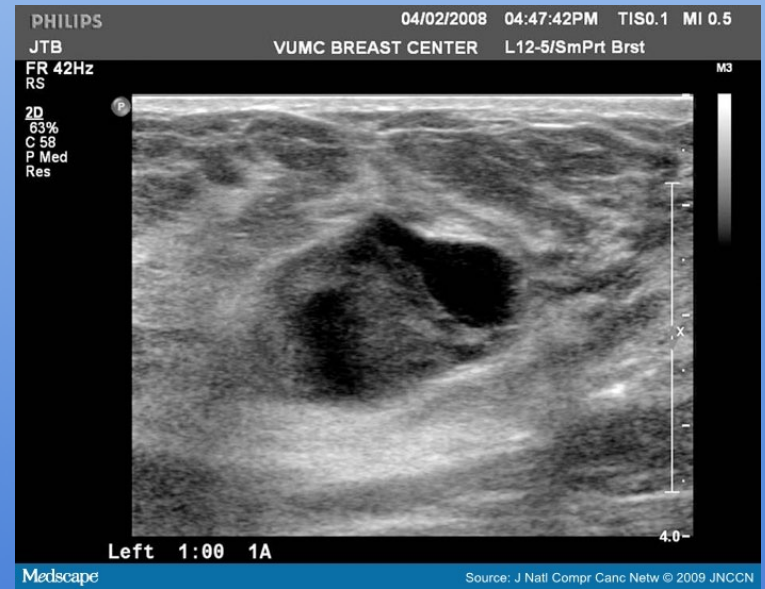
- No abnormality found on mammogram and US
 - Repeat examination in 2-3 months
 - MRI: little benefit
 - Refer to Breast Surgeon
- Corresponding mass on imaging
 - Cyst
 - Solid: malignancy, fibroadenoma, hematoma, fat necrosis, hamartomas

Breast Cysts

- Fluid filled
- Derived from the terminal duct lobular unit
- Influenced by hormonal changes
- Commonly found in any adults
 - Peak at 35 to 50 years of age
- Can be painful if acute enlargement
- Can be painful at onset of menses

Breast Cysts

- Simple
 - All fluid filled without internal echoes or solid components
 - Benign
 - No increased risk of breast cancer
 - No additional workup or followup
 - Aspirate if painful or if affecting reading of mammogram
- Complicated
 - With internal echoes (debris)
 - <1% risk of breast cancer
 - Needle biopsy/aspiration vs close observation with US (q6m x 2 yrs)
- Complex
 - With thick walls or thick septa (>0.5mm) or with solid component
 - <1 to 23% risk of malignancy
 - Biopsy



Fibroadenoma

- Benign solid tumor
- Multiple/bilateral in 20%
- Most commonly between 15-35 years of age
- Etiology: unknown but likely hormonal
 - Can increase in size during pregnancy or with estrogen therapy
 - Usually regress after menopause

Fibroadenoma

- Slightly elevated risk of breast cancer if complex, adjacent proliferative disease or family history of breast cancer
- Presentation: mobile firm mass
- US: well defined solid mass
 - Repeat US in 3-6 months
 - Core needle biopsy
 - Excise giant fibroadenomas
- Excision if increases in size or symptomatic
 - Rapid growth: phyllodes tumor?

Nipple Discharge

- Lactation
- Galactorrhea
 - Hyperprolactinemia (medications, endocrine tumors, endocrine abnormalities)
- Physiologic
 - Usually bilateral, clear, straw colored, green, brown or gray
- Pathologic
 - Spontaneous, persistent
 - Usually unilateral and from a single duct
 - Serous, serosanguinous, or sanguineous
 - Most commonly caused by papilloma
 - 5-15% caused by malignancy

Pathologic Nipple Discharge

- Obtain US
 - Can identify intraductal lesions near the nipple
- Obtain mammogram if >30 years of age
 - Most will have negative mammogram
- Surgical evaluation if
 - Breast mass
 - Imaging abnormality
 - Positive guaiac test
 - Spontaneous, single duct, bloody

Breast Pain

- Cyclical
 - Hormonal changes
 - Bilateral and diffuse
- Noncyclical
 - Unilateral and variable in location
 - Large pendulous breasts
 - Diet/lifestyle: caffeine, nicotine
 - Hormone replacement therapy
 - Duct ectasia
 - Mastitis
 - Inflammatory breast cancer
 - Hidradenitis suppurativa, pregnancy, thrombophlebitis, trauma, macrocysts, breast surgery, medications

Evaluation of Breast Pain

- History
- Physical examination
- Imaging
- Only about 0.5 - 3.3% of breast cancers present with pain
- Treatment
 - Reassurance
 - Diet change: low fat, high complex carbohydrate, eliminate caffeine, no vitamin A/B/E
 - Supportive garment
 - Warm compress, ice pack, gentle massage
 - Discontinue hormone replacement therapy
 - Decrease dose of estrogen in OCP
 - Evening primrose, flaxseed, NSAIA (oral or topical)
 - Danazol, tamoxifen
 - Surgery not effective

Gynecomastia

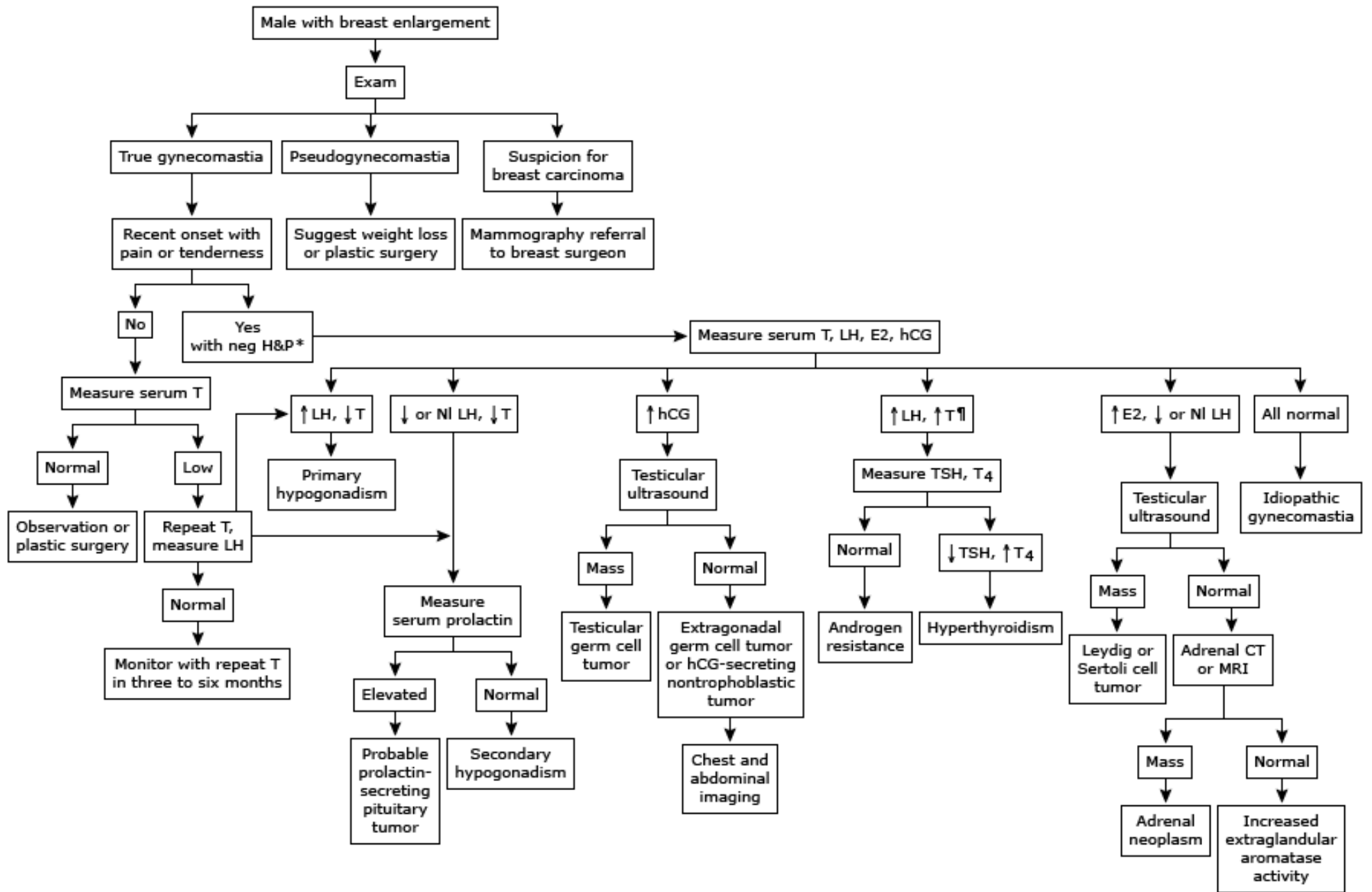
- Proliferation of glandular tissue
- Increase in the ratio of estrogen to androgen activity
- Palpable breast mass, pain
- Differential diagnosis
 - Pseudogynecomastia
 - fat deposition in obese men without glandular proliferation
 - Breast cancer

Causes of Gynecomastia

- Pubertal gynecomastia
- Medications: spironolactone, cimetidine, ketoconazole, recombinant human growth hormone, estrogen, hCG, anti-androgens, GnRH agonist, 5-alpha-reductase inhibitors
- Cirrhosis
- Malnutrition
- Hypogonadism
- Testicular tumors
- Hyperthyroidism
- Chronic renal insufficiency
- Idiopathic

Evaluation of Gynecomastia

- History and physical examination
- Laboratory studies
 - Morning serum total testosterone
 - If recent onset or painful, obtain hCG, LH, testosterone and estradiol
- Imaging
 - Mammogram or US if uncertainly about gynecomastia



Treatment of Gynecomastia

- Discontinuation of offending drug
- Correction of underlying condition
- Most will regress spontaneously
- Surgery or medical therapy for severe pain or if causing social issues
 - Androgens, antiestrogens, aromatase inhibitors

Nonproliferative Breast Lesions

- Simple cysts
- Papillary apocrine change
 - Proliferation of ductal epithelia cells
- Epithelial-related calcifications
 - May be seen in normal breast ducts and lobules or any pathologic conditions
- Mild hyperplasia of the usual type
 - An increase in the number of epithelial cells within a duct (2-4 cells in depth)
- No need for surgical excision
- Continue breasts surveillance

Proliferative Breast Lesions Without Atypia

- Usual ductal hyperplasia
 - Moderate/florid hyperplasias of the usual type
 - Increased number of cells within the ductal space
 - No additional treatment needed
- Sclerosing adenosis
 - Composed of distorted epithelial, myoepithelial and sclerotic stromal elements
 - No treatment needed
- Intraductal papilloma
- Diffuse papillomatosis
- Radial scar
- Fibroadenomas

Intraductal Papilloma

- Can harbor areas of atypia or DCIS (ductal carcinoma in situ)
- Recommend surgical excision if diagnosed on needle biopsy
- Meta analysis of 34 studies
 - 2236 papillary lesions
 - 346 (15.7%) upgrade to malignancy
- Solitary papillomas without atypia
 - Retrospective review of 38 patients
 - No malignancy in 14 patients on excision
 - Radiographically stable over 12 months in remainder of patients
- Study of 97 patients
 - 21% upgrade rate with atypia
 - 6% upgrade without atypia but all were felt to be discordant
- No additional therapy if papilloma confirmed on excision

Radial Scar (Complex Sclerosing Lesion)

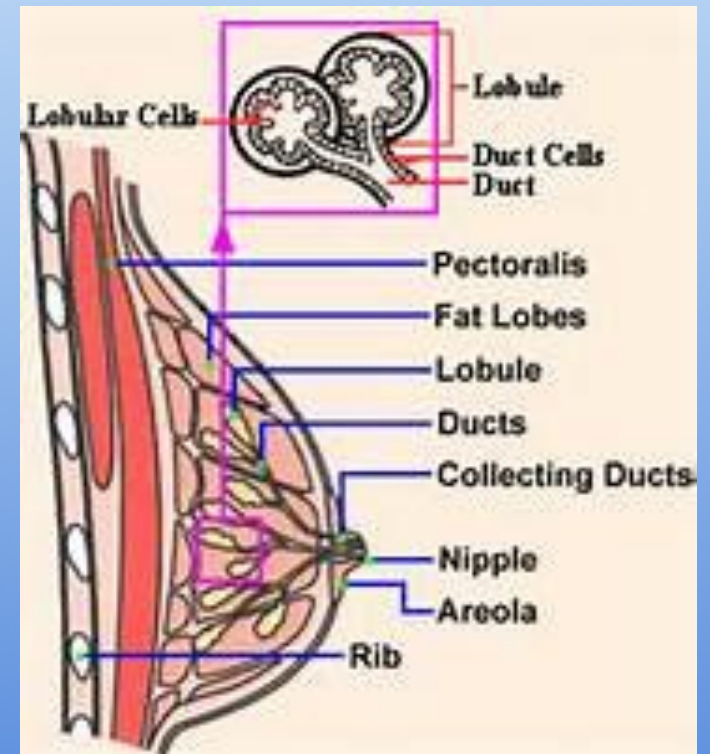
- Most studies show 8-17% chance of malignancy on excision
 - without atypia: 7.5% upgrade
 - with atypia: 26% upgrade
- Some evidence of being premalignant lesion
- No additional treatment after excision

Proliferative Breast Lesions With Atypia

- Atypical hyperplasia
- Flat epithelial hyperplasia
- Lobular Carcinoma in Situ

Atypical Hyperplasia

- Atypical ductal hyperplasia
- Atypical lobular hyperplasia
- Increased risk of breast cancer
 - 3.5 to 5 times
 - Both ipsilateral and contralateral
- Require excision biopsy when diagnosed on needle biopsy



Flat Epithelial Atypia

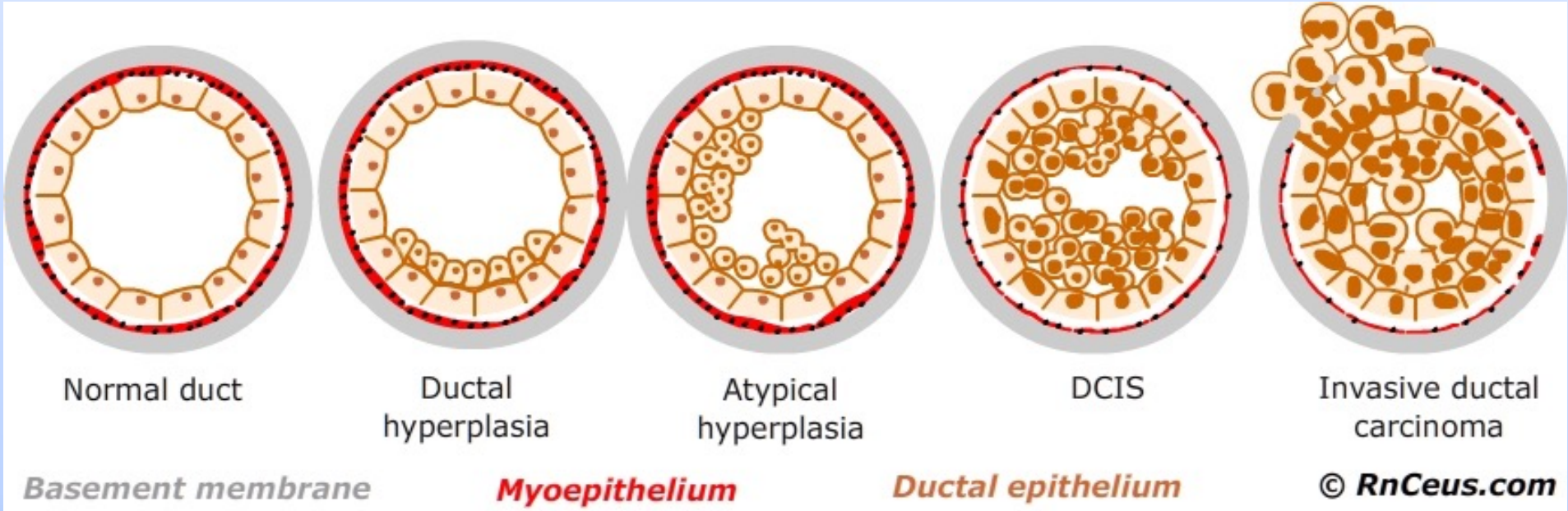
- Columnar cell change with atypia
- Columnar cell hyperplasia with atypia
- Typically shows up as calcifications on mammogram
- May be a precursor to DCIS
- 3-10% upgrade to DCIS on excision
- 0-4% upgrade to invasive carcinoma on excision

Lobular Carcinoma In Situ

- Not a cancer but a risk factor for breast cancer
- Often multifocal and bilateral
- Increased risk of 1% per year
 - Lifetime risk of 30-40%
- Recommend excision when diagnosed on needle biopsy
 - 15-38% chance of associated malignancy
- Pleomorphic LCIS: treated more like DCIS

LCIS Management

- Close observation
 - Clinical examination
 - Mammogram
 - MRI?
- Chemoprevention
- Bilateral prophylactic mastectomies



Lesions That Needs Excision

- Atypical ductal hyperplasia
- Atypical lobular hyperplasia
- Flat epithelial atypia
- Lobular carcinoma in situ (LCIS)
- Papilloma
- Complex sclerosing lesion (radial scar)

Reviewing Results

- Read pathology report thoroughly
- Read radiology report thoroughly
 - Check radiologist's interpretation of pathology
 - Concordant?
 - Discordant?
 - What's their recommendation

Question 1

Which of these do not need surgical excision when diagnosed on needle biopsy?

1. Intraductal papilloma
2. Atypical hyperplasia
3. Sclerosing adenosis
4. Complex sclerosing lesion

Question 2

All of the following labs should be obtained for patients with new onset of painful gynecomastia except,

1. Estradiol
2. FSH
3. hCG
4. Testosterone

Question 3

Which risk calculator should not be used for patients with extensive family history?

1. Gail
2. Tyrer-Cuzick
3. Claus
4. BRCAPRO

Question 4

True or False?

Raloxifine is as effective as tamoxifen in reducing the risk of both invasive breast cancer and DCIS.