Breast Density and Breast Tomosynthesis

How have they changed our lives?

Renee W. Pinsky, MD
Associate Professor of Radiology
University of Michigan
“The only thing that is constant is change”

Heraclitus of Ephesus
Greek philosopher
c.535 – c.475 BCE
Objectives

• Review breast density and implications for mammography/breast cancer risk

• Review the first 10 months of the Breast Density Notification law in Michigan and supplementary screening

• Explain Tomosynthesis and the changes we can expect from its use
Breast Density

The Law Is Here!
Federal Bill

• February 2015
• Introduced in
  – Senate (SB 370)
  – House (HR 716)
• No action
REGULAR SESSION OF 2014

Introduced by Senators Hildenbrand, Schuitmaker, Jansen, Anderson, Bieda, Booher, Brandenburg, Casperson, Emmons, Gregory, Hansen, Hood, Hunter, Jones, Kahn, Kowall, Marleau, Meekhof, Moolenaar, Nofs, Pappageorge, Pavlov, Proos, Richardville, Robertson, Rocca, Smith, Walker, Warren and Young

ENROLLED SENATE BILL No. 879
The People of the State of Michigan enact:

Sec. 13524. (1) If a patient’s mammogram demonstrates dense breast tissue, a person who provides mammography services in this state shall provide notification to the patient that includes, but is not limited to, the following information, in the summary of the written report of the results of a mammography examination that is sent directly to a patient pursuant to 42 USC 263b:

“Your mammogram shows that your breast tissue is dense. Dense breast tissue is very common and is not abnormal. However, dense breast tissue can make it harder to find cancer through a mammogram. Also, dense breast tissue may increase your risk for breast cancer. This information about the result of your mammogram is given to you to raise your awareness. Use this information to discuss with your health care provider whether other supplemental tests in addition to your mammogram may be appropriate for you, based on your individual risk. A report of your results was sent to your ordering physician. If you are self-referred, a report of your results was sent to you in addition to this summary.”

Enacting section 1. This amendatory act takes effect June 1, 2015.
Change brings Concerns

• How good are we at determining density?
• Benefits and risks of supplemental screening?
• Will health system be overwhelmed in #’s and $’s?
• How will you guide your patients?
What is Breast Density?

- Different X-ray absorption of fibrous & glandular (FG) tissue vs fat
- Density is the relative amount of white (FG) vs black/gray (fat)
BI-RADS (Breast Imaging Reporting and Data System)

• Qualitative-SUBJECTIVE
  a. Almost entirely fatty
  b. Scattered areas of fibroglandular density
  c. Heterogeneously dense
  d. Extremely dense
BI-RADS (Breast Imaging Reporting and Data System)

- Qualitative
  - a.
  - b.
  - c. Heterogeneously dense
  - d. Extremely dense

= DENSE BREASTS
Density Changes

- Decreases breast density
  - Increasing age
  - Increasing BMI
  - Tamoxifen

- Increases breast density
  - Weight loss
  - Exogenous hormones
  - Lactation/Pregnancy
Change brings Concerns

• How good are we at determining density?
Variability in categorizing density

• No true gold standard
• BIRADS used in USA
• Review for USPSTF:
  – Same radiologist changed density 23%
  – Different radiologist changed density 33%
  – ~13-19% changed between dense and non-dense

Melnikow, J. Annals of Internal Medicine 2016;164:
Future density determinations

• Computer programs
  – Volumetric density assessment
  – Should be more reliable

• Different than BIRADS so will need recalibration
  – What levels are significant?
Distribution of Breast Density

<table>
<thead>
<tr>
<th>BIRADS breast density</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatty</td>
<td>10</td>
</tr>
<tr>
<td>Scattered</td>
<td>44</td>
</tr>
<tr>
<td>Heterogeneous</td>
<td>37</td>
</tr>
<tr>
<td>Extremely Dense</td>
<td>9</td>
</tr>
</tbody>
</table>

Impact of Breast Density: MASKING

Dense tissue hiding a cancer on a mammogram

Sensitivity:
Dense 63%
Fatty 87%

Impact of Breast Density: RISK

11 studies with >14,000 cases

McCormack, VA Breast density and parenchymal patterns as markers of breast cancer risk: a meta-analysis Cancer Epidemiol Biomarkers Prev. 2006. 15(6);1159-1169.

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Relative risk of cancer*

- Heterogeneously dense - 1.2x
- Extremely dense - 2.1x

*compared to average density

DMIST Trial-2005

- Digital Mammography vs film screen
  - Digital imaging MORE ACCURATE
    - Under age 50
    - Dense breasts (>50% dense)
    - Pre or peri-menopausal

>98% of units in US are digital

Film 1993  Digital 2011

Change brings Concerns

- Benefits and risks of supplemental screening?
Supplemental Screening

• In addition to mammography!

• Tomosynthesis (MORE LATER!)
• Screening US
• Screening MRI
Screening US

• ACRIN 6666- 2008
  – Screening mammogram
  – Screening US
  – 2637 Women
    • Increased risk AND >50% dense
    • Based on
      – personal hx
      – previous high risk biopsy
      – Gail model
### Screening US

4.2 additional cancers/1000 women
3.7/1000 in years 2 and 3

<table>
<thead>
<tr>
<th></th>
<th>False +</th>
<th>PPV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mammo alone</td>
<td>4.4</td>
<td>22.6%</td>
</tr>
<tr>
<td>US alone</td>
<td>8.1</td>
<td>8.9%</td>
</tr>
<tr>
<td>Mammo + US</td>
<td>10.4</td>
<td>11.2%</td>
</tr>
</tbody>
</table>

*Berg WA, et al, Combined Screening With Ultrasound and Mammography vs. Mammography Alone in Women at Elevated Risk of Breast Cancer JAMA, 2008; 299, 2151-2163*
## Connecticut Experience

<table>
<thead>
<tr>
<th></th>
<th>Hooley</th>
<th>Weigert</th>
<th>Parris</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong># of patients</strong></td>
<td>935</td>
<td>8647</td>
<td>5519</td>
</tr>
<tr>
<td><strong># of Cat 4 or 5</strong></td>
<td>5%</td>
<td>5%</td>
<td>3.3%</td>
</tr>
<tr>
<td><strong># of incremental cancers</strong></td>
<td>3.2/1000</td>
<td>3.3/1000</td>
<td>1.8/1000</td>
</tr>
<tr>
<td><strong>Size of cancer</strong></td>
<td>0.5 - 0.9 cm</td>
<td>0.4 - 8 cm</td>
<td>0.4 - 1.5 cm</td>
</tr>
<tr>
<td><strong>PPV</strong></td>
<td>6.5%</td>
<td>6.7%</td>
<td>5.5%</td>
</tr>
</tbody>
</table>

*Hooley et al, Radiology, 2012; Weigert et al, Breast Journal 2012; Parris et al, Breast Journal 2013*
Connecticut Update- RSNA 2015

- 5 Years later, tech scanning
- 756 Screening breast US
- + insurance coverage
Connecticut Update- RSNA 2015

- No change CDR
- PPV3- 25% Much better
  - (previously 6.5% p< 0.0001)
- 5% Probably benign
  - (previously 20% p< 0.0001)
- Fewer biopsies recommended 1%
  - (previously 5% p<0.0001)

- Conclusion – With experience CDR was maintained and all other performance parameters improved

Philpotts L Update on Technologist-performed, Screening Breast Ultrasound in Women with Dense Tissue 5 Years after CT Public Act No. 09-41: How Are We Doing Now? RSNA abstract Dec. 2015 http://archive.rsna.org/2015/15014457.html
Automated US

- Limited outcome studies to date
- May become more widely used with further study
- Concerns
  - High recall rate
  - Cost benefit ratio- many images, low reimbursement
  - Learning curve
MRI

Dense, negative mammogram
IDC

Berg 2012 JAMA
Expanded ACRIN trial:
Higher risk AND dense
Added MRI screening after 3 rounds of M/US
ACRIN + MRI

612 women in MRI-added group
16/612 had Cancer

Supplemental cancer yield of MRI - 14.7/1000

<table>
<thead>
<tr>
<th></th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>PPV</th>
<th>Recall Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mammo alone</td>
<td>56%</td>
<td>89%</td>
<td>29%</td>
<td>11%</td>
</tr>
<tr>
<td>Mammo + US</td>
<td>94%</td>
<td>74%</td>
<td>11%</td>
<td>16%</td>
</tr>
<tr>
<td>MRI</td>
<td>100%</td>
<td>70%</td>
<td>19%</td>
<td>31%</td>
</tr>
</tbody>
</table>

MRI

• Review of subgroups at lower risk:
  – MRI after negative mammo:
    • Sensitivity: 0.75 - 1.00
    • Specificity: 0.78 - 0.93
    • PPV: 0.03 - 0.33
    • NPV: 0.99 - 1.00

Melnikow, J Annals of Internal Medicine 2016;164
Supplementary Screening

- Risks/harms (assess patient acceptance)
  - False positives
    - More call backs
    - More biopsies
  - Costs
    - Financial
    - Stress
Change brings Concerns

• Will health system be overwhelmed in #’s and $’s with supplementary screening?
NJ Utilization study

- Law - May 2014
  - Includes insurance coverage for screening US

- Looked at screening breast US use
  - Before/after
  - 6 months after law enactment
  - Community practice (extrapolated to whole state)
  - All with dense breasts offered US

Sobotka, J J Am Coll Radiol 2015;12:1011-1015
**Utilization of US in NJ**

### Table 1. Follow-up breast sonography before and after the enactment of dense breast notification legislation

<table>
<thead>
<tr>
<th></th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>Average, January to March</th>
<th>95% Cl (±3.67%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mammography</td>
<td>419</td>
<td>382</td>
<td>444</td>
<td>415.0</td>
<td></td>
</tr>
<tr>
<td>Follow-up ultrasound</td>
<td>57</td>
<td>74</td>
<td>88</td>
<td>73.0</td>
<td>13.92%–21.26%</td>
</tr>
<tr>
<td>% follow-up</td>
<td>13.60%</td>
<td>19.37%</td>
<td>19.82%</td>
<td>17.60%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>Average, May to July</th>
<th>95% Cl (±4.55%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mammography</td>
<td>459</td>
<td>435</td>
<td>461</td>
<td>451.7</td>
<td></td>
</tr>
<tr>
<td>Follow-up ultrasound</td>
<td>215</td>
<td>187</td>
<td>169</td>
<td>190.3</td>
<td>37.61%–46.71%</td>
</tr>
<tr>
<td>% follow-up</td>
<td>46.84%</td>
<td>42.99%</td>
<td>36.66%</td>
<td>42.16%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>November</th>
<th>December</th>
<th></th>
<th>Average, November and December</th>
<th>95% Cl (±4.71%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mammography</td>
<td>395</td>
<td>429</td>
<td></td>
<td>412.0</td>
<td></td>
</tr>
<tr>
<td>Follow-up ultrasound</td>
<td>160</td>
<td>182</td>
<td></td>
<td>171.0</td>
<td>36.71%–41.47%</td>
</tr>
<tr>
<td>% follow-up</td>
<td>40.51%</td>
<td>42.42%</td>
<td></td>
<td>41.47%</td>
<td></td>
</tr>
</tbody>
</table>

* Includes screening and diagnostic US

**Minimum relative increase -177%**

**Maximum relative increase- 336%**
NJ Utilization study

- 22k-44k additional screening US/month
- 94-187 additional cancers/month

- Increased costs by:
  - $4.9 million/year minimum
- Theoretical savings:
  - Smaller cancers found (invasive, node neg)
  - Less therapy needed-surgery, drugs etc…
UM: Utilization of Screening US

- Pre-law: Jan-May 2016 = 28
- Post-law: June-Dec 2016 = 47
- 68% increase in first 6 months

- Total screening mammograms: 27,575

- Small sample
- Anecdotal
Change at UM

- Added 2 breast sonographers
- Schedule screening studies requested by any clinician (prev. only BCC)
- Variable insurance coverage
- Subject to deductibles and copays
Supplemental studies

• Medicare reimbursement averages
  • Tomosynthesis: $57
  • Screening Breast US: $165
  • Screening MRI: $536 (UM)

_Berg, W. JCO .ascopubs.org  Accessed 4-9-2016  Current Status of Supplemental Screening in Dense Breasts_
Change brings Concerns

• How will you guide your patients?
Clinician

- Clinical assessment
  - Patient interest
  - Review of risk factors
  - Tolerance for ‘negative side‘ of screening
California Density Interest Study

- Law-April 2013
- No insurance coverage state
- Compared academic and county facilities

Trinh, L Patient Awareness of breast density and interest in supplemental screening JACR 2014:10.027
California Density Interest Study

• 105 academic center respondents
  – Described as affluent population

• 132 county respondents
  – Described as indigent population

  – Study performed just before California law started
**Significant differences**

- In awareness of breast density *(low for both groups)*
- Interest in knowing breast density *(high for both groups)*
  - Interest in getting US *(high)*
  - Interest in paying for US
Biggest concern - disparities
Clinician

• Patient education materials
• Face to face discussion
• Referral to high risk clinic

• All are right
Breast Cancer Risk Factors

- Female
- Age
- Genetic: BRCA 1 and 2 most common 5-10%
- 1st degree relative (mother, sister or daughter)
- Personal history of breast cancer: 3-4x risk of a second cancer.
- Chest wall radiation age 10-30
- Prior biopsy with atypia: increase risk 3½ to 5x.
- Lobular carcinoma in situ 7 to 11x risk
- Dense breast tissue 1.2x (Het. dense) - 2.1x (Extremely dense)
- Race: -Caucasian- higher incidence
  - African-American women higher mortality
- Rare genetic syndromes- Cowden’s, Li Fraumeni etc
- Early menarche (<12)
- Late menopause (>55) longer lifetime exposure to hormones.
Controllable Risk Factors

• Lifestyle-related risk factors
  – Combined HRT
  – more than 1 alcoholic drink/day
  – overweight or obese
  – physical inactivity
Risk Models

• Not yet perfect
• Only 1 includes breast density
  – Breast Cancer Surveillance Consortium (BCSC) model
    • 5 and 10 year risk
• Several used for genetic testing/MRI
  – Tyrer Cusick
  – Penn II
  – BODEACEA
  – BRCA PRO
Imaging Recommendations

HIGH Risk Women

- Lifetime risk >20%
- 5 year risk >1.7%
- BRCA +
- Thoracic radiation
- Rare genetic syndromes

- Annual mammogram with tomosynthesis if available
- Annual screening MRI
  - Regardless of breast density
- Screening US only if MRI cannot be performed
Imaging Recommendations for AVERAGE Risk Women With Any Breast Density

• Screening mammography
  – Add Tomosynthesis if available

• Supplemental screening is NOT supported
  – NCCN: insufficient evidence to support it in absence of other risk factors
  – ACR/SBI
  – ACOG
  – ACS
  – USPSTF
Imaging Recommendations

INTERMEDIATE Risk Women

- 15-20% lifetime risk based on models
- Personal h/o breast cancer
- LCIS or atypia on prior biopsy

- Less clear cut management
- Annual Mammogram Tomosynthesis if available
- ACR/SBI appropriateness criteria:
  - MRI ‘is usually appropriate’
  - US ‘may be appropriate’
- Dense breasts- may bump to next category

>>>> supplementary screening could be considered
www.MIdensebreasts.org

• Education for primary care providers
• Links to clinical protocols
• Links to risk assessment model websites
• Educational material for providers

• Michigan Department of Community Health (MDCH)
• Michigan Breast And Cervical Cancer Control Navigation Program (BCCCNP)
Michigan Cancer Consortium
Screening Guidelines for Early Detection of Breast Cancer
May 2014

The Michigan Cancer Consortium supports the breast cancer screening guidelines for women at average and increased risk as recommended by the American Cancer Society (2014)\(^1\) and the National Comprehensive Cancer Network (NCCN) Clinical Practice Guidelines in Oncology for Breast Cancer Screening and Diagnosis (V2.2013)\(^2\).

I. Recommendations for Breast Cancer Screening – Average Risk for Breast Cancer

<table>
<thead>
<tr>
<th>Screening Exam</th>
<th>Interval</th>
<th>Age to Begin</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast Awareness/ Breast Self Exam(^1,2,3)</td>
<td>Optional</td>
<td>Mid-20’s</td>
<td>See NOTE*</td>
</tr>
<tr>
<td>Clinical Breast Exam (CBE)(^1,2)</td>
<td>Every three (3) years</td>
<td>Age 25-39</td>
<td>CBE should be part of periodic health exam</td>
</tr>
<tr>
<td></td>
<td>Annually</td>
<td>Age 40</td>
<td></td>
</tr>
<tr>
<td>Mammography(^1,2,3)</td>
<td>Annually</td>
<td>Age 40</td>
<td>Yearly exams should continue for as long as a woman is in good health.</td>
</tr>
</tbody>
</table>

*NOTE: Breast Awareness/Breast Self Exam

- Breast self exam (BSE) is an option for women starting in their 20s. Women should be informed about the benefits and limitations of BSE.\(^1\)
- Women should be familiar with their breasts and promptly report changes to their healthcare provider. Periodic, consistent BSE may facilitate breast self awareness. Pre-menopausal women may find BSE most informative when performed at the end of menstruation.\(^2\)
## II. Recommendations for Breast Cancer Screening – *Increased Risk for Breast Cancer*

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Screening Exam</th>
<th>Interval</th>
<th>Age to Begin</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Known Genetic predisposition (ie. BRCA) or pedigree suggestive of predisposition including Hereditary Breast and Ovarian Cancer Syndrome and untested 1st degree relative of BRCA case</td>
<td>CBE</td>
<td>6-12 months</td>
<td>Age 25</td>
<td>* See Note Breast Self-Awareness Consider Risk Reduction Strategies (See NCCN Breast Cancer Risk Reduction Guidelines)</td>
</tr>
<tr>
<td></td>
<td>Mammogram</td>
<td>Annual</td>
<td>≥ age 30 (Controversial between age 25 and 30)</td>
<td>Referral to genetic counselor</td>
</tr>
<tr>
<td></td>
<td>MRI</td>
<td>Annual</td>
<td>Age 25</td>
<td></td>
</tr>
<tr>
<td>High Breast Cancer Risk (&gt;20% lifetime risk) 1,2</td>
<td>CBE</td>
<td>6-12 months</td>
<td>Age Risk is Identified</td>
<td>* See Note Breast Self-Awareness Consider referral to genetic counselor Consider Risk Reduction Strategies (See NCCN Breast Cancer Risk Reduction Guidelines)</td>
</tr>
<tr>
<td>Per models largely based on family history</td>
<td>Mammogram</td>
<td>Annual</td>
<td>Age ≥ 30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MRI</td>
<td>Annual</td>
<td>Age ≥ 30</td>
<td></td>
</tr>
<tr>
<td>Prior thoracic radiation therapy between ages of 10-30 2</td>
<td>CBE</td>
<td>6-12 months</td>
<td>Begin 8-10 years after Radiation Therapy or age 40, whichever occurs first.</td>
<td>* See Note Breast Self-Awareness</td>
</tr>
<tr>
<td></td>
<td>Mammogram</td>
<td>Annual</td>
<td>As above, no earlier than age 25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MRI</td>
<td>Annual</td>
<td>As above, no earlier than age 25</td>
<td></td>
</tr>
<tr>
<td>Personal History of Breast Cancer 2</td>
<td>CBE</td>
<td>6-12 months</td>
<td>Post Diagnosis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mammogram</td>
<td>Annual</td>
<td></td>
<td>* See Note Breast Self-Awareness See NCCN Breast Cancer Guidelines-Surveillance Section</td>
</tr>
<tr>
<td>Moderate Breast Cancer Risk (15% - 20% lifetime risk) 1</td>
<td>CBE</td>
<td>6-12 months</td>
<td>Age risk is identified</td>
<td>* See Note Breast Self-Awareness</td>
</tr>
<tr>
<td></td>
<td>Mammogram</td>
<td>Annual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal history of atypical hyperplasia or Lobular Carcinoma In Situ (LCIS) 2</td>
<td>CBE</td>
<td>6-12 months</td>
<td>Post diagnosis</td>
<td>* See Note Breast Self-Awareness Consider Risk Reduction Strategies (See NCCN Breast Cancer Risk Reduction Guidelines)</td>
</tr>
<tr>
<td></td>
<td>Mammogram</td>
<td>Annual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women ≥ 35 with 5-year risk of invasive breast cancer ≥ 1.7% 2 (Per Gail model)</td>
<td>CBE</td>
<td>6-12 months</td>
<td>≥35</td>
<td>* See Note Breast Self-Awareness Consider Risk Reduction Strategies (See NCCN Breast Cancer Risk Reduction Guidelines)</td>
</tr>
<tr>
<td></td>
<td>Mammogram</td>
<td>Annual</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Tomosynthesis

- The “NEW” mammogram
- Modified for use in breast in 1990’s
Tomosynthesis

Digital x-ray mammogram
Multiple projections produced by x-ray source that moves in an arc

Park J M et al. Radiographics 2007;27:S231-S240
Tomosynthesis

DBT slice
Tomosynthesis

DBT

*LUM research

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Tomosynthesis

• Benefits
  – Increase cancer detection- all densities (many studies)
  – Decreased recall rate
    • Removes superimposition

Friedewald, SM JAMA 2014;311(24):2499-2507
## Tomosynthesis in Screening

<table>
<thead>
<tr>
<th>Study</th>
<th>Cancer detection rate/1000 (% increase)</th>
<th>Recall rate (% decrease)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oslo Tomo Screening Trial 2013 (n= 12,621)</td>
<td>Incr. 6.1 to 8.0 (31%)</td>
<td>Decr. 6.1 to 5.3 (13%)</td>
</tr>
<tr>
<td>Screening Tomo Or Mammo (STORM) 2013 (n= 7292)</td>
<td>Incr. 5.3 to 8.1 (53%)</td>
<td>Decr. 5.4 to 4.4 (18%)</td>
</tr>
<tr>
<td>Friedewald 2014 (n= 173,663)</td>
<td>Incr. 4.2 to 5.4 (29%)</td>
<td>Decr. 10.7 to 9.1 (15%)</td>
</tr>
</tbody>
</table>

Synthesized views
PALPABLE MASS

RCC

RMLO
PALPABLE MASS 2D

RCC  RMLO
PALPABLE MASS 3D

RCC-T

RMLO-T
Tomosynthesis

• Limitations
  – Radiation dose- 2x
    • Synthesize 2-D images from the 3-D
    • Slightly longer time in compression
  – Increased interpretation time

  – Still mammographic technique
    • Need some type of contrast between tissues
    • Esp in extremely dense breasts

Friedewald, SM JAMA 2014;311(24):2499-2507
What does TOMO do for us?

- \(\uparrow\) Cancer detection rate
- \(\downarrow\) False positives/ ‘harms’
- Low cost
SUMMARY

• High risk patients - Annual M + MRI
• Low risk patients
  – Annual mammogram (Tomo if available)
  – Address controllable risk factors
• Intermediate risk
  – Annual mammogram (Tomo if available)
  – Consider screening US vs MRI
    • False positives
    • Cost
Recommendations For Dense Breasts

- Continue Screening Mammography (≥40)
- Comprehensive discussion with patients
  - Acknowledge limitations
    - Subjective density assessment
    - Density can vary with patient and technical factors
  - All risk factors
  - Reassurance- density is a small risk factor
  - Supplementary screening options-strengths and weaknesses
  - Formal genetic counseling
BCCCNP

- Funds available to cover diagnostic examinations
- No coverage for Tomosynthesis
- Screening US only covered if ‘diagnostic’
“It is not the strongest or the most intelligent who will survive but those who can best manage change.”

Charles Darwin
1809-1882