

Dense Breasts and the Supplemental Screening Conundrum

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Disclosures

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Consultant: Bayer

Goals:

- Define breast density
- Describe why it matters
- Review what we are required to do
- Review what we can be doing

What does breast density actually mean?

- An important question to remember when dealing with patients
- Which of the following defines breast density (from the perspective of government, payers)
 - A. The way patient's breasts feel to her
 - B. The way the breasts feel on physical exam
 - C. The amount of fatty versus fibroglandular tissue on a mammogram
 - D. B or C
 - E. Any of the above

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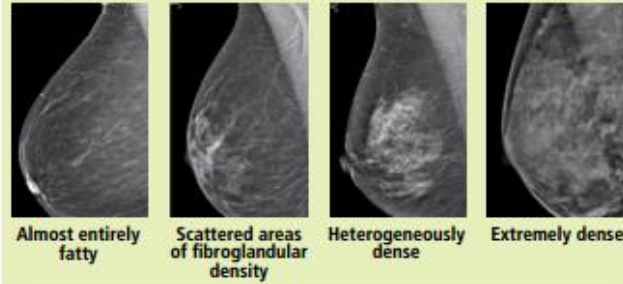
BiRads Manual 2013 Statements:

- 4 categories “defined by the visually estimated content of fibroglandular-density tissue within the breasts”
- Composition categories:
 - 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 breast are extremely dense, which lowers the sensitivity of mammography

What does breast density actually mean?

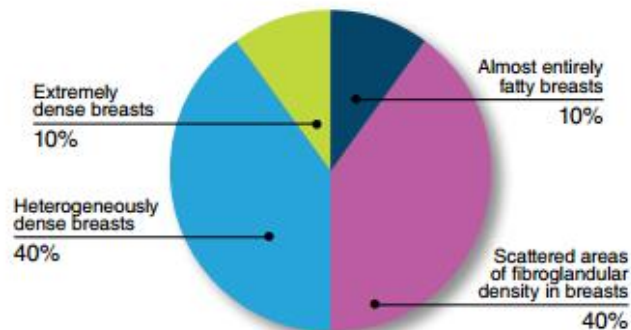
Categories of breast density

Radiologists classify breast density using a 4-level density scale:



Breast density in the U.S. (See pie chart)

- 10% of women have almost entirely fatty breasts
- 10% have extremely dense breasts
- 80% are classified into one of two middle categories



A solution to the subjectivity?

Computer calculated breast density:

- Known significant subjectivity of visual determination of breast density.
- Difficult to determine scattered versus heterogeneous especially.
 - Though this is the key dividing line for density categorization!

Computer calculated breast density:

- Volumetric breast density measurement rather than 2D estimation
- Volumetric Density =
Volume of Fibroglandular Tissue/Volume of Breast
- Several commercially available products

Why does breast density matter?

- Independent cancer risk factor
 - Elevated risk just due to the tissue
 - Estimated in the 2x RR for extreme breast density compared to average density (1.2 x RR for hetero)
 - Comparing Cat D vs A density 4-6 X RR (film screen data)

Why does breast density matter?

- Independent cancer risk factor
 - Interesting to compare to other factors:
 - Personal Hx: 3-4X
 - Fam Hx Mother < 50: 2.4 X
 - Fam Hx Sister < 50: 3.2 X
 - LCIS: 8-12 X
 - ADH: 4-5 X

Why does breast density matter?

Qualitative Perspective

- Makes it harder to see cancer!
 - Egg in a cup of milk analogy
 - Obscures small lesions
 - Masses especially can be obscured
 - Critical to look for distortions

Why does breast density matter?

Quantitative Perspective

- Sensitivity decreases with each increasing quartile of density
 - A: Fatty: 88%
 - B: Scattered: 82%
 - C: Hetero: 69%
 - D: Extreme: 62%

Carney et al. Radiology 2003; 138: 168-175.

- DMIST Trial Data (Dense = 48%)

Who's paying attention?

Who's paying attention?

EVERYONE !!!

Who's paying attention?

EVERYONE !!!

Referring MDs

Patients

Hospitals

Governments

Non-profits

Media

Insurance

Non-profits

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Giving Women with Dense Breast Tissue access to Early Detection.

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OCTOBER 2009: Connecticut first state to mandate Breast Density Notification.

The addition of breast MRI or Ultrasound to mammography increases the detection of small node-negative cancers beyond that achieved with mammography alone.
-Berg, 2008



[NEWS >>](#)

Study Aims to Keep Women from Learning About their Dense Breast Tissue Cancer Risk
[More >>](#)

NINETEEN State Density Laws as Missouri joins sister states to protect women from delayed and advanced diagnoses
[More >>](#)

Dr. Cappello's Blog Post-Bring it on: October 2015 Breast Cancer Awareness Month
[More >>](#)

Governor Malloy Proclaims Are You Dense Day Recognizing CT's Landmark Education & Advocacy Efforts
[More >>](#)

Breast Health Care is NOT One Size Fits All as Senators Feinstein/Ayotte unite for National Standard of Breast Density Reporting
[More >>](#)



[RESOURCES >>](#)

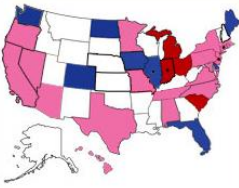
Dr. Cappello's Published Article in JACR - Decades of Normal Mammography Reports - The Happygram
[More >>](#)

Newly Updated! RESOURCE: Dr. Vitiello: Why Breast Density Matters
[More >>](#)

NEWLY UPDATED! RESOURCE: The Are You Dense? APP 'Free' on ITUNES
[More >>](#)

BROCHURE: Are You DENSE? How to know if you have dense breast tissue
[More >>](#)

STATE MANDATORY BREAST DENSITY NOTIFICATION



KEY:

- PINK: Enacted Law
- RED: Introduced Bill
- BLUE: Working on Bill
- WHITE: No Action
- BLACK *: Insurance Coverage Law

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Media

ABC News



SECTIONS TRAFFIC VIDEO Chicago & Suburban Cook Co.

HEALTH & FITNESS

WOMEN KEPT IN DARK ABOUT
KEY BREAST CANCER DATA



10:15 39' abc 7 @ABC7Chicago

Women with dense breast tissue may need more than a mammogram to determine if they are at risk for breast cancer.

ABC7 I-Team Investigation

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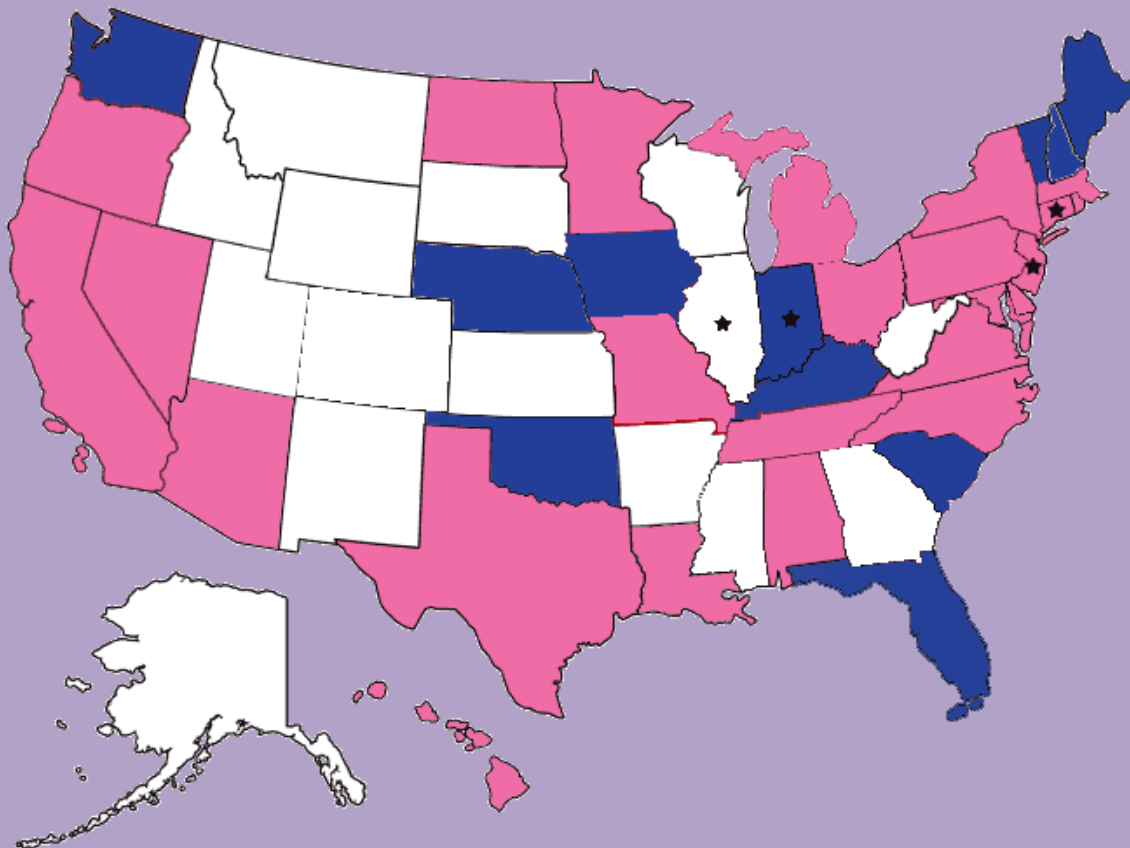
 By Chuck Goudie and Christine Tressel

Government

Previous Patchwork regarding notification circa 2018

Pink = Notification Law Enacted
Blue = Working on Bill
White = No action by Gov
Star = Insurance Must Cover Law

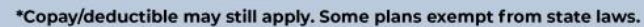
From areyoudense.com



Government (cont):

- 2019:
 - Proposal to amend MQSA to include minimum federal standard for reporting density (include: masking effect, subjectivity of determination, need to discuss with referring)
- March 2023:
 - National requirement for dense breast reporting to patients and their referring providers. Must comply by September 10, 2024. Will need to include specific language in the patient letter (dense vs not dense), and use BiRads terminology in official report.

DENSE[®]
BREAST-info
DenseBreast-info.org



What shall we do?

- Notify patients of density? CHECK!
- Perform alternative/adjunctive screening?
 - Well, now, this gets complicated...
 - Local resources
 - Practice patterns
 - Physician expertise
 - Insurance coverage laws
 - Patient preference
 - We could go on and on and on...
- Wait...we have to do this for everyone who is dense?!? How's that going to work?!?

What shall we do?

- Adjunctive options:
 - CEM
 - AWBUS
 - HH WBUS
 - MRI
 - Abbreviated MRI
 - Nucs
 - None of these tests are perfect!

What shall we do? US?

- For high risk screening if MRI not possible
- For dense screening?
 - Upsides:
 - Available
 - Lower cost (sometimes)
 - No radiation
 - Easy on patients
 - Typically detects small, node negative cancers
 - Downsides:
 - Lower CDR than MRI
 - False positives

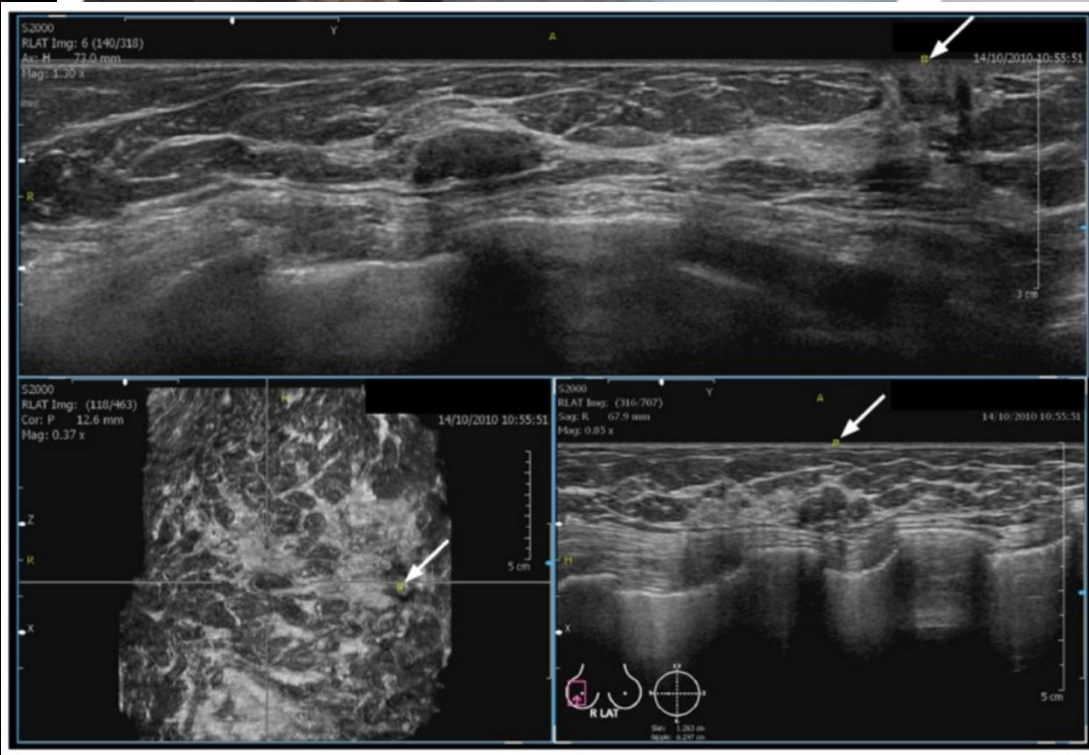
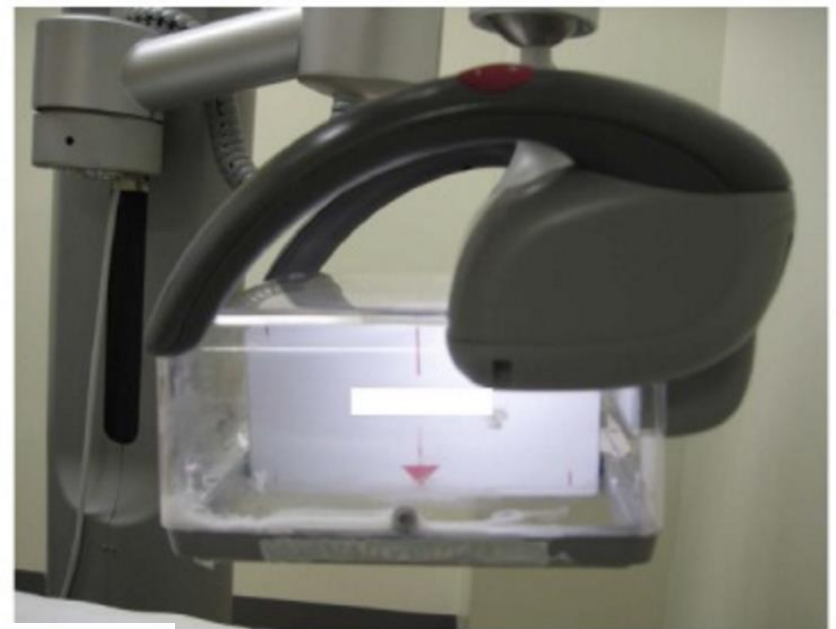
What shall we do?

Automated US?

- Advantages:
 - All images reviewed by MD (not representatives)
 - No need to read in real time
 - Less operator dependence
- Disadvantages
 - Not as available as a hand held system
 - Still lower CDR than MRI
 - Still false positives

Automated US systems:





Automated Whole Breast Ultrasound



- Reading software can be installed on your reading station
- Study is reviewed in a variable rate Cine-Loop format
- Reading time is 5-6 minutes



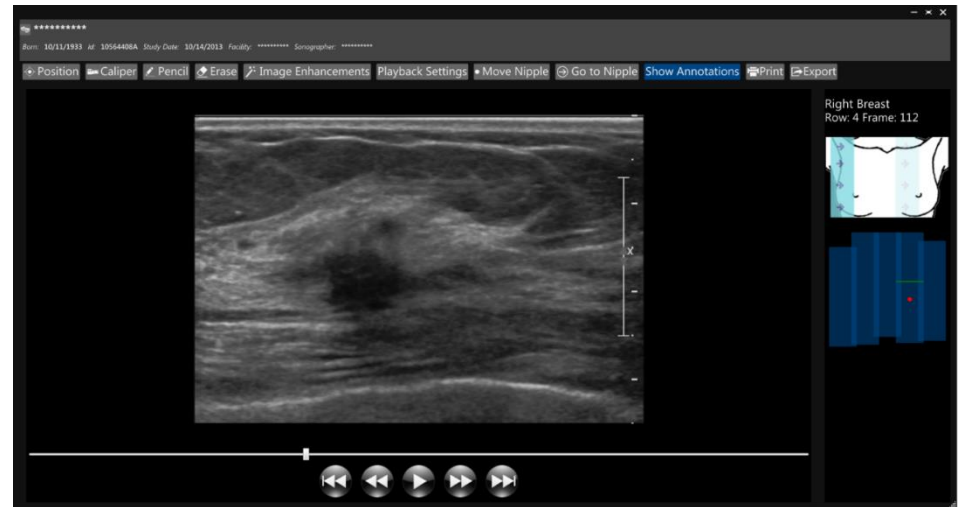
Case 1

- 79 yo female with negative mammogram in 09/2013. Referred for AWBU due to heterogenously dense breasts

AWBUS

9-11-2012

9-23-2013



Diagnostic US



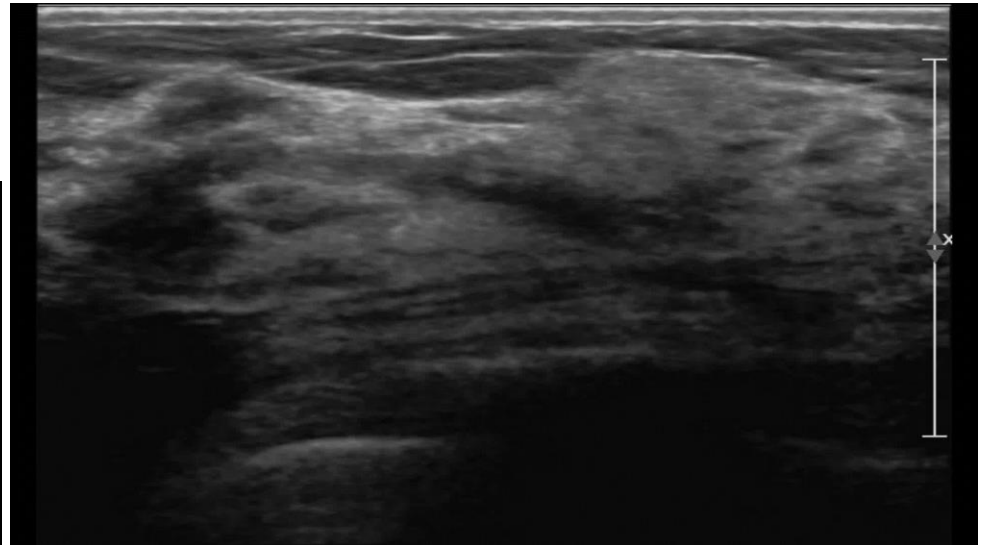
Case 2

- 63yo female with negative mammogram in 11/2013. Referred for AWBU due to heterogenously dense breasts

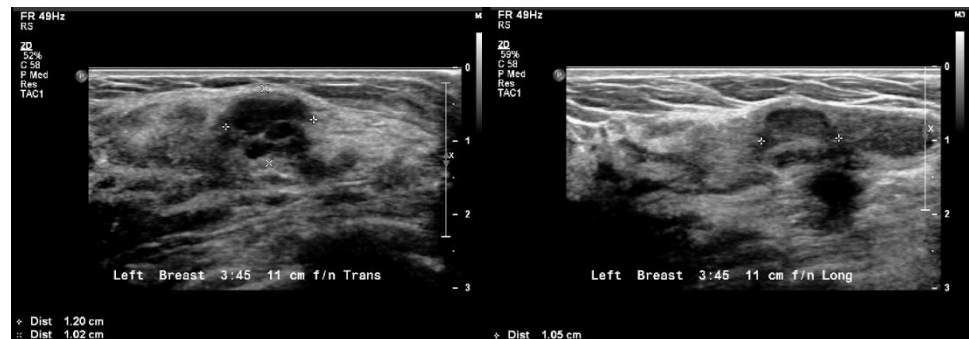
11-12-2012

11-19-2013

AWBUS



Diagnostic US



What shall we do?

MRI?

- Advantages:
 - Highest CDR
 - Becoming more available (increased access with a short protocol similar to ACRIN study)
 - Becoming more cost competitive in some states
- Disadvantages
 - Needs IV
 - MR Bxs are more difficult than US cores

What shall we do?

Educate and advocate!

- KYP (Know Your Practice)
 - Comfort level and experience of radiologists, referring clinicians, patients.
 - Educate patients and referring providers
 - Advocate for equipment upgrades (ex MRI)
 - Encourage the most important things!
 - Annual screening at 40
 - Risk assessment, especially if at risk
 - Screening MRI when reasonable or otherwise US