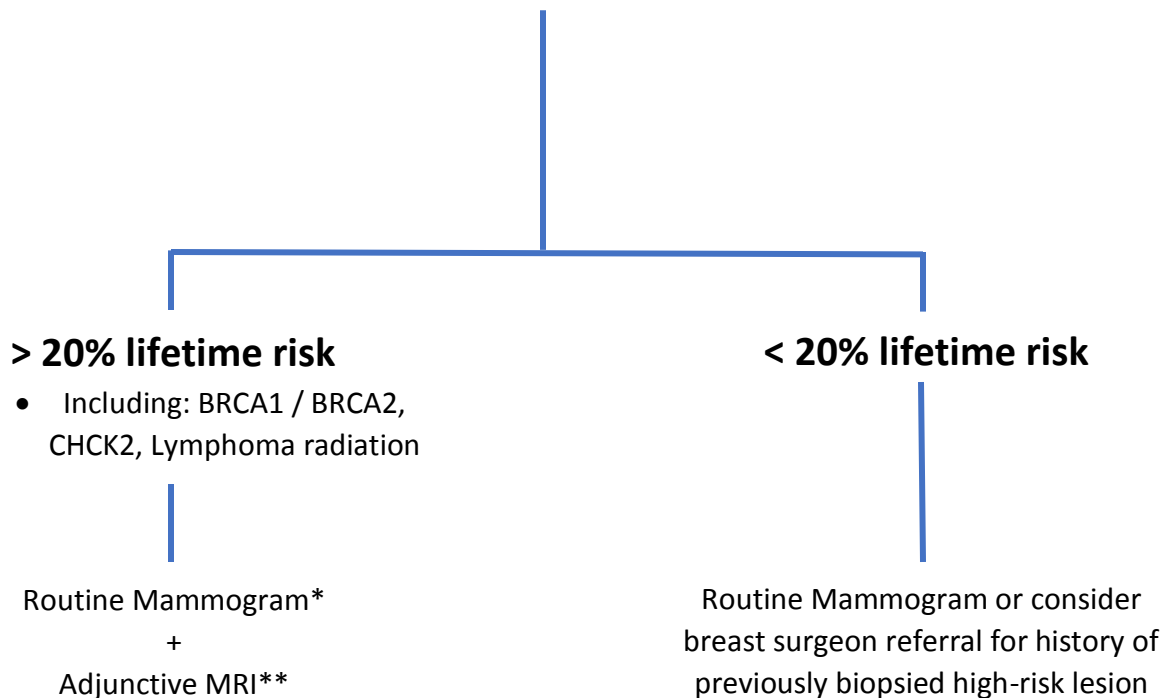


Screening Protocol with No History of Breast Cancer

Complete Tyrer-Cuzick risk assessment by age 30:
(Particularly women of Ashkenazi Jewish origin and African American women)
<http://ibis.ikonopedia.com/>



* Where screening is indicated prior to age 30, women should be screened with an annual MRI. At age 30, MRI may be alternated with screening mammograms every 6 months.

Adjunctive MRI - performing mammography and breast MRI alternating every 6 months.

**If MRI is contraindicated, routine mammogram + adjunctive ultrasound.

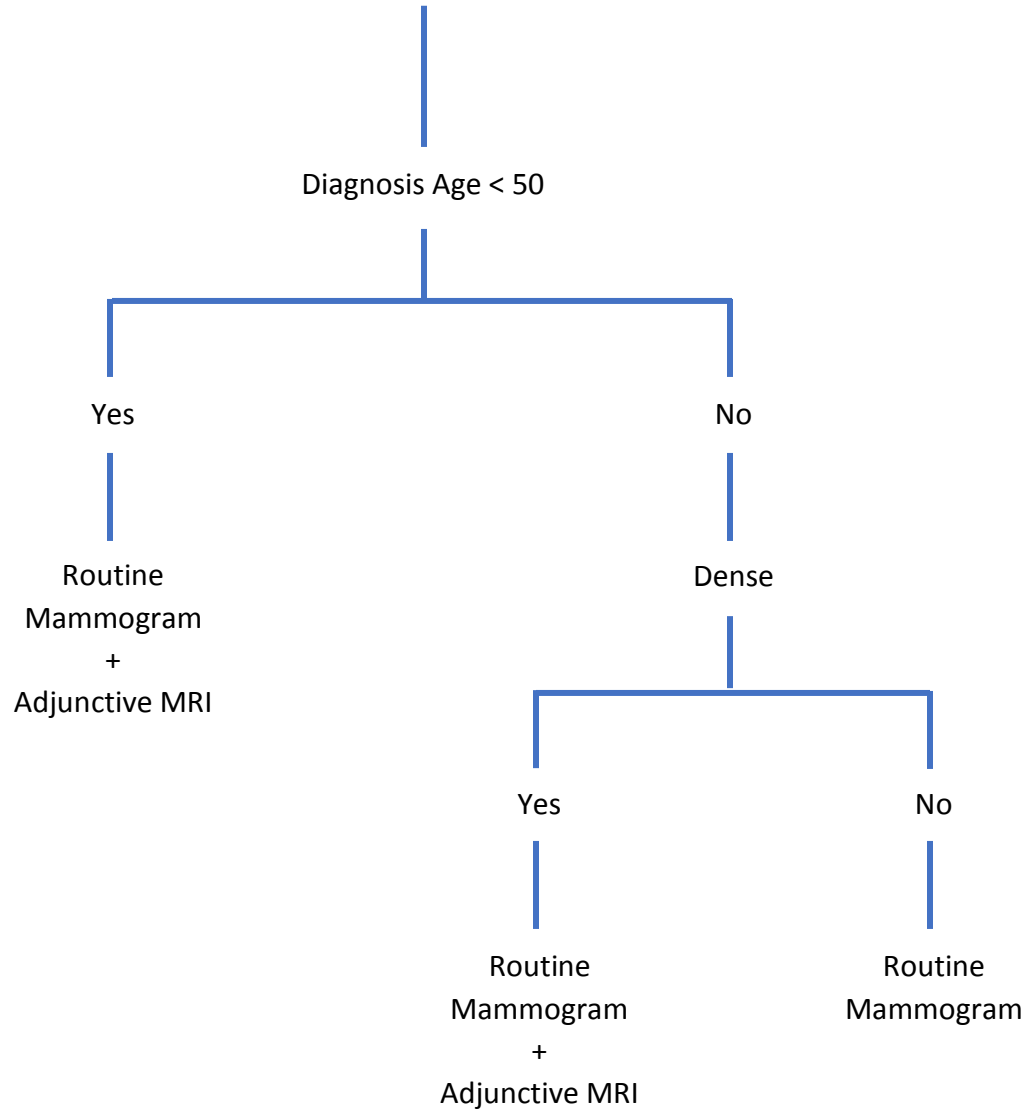
High Risk Lesions:

ADH - Atypical Ductal Hyperplasia

ALH - Atypical Lobular Hyperplasia

LCIS - Lobular Carcinoma In Situ

Screening Protocol with a History of Breast Cancer



To: Central Iowa Primary Care Providers
From: JSCC Breast Program Leadership Committee

Re: Breast Density

Breast density will be reported for all mammograms using the terminology based on BI-RADS 5th edition as follows:

a. The breasts are almost entirely fatty b. There are scattered areas of fibroglandular density c. The breasts are heterogeneously dense, which may obscure small masses d. The breasts are extremely dense, which lowers the sensitivity of mammography (Quartiles have been eliminated)

What does this mean for you and your patient?

1. Although breast density is an independent risk factor for the development of breast cancer, the actual risk for developing breast cancer when increased breast density is the only risk factor is low. The relative risk of developing breast cancer for women with heterogeneously dense breast tissue is 1.45, while the relative risk for women with extremely dense breast tissue is 2.1 when compared to women with average breast density. Current evidence suggests that breast density should not be the sole factor for pursuing supplemental screening.
2. In order to determine a woman's overall risk profile, physicians should use an established risk model calculator (Tyrer-Cuzick V.8 or BCSC). Women's risk should be calculated prior to age 30, so that early screening may begin if the patient is at increased risk. This is especially true if the patient is of African-American or Ashkenazi Jewish descent, as these populations are known to be at higher risk of breast malignancy.
3. Determining the optimal individualized screening schedule for a patient is based on the patient's lifetime risk of developing malignancy. Breast density is one of many factors that contribute to the calculation of the patient's breast cancer risk. Risk based recommendations from the American College of Radiology are summarized below and in the accompanying chart.
 - a. For women with lifetime risk < 20%, regardless of breast density, no supplemental screening beyond routine digital mammography (preferably with tomosynthesis) is recommended at this time. Consider surgical consultation for supplemental screening if there is a history of high-risk lesion (ADH, ALH, LCIS, etc.).
 - b. For women with lifetime risk > 20%, regardless of density, supplemental screening with MRI alternating at 6 month intervals with digital mammography is recommended (ages 30-74). Mammograms should not begin before age 30. Screening is done with annual MRI for patients ages 25-29.

- c. For women with dense breast tissue and a personal history of breast cancer, MRI/mammography is recommended. MRI and mammography is recommended for patients with a personal history of breast cancer diagnosed at < 40 years of age regardless of breast density. If patient is diagnosed 41-50 years of age, discuss screening protocol with breast surgeon.
4. Detection of breast cancer in women with dense breasts may be more difficult than with normal density breasts, although evolution in technology (digital tomosynthesis) has improved detection of breast cancer in dense breasts. Supplemental screening options include MRI (preferred) and whole breast ultrasound (not recommended as an adjuvant screening tool as it provides only minimal increases in cancer detection while resulting in large numbers of false positive exams). Each is associated with a false positive rate between 12 and 24%. In order to minimize adverse outcomes associated with the additional imaging and biopsies generated by a high false positive rate, risk benefit analysis support a risk-based approach to supplemental screening.
5. The test of choice for continued screening in average risk women with dense breasts is digital mammography, preferably with tomosynthesis imaging. These are the only tests that have been shown to reduce breast cancer mortality.
6. Having dense breasts is associated with a slight increased risk of having breast cancer but is not associated with an increased mortality from breast cancer.
7. Always try to optimize modifiable risk factors:
 - a. Maintain as lean of body weight as possible (BMI 18.5-25).
 - b. Exercise regularly (5 days per week, 30 minutes per day).
 - c. Limit alcohol intake to 1 drink per day or less.
 - d. Eat nutritious foods - vegetables, fruits, nuts, fresh meats and avoid all processed food and added sugar.
 - e. Never smoke and, if a current smoker, quit.
8. Breast density classification may fluctuate for a given patient over time.
 - a. There is significant inter-observer and intra-observer variability in labeling breasts as dense.
 - b. Breast density can change over time and is not a stagnant. Breast density can change with weight changes, diet, age, physical fitness and hormone replacement therapy.
9. The bottom line is that supplemental breast imaging in women with dense breasts is based on calculated risk (personal history, family history, genetic mutations, reproductive history and age) and not on breast density alone.