

# SCREENING FOR BREAST CANCER

RECENT DEVELOPMENTS IN MAMMOGRAPHY:

DENSE BREAST LEGISLATION

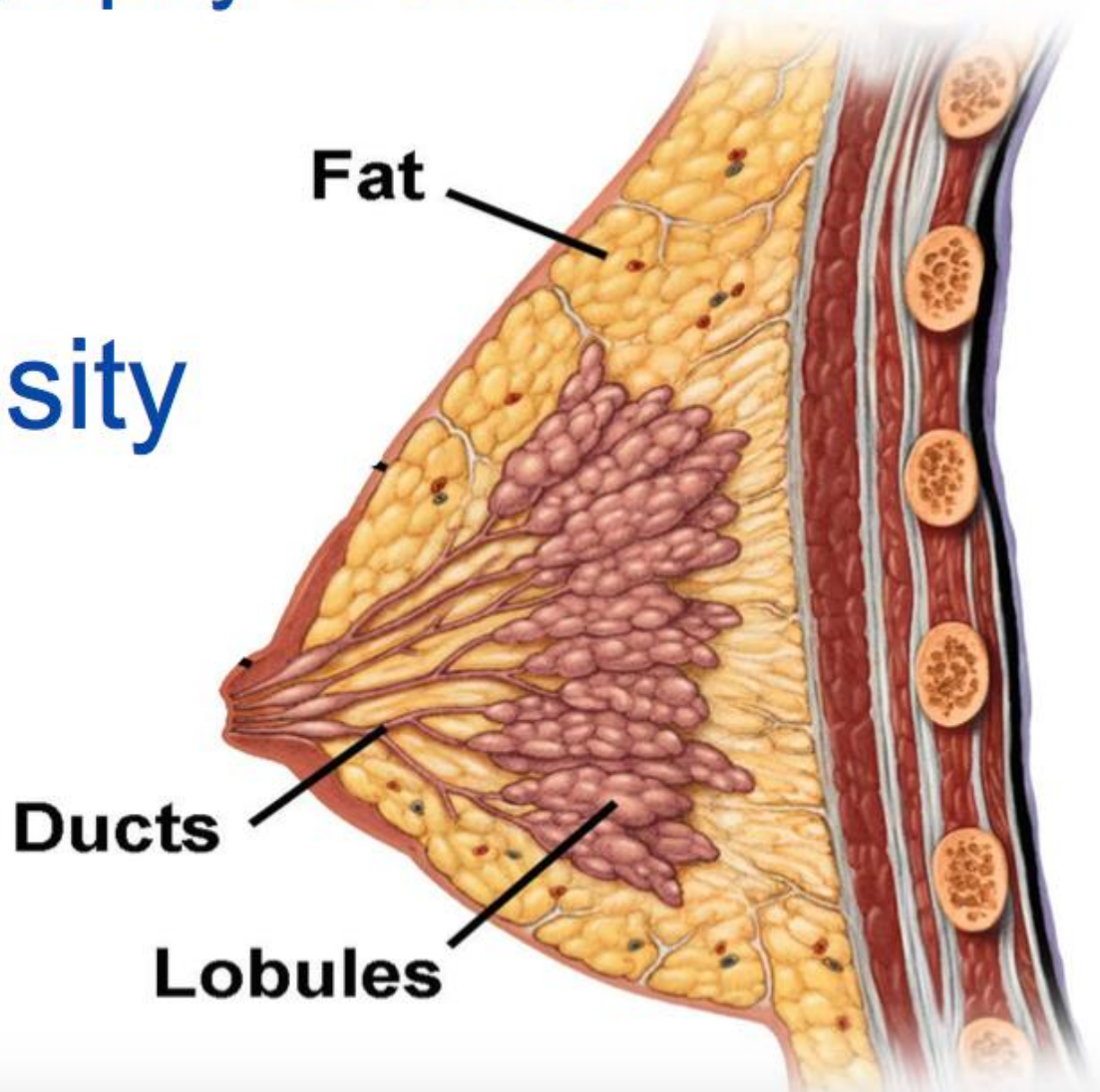
US PREVENTATIVE SERVICES TASK FORCE & ACS

# CANCER SCREENING

- BENEFIT: EARLY DETECTION LEADS TO EFFECTIVE TREATMENT, BETTER SURVIVAL
- CONCERNS: COST, OVERDIAGNOSIS (FALSE POSITIVE), AND FAILURE TO DETECT (FALSE NEGATIVE)
- TO BE COST EFFECTIVE, MUST RESTRICT SCREENING TO THOSE AT INCREASED RISK, USING TOOLS THAT ARE SENSITIVE.

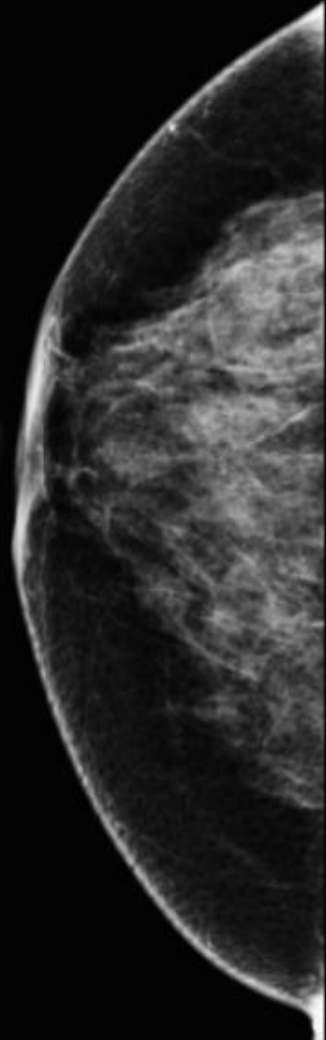
What is most important factor in failure of mammography to detect cancer?

## Breast Density

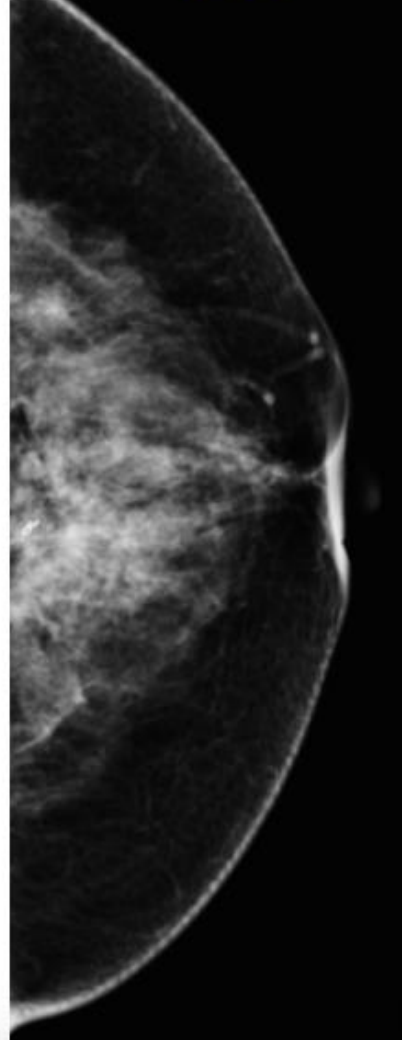


# False Reassurance

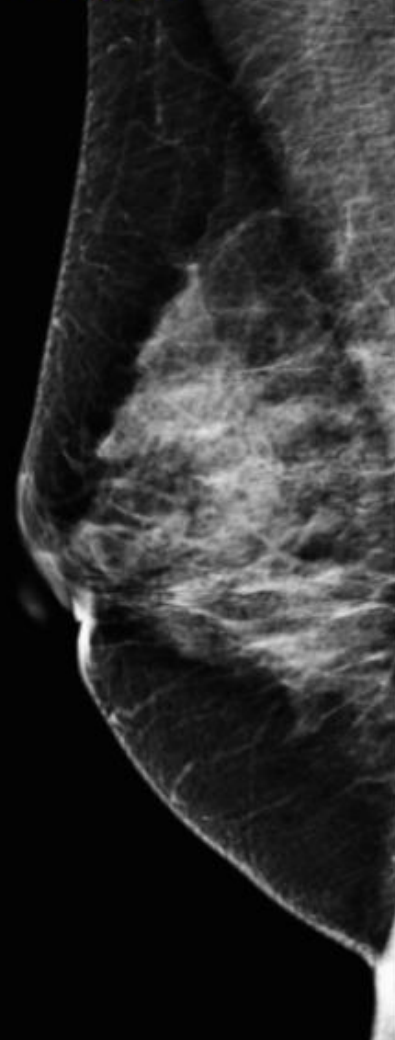
**Right**



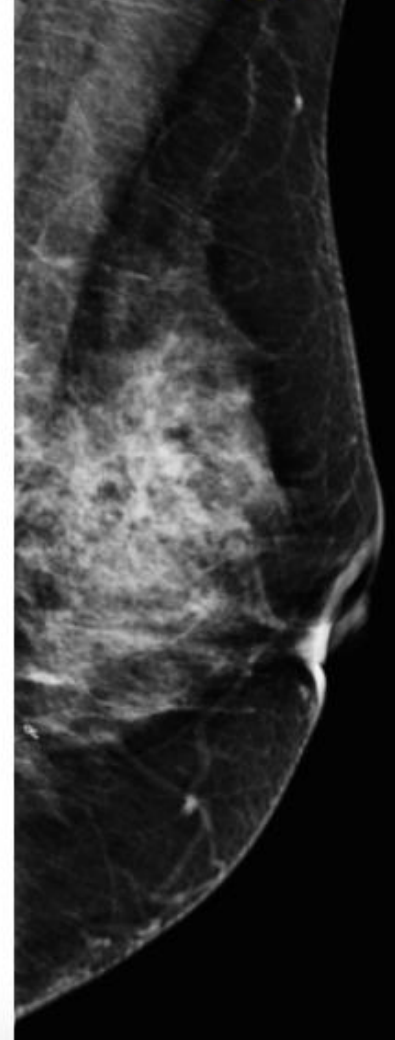
**Left**



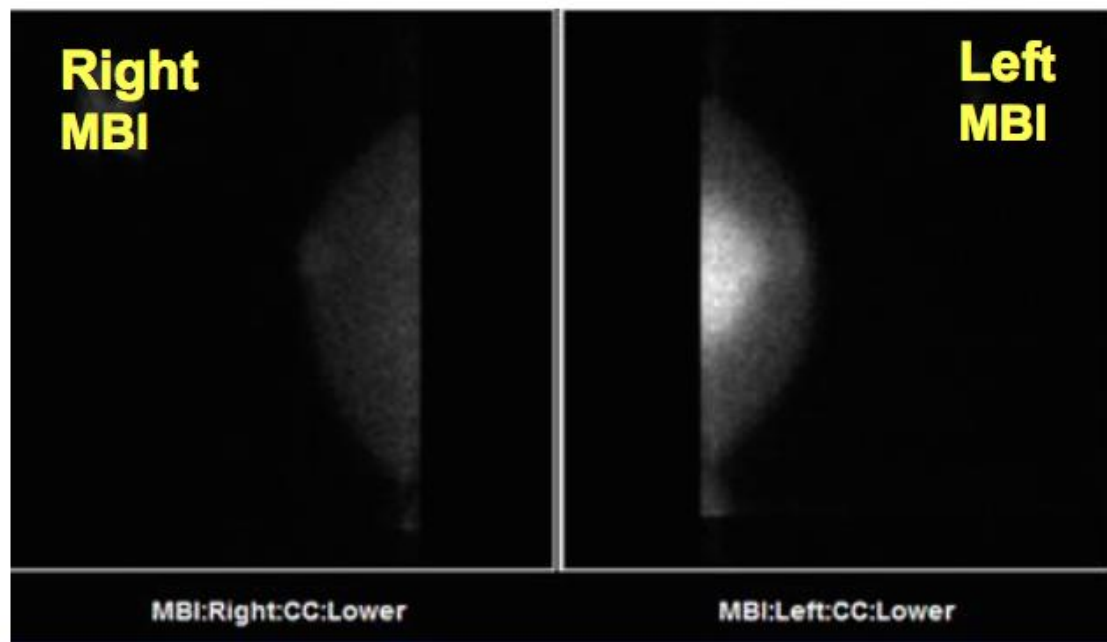
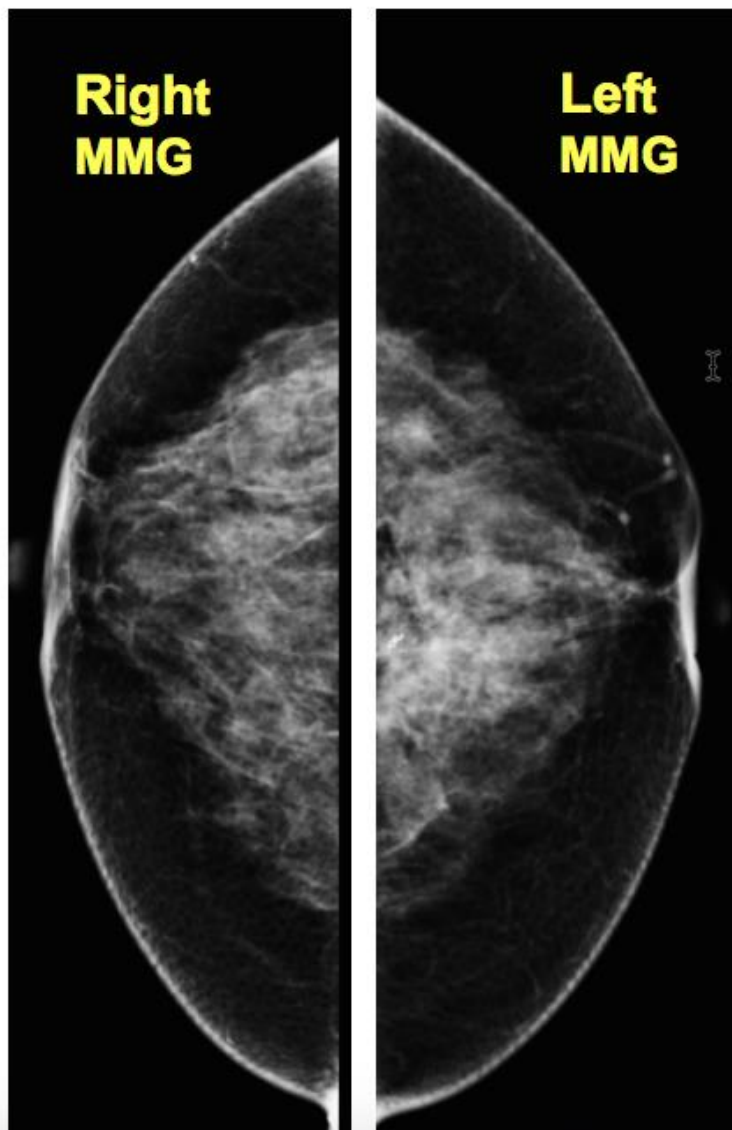
**Right**



**Left**



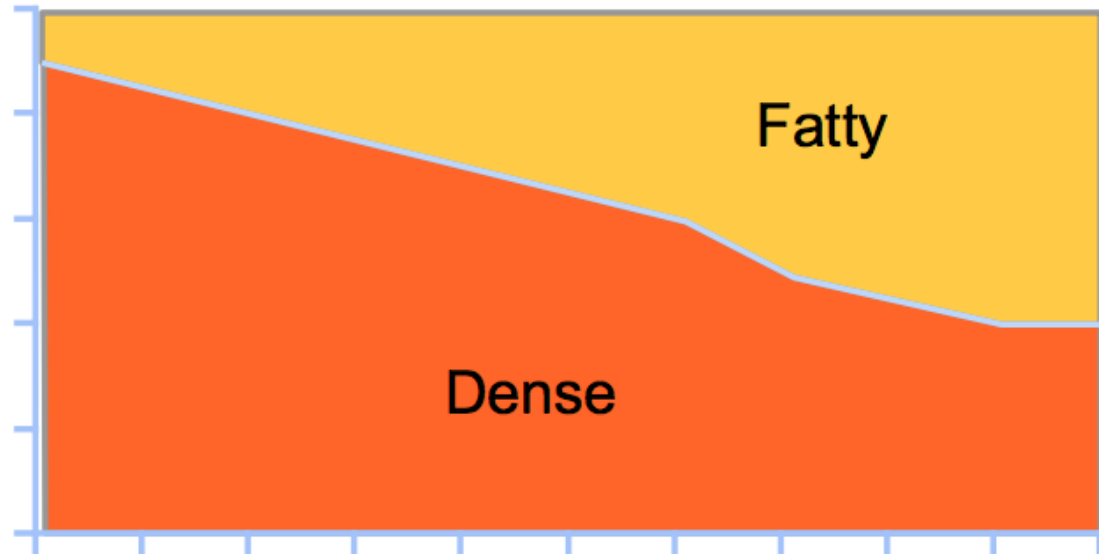
# Same patient; functional imaging technique



7 cm IDC not seen on mammography

# DENSITY BY AGE

Females  
with dense  
breasts (%)



Age (yr)

74% have dense breasts at age 40-50  
36% have dense breasts at age 70-80



# DENSE BREAST LEGISLATION

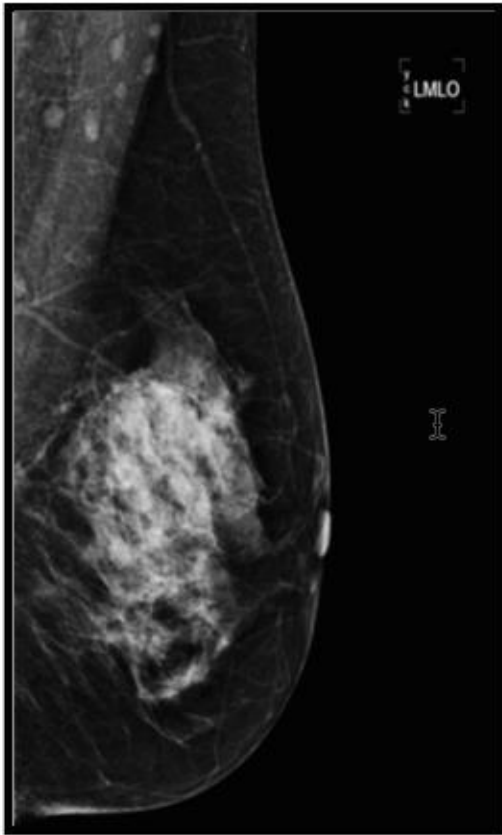
- 2009: CT BECAME FIRST STATE REQUIRING THAT WOMEN BE INFORMED IF THEIR MAMMOGRAMS SHOW DENSE BREASTS, AND THEY MAY BENEFIT FROM SUPPLEMENTAL SCREENING.
- 2012: TX, VA, NY PASSED LEGISLATION
- 2015: 22 STATES PASSED, MANY OTHERS IN PROGRESS
- THIS PROCESS IS WOMEN-DRIVEN: DIANE FEINSTEIN AND THE MAMMOGRAPHY QUALITY STANDARDS ACT

# WHAT SUPPLEMENTAL SCREENING?

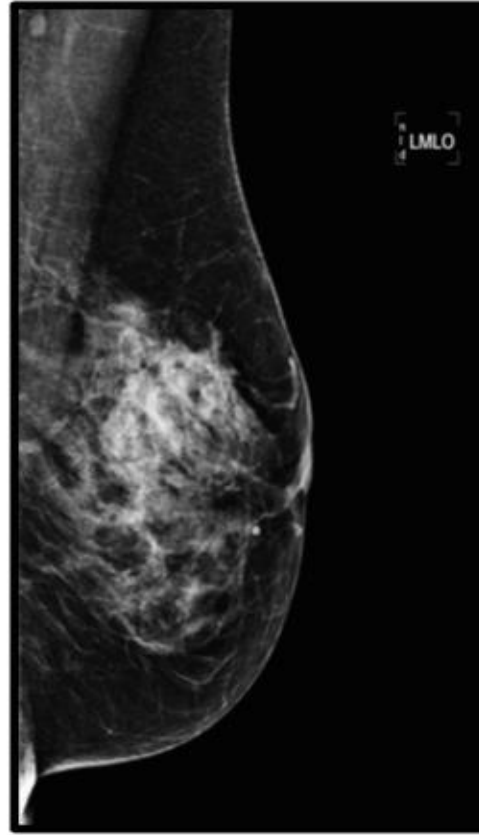
- BREAST ULTRASOUND, MANUAL, AUTO
- TOMOSYNTHESIS – 3D MAMMOGRAM
- MAGNETIC RESONANCE IMAGING
- MOLECULAR BREAST IMAGING – MAYO
- CONTRAST MAMMOGRAM - MEMORIAL



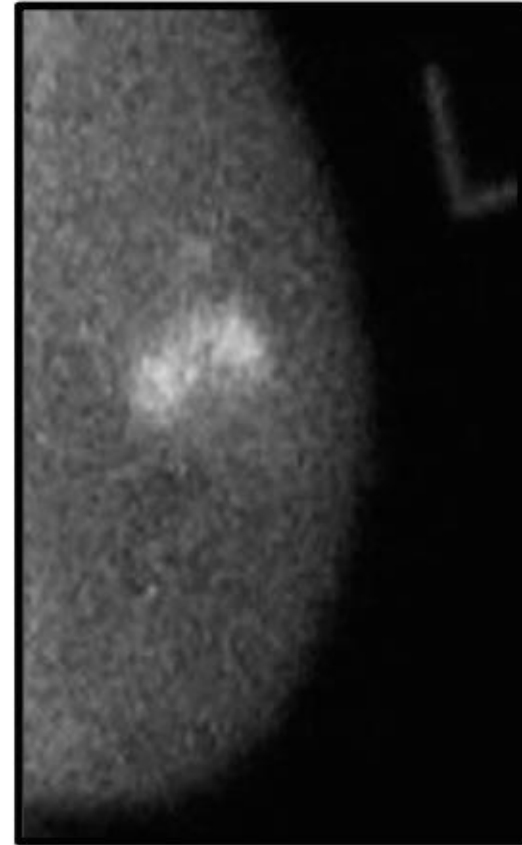
# MOLECULAR BREAST IMAGING TC-99 SESTAMIBI



**Mammogram  
November 2008**

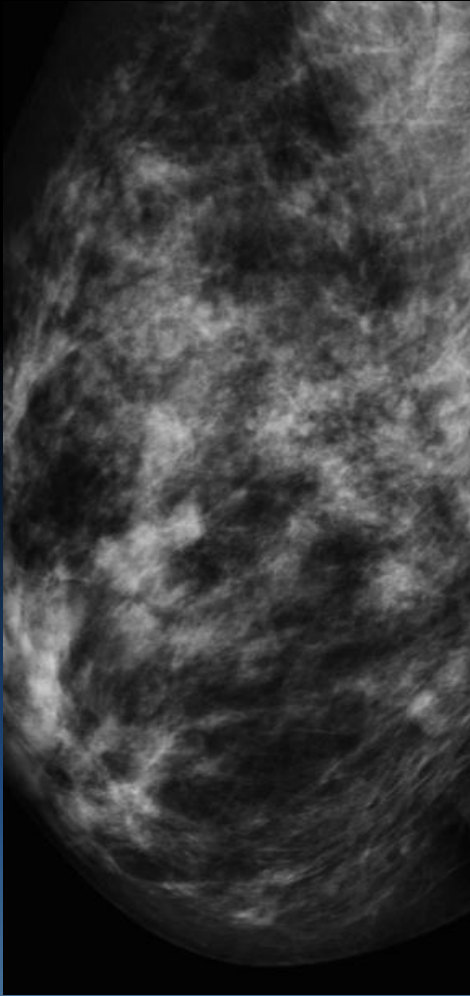


**Mammogram  
October 2010**

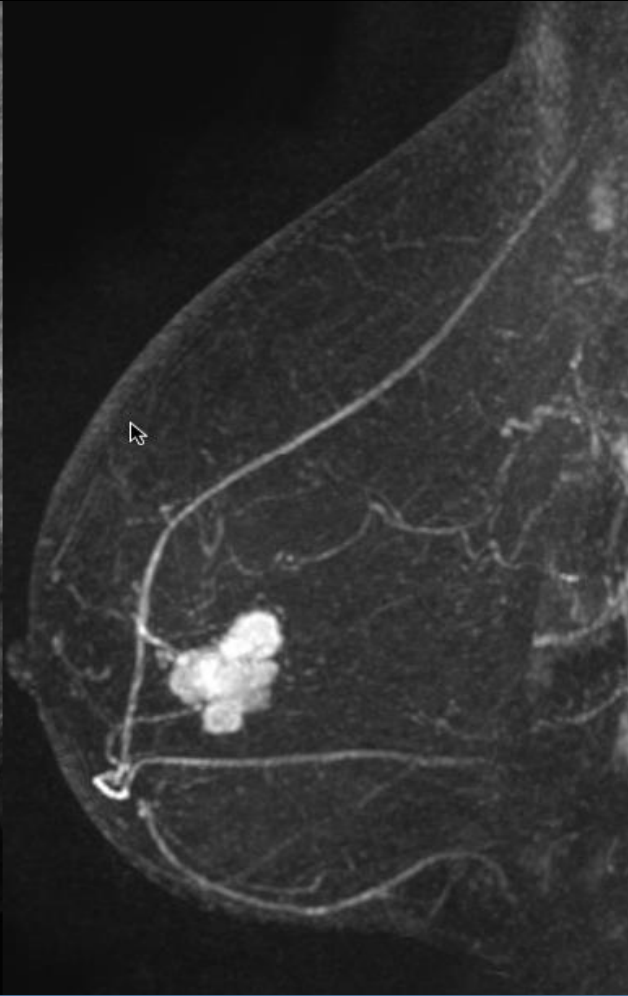


**MBI  
October 2010**

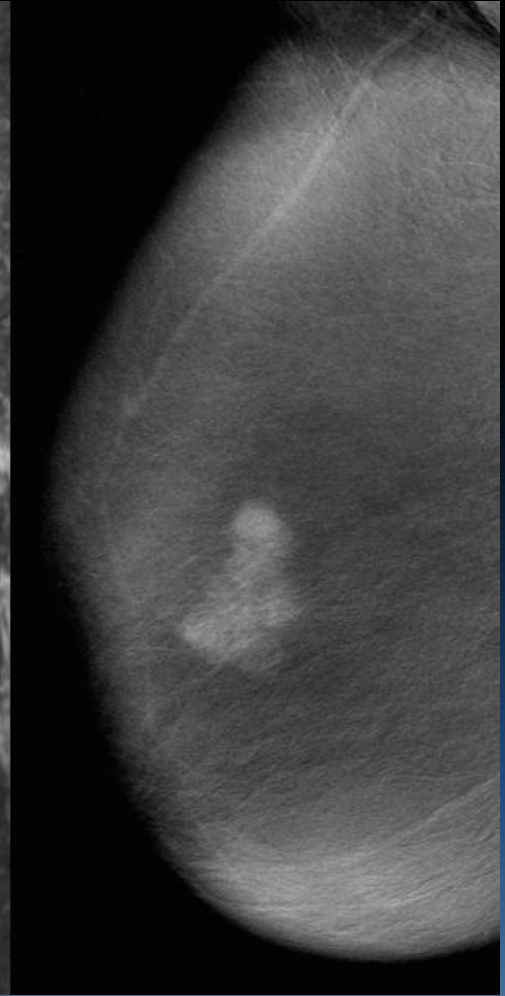
**Grade III Invasive Lobular Carcinoma, 3.6 cm; node positive**  
**Slide courtesy of Deborah J Rhodes MD**



STANDARD MAMMO



CONTRAST ENHANCED  
MAMMOGRAM



TOMOSYNTHESIS  
3-D MAMMOGRAM

# **US PREVENTIVE SERVICES TASK FORCE (USPSTF): AVERAGE RISK WOMEN**

- 40 – 49 DISCUSS WITH PHYSICIAN  
WHETHER TO HAVE MAMMOGRAPHY**
- 50 – 74 MAMMOGRAPHY EVERY 2 YEARS**

# AMERICAN CANCER SOCIETY GUIDELINES: AVERAGE RISK WOMEN

- 40 – 44 OFFER CHOICE TO START ANNUAL MAMMOGRAMS
- 45 – 54 ANNUAL MAMMOGRAMS
- 55 + CHOICE TO SWITCH TO EVERY 2 YRS
- ELDERLY? CONTINUE IF HEALTHY (LE>10Y)
- ALL WOMEN SHOULD KNOW HOW THEIR BREASTS LOOK AND FEEL, AND REPORT ANY CHANGES RIGHT AWAY.

**CONCLUSION:**  
**DON'T STOP SCREENING. SCREEN BETTER**

- **ULTRASOUND, TOMOSYNTHESIS, MRI, CONTRAST-ENHANCED MAMMOGRAM, AND MOLECULAR BREAST IMAGING ALL DETECT MORE CANCERS THAN MAMMO ALONE.**
- **PROSPECTIVE TRIALS ARE COMPARING EFFICACY OF THESE.**
- **PHYSIOLOGY OVER ANATOMY**