The Dense Breast (DB) Tissue Issue & Setting Up an DB Early Detection Program

Presented by: The Divot Diva with a Passion!
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brush4info@aol.com - www.mammobis.com - 619.895.8184
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Mammography - Facing the Facts
We Need to Regain Their Trust

- We’ve been “selling” mammography as the earliest form of detection for ALL women

- FACT
  - breast density (BD) is one of the strongest reasons mammography fails to detect cancer
Mammography: Limitations

- Accuracy depends on the density of the breast tissue – relation of fat and glandular tissue
- ACR 1  3 mm lesion @ 95 % sensitivity
- ACR 2  5 mm lesion @ 90 % sensitivity
- ACR 3  10 mm lesion @ 70 % sensitivity
- ACR 4  20 mm lesion @ 50 % sensitivity
Like Trying to Find the Sun on a Cloudy Day
The BC Risk – Dense vs. Fatty

• 4-6 x’s that of women of same age and health

• BD is another genetic risk factor
  ◦ > than 1st degree relative
  ◦ = to 2 or more 1st degree relatives w/BC

  • July 2010 AACR meeting
    (American Association for Cancer Research)
40% Of Women Have DB’s

- 70% of BC’s are in women w/DBs
- Most are interval cancers = worse prognosis
- Recurrence is 4 x’s more likely
The Story That Began a Crusade

Dr. Nancy Cappello, PhD,
34 years in public education
Palpable mass
(-) mammo
Found by ultrasound (US)
Stage III
She Learned that BD predicts the accuracy of a mammogram at any age.
DB’s Not Just In The Young

- 2/3 of pre and 1/4 of post-menopausal women:
  - 74% in their 40’s
  - 57% in their 50’s
  - 44% in their 60’s
  - 36% in their 70’s

IT’S WHAT WE CAN’T SEE THAT KILLS!
Leads to 6 out of 7 FN's

37,200,000 women seek mammograms each year

- 37,200,000 women seek mammograms each year

- ~744,000 are at high risk (33% lifetime risk)
  - ~6,100 cancers / year discovered by mammography
  - ~6,100 cancers / year missed by mammography

- ~14,136,000 are at moderate risk (11% lifetime risk)
  - ~38,885 cancers / year discovered by mammography
  - ~38,875 cancers / year missed by mammography

- ~14,880,000 have dense breasts

Data are extrapolated from lifetime risks averaged over 40 year span.
http://www.sonocine.com/medical
A Force of Strength
Founder “Are You Dense”

I pledged to ensure that no other woman unnecessarily suffers the tragedy of a later stage cancer.

www.areyoudense.org
Survey = 90% do not know their BD!!!!

These women should be counseled on:

- Their increased risk
- The benefits/limitations of mammography
- Imaging that might improve their odds for early detection

• Are You Dense.org
“Lie By Omission”

WITHOUT BD NOTIFICATION, A NORMAL/NEGATIVE MAMMOGRAM IS A LIE BY OMISSION….

40% OF WOMEN ARE EFFECTIVELY DENIED EQUAL ACCESS TO EARLY DETECTION, [AND]…DENIED THE OPPORTUNITY TO PARTNER IN BC SURVEILLANCE.

WWW.AREYOUODENSE.ORG
“As women find out about this, they are OUTRAGED that they were never told about their own body, that they have a health hazard that has been kept from them”

Nancy Capella, PhD.
Founder, Are You Dense
I ask you for a moment to consider the “anxiety” of a late stage BC diagnosis, 
…and finding out your BC might … have been detected at an earlier stage…. 

Amy Colton, a nurse whose 3 invasive cancers were NOT found by mammography
Are You Dense Advocacy Organization

- Advocates/supports State and Federal legislative efforts to:
  - Communicate BD information to women
  - Access reliable BC screening tools for women with DB tissue.
    - Adjuvant breast screening tools can increase DB early stage BC detection up to 100%.
      - areyoudenseadvocacy.org
Current States w/Mandates
14 States + Federal Bill Pending Legislation
Info @ www.areyoudense.org

- Connecticut, Virginia, Texas, New York, California

Connecticut: In effect 2010
Virginia: In effect 8/12
Texas: In effect 4/13
New York: In effect 1/13
California: In effect 4/13
California Notification Mandate
Effective 4/1/13 to 1/1/19
unless repealed, changed, deleted or extended

08/28/12 - ASSEMBLY FLOOR: 74-0 (PASS)
08/29/12 - SENATE FLOOR: 36-0 (PASS)
09/22/12 - GOVERNOR BROWN SIGNED INTO LAW
Section 123222.3 of the Health and Safety Code requires that following a mammogram, women with heterogeneously or extremely DB’s be informed:

- they have DB tissue;
- harder to evaluate the results of a mammogram;
- an increased risk of breast cancer;
- information about BD is given to discuss with their doctor;
- a range of screening options are available.
Our Obligation Ends With Notification

No Duty Of Care Or Legal Obligation

You have dense tissue
CA Required Verbiage

- Your mammogram shows that your breast tissue is dense. Dense breast tissue is common and is not abnormal.
- However, dense breast tissue can make it harder to evaluate the results of your mammogram and may also be associated with an increased risk of breast cancer.
- This information about the results of your mammogram is given to you to raise your awareness and to inform your conversations with your doctor.
- Together, you can decide which screening options are right for you.
- A report of your results was sent to your physician.
  - [http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201120120SB1538](http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201120120SB1538)
Our RF’s Are To.... Advise/Refer Patients
Unless A Breast Surgeon Laws May Overwhelm RFs

• **Mammo provider not mandated to communicate:**
  - risk status or follow-up care/supplemental screening/options

• **Leaves these tasks to her RF:**
  - who might find this unduly burdensome
  - would probably welcome your assistance in this matter.

  - Henda’s Law Texas Rad Society Comment
    www.vwimaging.com/hendas_law.pdf
NOTIFICATION …ABOUT BD …HAS …FACILITATED NEEDED DISCUSSION WITH PCPs ABOUT INDIVIDUAL ASSESSMENT OF BC RISK, AND STRATEGIES TO IMPROVE … EARLY DETECTION. "

Judy Dean, MD, Diagnostic Radiologist practices in Santa Barbara, CA, specializing in breast imaging for >20 years. LA Daily News 08/07/2012
Connecticut Lessons

• **Initial education of RF’s**
  ◦ Sent letter explaining potential law
  ◦ Explained reasoning and DB issue

• **Backlash**
  ◦ Suggested being done for financial gain

• **Educated**
  ◦ Legislation driven by grassroots… not by breast centers
  ◦ No reimbursement mandate at that time
Get Buy-In… PRIOR To Beginning DB Program

First, we’re going to run some tests to help pay-off the machine….”
Patient Advised to Take Initiative

- RFs involved only if patient contacts them
  - not responsible to get patients to comply.

- In Texas, Henda’s Law cannot be mentioned in litigation or disciplinary proceedings.
But What Should Be Advised???

- Informing a woman of her BD presents another dilemma.
  - How useful is that information without recommendations on what to do next?

- What’s more, the medical community has yet to establish a protocol for them,
  - including what modality should be used for follow-up.
What Are The Potential Imaging Strategies?

A number of additional screening technologies have been proposed, including DBT, MBI, MRI, WBUS.

There are no data/studies presently to show reduction in mortality from BC from any screening technique other than mammography.
Though waiting for randomized controlled trials (10-15 years for survival data) is optimal, it is somewhat disingenuous, and perhaps reckless, to suggest waiting, [since] much higher rates of BC can be detected w/adjunct screening.

Thomas Kolb, MD
AMA Scientific Paper of the Year 2002 for WBUS Study
Digital Breast Tomosynthesis - DBT

Cross-sectional Mammography

FFDM = Planar 2D

DBT = multiple images

Can be formatted into a “3”D image

Hologic FDA approved

GE Submitted

Hologic's Selenia Dimensions 3D
“DBT makes a huge difference…

…the ability to peel away layers …
is a tremendous advance …
to markedly improve what we’re doing in screening.“

Stephen L. Rose, M.D., president
and founder of Rose Imaging Specialists

“…able to correctly dismiss
summation shadow or overlapping structures
and more accurately characterize lesions…”

Elizabeth Rafferty, M.D., Massachusetts General Hospital.
Enterprise Imaging & Therapeutic Radiology Management,
2009 Vol. 17, Issue 9
The 2D Mammography Image next to one slice of a 3D Image Set

The Difference is Clear
Digital Breast Tomosynthesis (DBT) Might Do The Job

Reduction in FP Recalls
Validated @ ~ 40%

Perhaps an aid to reduce FPs with any additional imaging studies if read at same time

Increase in Cancer Detection Rate (CDR)
Preliminary Data Positive But….. Not At Level of MRI or WBUS
Clinical Outcomes and “Marketing”

“So far, we have found 33% more cancers with 3D images than with 2D.
…we are delighted to offer this monumental breakthrough in technology to our patients.”

INGRID OTT, M.D.
Washington Radiology Associates
85,000 mammograms annually
15 DBT Units
6 locations, Washington, D.C. area
30 September 2012 | itnonline.com
Imaging Technology News
Breast Tomosynthesis Clinical Trials

- **European Studies** = primary outcome of CDR
  - Oslo, Norway – Hologic – 25K women
  - Malmo, Sweden – Siemens – 15K women

- 2 proposed ACRIN Screening Studies
  - **DBT vs. DM** - all vendors - North American women
    - 31K women w/DBT and DM
    - 62K women w/DBT or DM over 3 years

- to determine:
  - Diagnostic accuracy
  - Cost effectiveness for DBT as screening tool
  - Impact on health outcomes
  - Mortality rates
    - SBI newsletter Summer 2012
Interim Analysis of Oslo Study

- **CDR’s/1000 - invasive and in situ cancers**
  - 27% increase = 6.1 vs. 8.0 + DBT
    - + 25 invasive cancers detected = 40% increase

- **FP’s/1000**
  - 15% decrease = 61.1 vs. 53.1 + DBT

- **PPV comparable**
  - 29.1% vs. 28.5% + DBT

- **2x’s Interpretation time**
  - 45 sec. vs. 91 sec. + DBT

- [http://radiology.rsna.org/content/early/2013/01/01/radiol.12121373.abstr act](http://radiology.rsna.org/content/early/2013/01/01/radiol.12121373.abstr act)
SBI/ACR Response to Oslo Interim Results

- Pre-planned analysis of 2 out of 4-arm study.
- Results promising,
  - but does not provide adequate information to define the role of DBT in clinical practice.
  - EX – identify which women benefit the most – dense breasts vs. fatty
- Completion of the entire study will add value to the assessment of this new technology.
DBT Replace MRI and/or US???

“…overall performance characteristics of DBT for screening are eagerly awaited.

If substantial success is shown, DBT could reduce the efficacy of supplemental MRI or WBUS…”

If I have DBs, do I still need a mammogram?

- Yes. A mammogram is the only screening test proven to reduce breast cancer deaths.
- Many cancers are seen even if you have DB tissue.

www.acr.org - Posted 8/6/12
• Are there any tests that are better than a mammogram for DBs?
  ◦ *Studies have shown that US and MRI can help find BCs that can’t be seen on a mammogram.*
• Both
  ◦ *May not be covered by insurance*
  ◦ *Show more findings that are not cancer*
  ◦ *Can result in added testing and unnecessary biopsies.*
Breast MRI

- MRI = Hi risk screening tool recommended by ACS
  - for those with high familial and/or genetic risk.

- Not mentioned for DB = intermediate risk
ACS Specifically Excluded DB Tissue As A Risk For Imaging With MRI, [Therefore]…

no reimbursement for an MRI unless a woman is high risk.

Boetes C, Veltman J. Screening women at increased risk with MRI. Cancer Imaging, 2005; 5 Spec No A:S10-5.
MRI MAY REVEAL ADDITIONAL BREAST CANCERS MISSED BY BOTH MAMMOGRAPHY AND WBUS SCREENING.“

WENDIE A. BERG, M.D., PH.D.,

JAMA (JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION) APRIL 2012
## Data

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<th>Cancers found Series 1</th>
<th>Cancers found Series 2+3</th>
<th>Recall 1</th>
<th>Recall 2+3</th>
<th>Biopsy Rate series 1</th>
<th>Biopsy Rate series 2+3</th>
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<td>20/2659 (7.5/1000)</td>
<td>39/4819 (8.1/1000)</td>
<td>11.5%</td>
<td>9.4%</td>
<td>2.4%</td>
<td>2.0%</td>
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<td>24/2659 (9.0/1000)</td>
<td>34/4814 (7.1/1000)</td>
<td>20.9%</td>
<td>10.7%</td>
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<td>Mammo + US</td>
<td>34/2659 (12.8/1000)</td>
<td>57/4814 (11.8/1000)</td>
<td>15.1%</td>
<td>7.4%</td>
<td>10.2%</td>
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<td>MRI</td>
<td>XX</td>
<td>16/612 (14.7/1000)</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Berg, et. al. JAMA, April 4, 2012
How Many Supplemental Exams To Find One Cancer?

- 234 WBUS’s
- 68 MRI’s
  - Berg, et. al. JAMA, April 4, 2012

Recall Rate Issue
- MRI vs. WBUS
  - 3-5 x’s recall rates for women with DB’s
  - Higher FP rates

The Overall Conclusion - MRI Or WBUS?

- MRI not well-tolerated by women
  - Only 58% in ACRIN 6666 participated
    - Claustrophobia, injection, uncomfortable, too long
- If MRI could not be done
  - HHWBUS provided significant increase in invasive cancer detection and....
    - Biopsies decreased with repeated screenings while increase in CDR persisted.
      - Berg, et. al. JAMA, April 4, 2012
Was Suzanne Somers right?
Cappello Supports WBUS

There’s a decade of research on US detection of BC in DB’s.

I was shocked to find at least 6 major studies showed an increase of >96% detection with the addition of US.

Nancy Cappello on naysayers on US as additional screening tool
8 Studies - BC Detection w/WBUS
~ 4/1000

Courtesy Michael Golatta, MD. University of Heidelberg.
Department of Obstetrics and Gynecology.
Compelling Reasons For WBUS

- 1st year Connecticut results
  - 100% increase in early stage BC detection
  - Better quality of life for patients with BC

- Treatment costs minimized
  - Stage IA cancers ~ $30-50K
  - Stage II and higher ~ $300-500K

- Equates to a huge cost savings, on the order of $1 to $1.5 million per 1,000 patients screened.
Cons of HHUS for WBUS

- ACRIN 666 total Rad time = 45 – 50 min.
  - Time to perform - ~ 30 min
  - Time to interpret - ~ 19 min

- Operator dependent
  - Quality varies by training and experience
  - Inconsistent inclusion of entire breast
    - Increase in malpractice concern
  - Difficult to replicate or compare
US Tech vs. Radiologist and HHUS

- A CDR can be achieved by techs that is similar to physician-performed HHUS exams
  - Study from Yale University School of Medicine - Breast ultrasound performs well in wake of density laws,
    Kate Madden Yee, AuntMinnie.com, June 25, 2012,
Pros of Automated Whole Breast Ultrasound (AWBUS)

- Facilitates complete coverage of the breasts.
- Removes operator variability
  - Repeatable acquisition exam to exam
- Decrease overhead
  - Use mammo tech rather than US tech
  - Can use non-medical personnel
- Reduces interpretation time
  - Interpretation separated from performance
  - Batch reading possible
Automated Whole Breast Ultrasound (AWBUS)

U-Systems somo•v
Automated Breast Ultrasound (ABUS)
www.u-systems.com/

Siemens’ ACUSON S2000
Automated Breast Volume Scanner (ABVS)
www.siemens.com

SonoCine
Automated Whole Breast Ultrasound (AWBUS)
www.sonocine.com
SonoCiné AWBUS

- Used w/any quality US unit
- HHUS sized transducer
  - Add on is mechanical “arm”, software, monitor
  - 2,000 to 5,000 images depending on breast size –
    - Average 3000 thin slices
- Exam time is 15 minutes
- Images viewed on a computer in cine.
SonoCiné Scanning Procedure

- Uses an automated arm which systematically covers the entire breast
- The operator determines the force and the angle according to breast thickness and chest wall angle.

Transducer attached to moving arm

Gel filled nipple pad Placed on breast

Camisole on top on which gel is spread

Scan starts in axilla and moves in linear strips
**SonoCiné Scanning Procedure**

Tech applies pressure and tilts transducer to follow shape of chest wall.

Arm moves at 8 mm/second

Up to 3000 images – each with location code.
Ease of Transition

- **Learning curve is minimized**
  - Similar look to known breast HHUS
- **As cine loops thru breast cancers “Pop” out**
  - Uses motion to increase detection thru dynamic disruption of normal tissue architecture between frames.
- **Can be reviewed in 2 and 3 D**
- **Can select most relevant image.**
  - as if the doctors are standing there and looking at the entire image.
  - Experience of Thomas Stavros, MD, Sutter Pacific Women’s Health Center Santa Rosa, Ca. Fellow of the American College of Radiology, Society of Radiologists in Ultrasound
C. Right breast at 11:30, 6 cm from the nipple; shows a 7 mm, grade I, stage 1, invasive ductal carcinoma.

D. Left breast at 12:00, 3 cm from the nipple; two white arrows show 10 mm, grade I, stage 1, invasive carcinoma with lobular carcinoma in situ.
Siemens and U-Systems

- Similar configuration and image output
  - Stabilizing membrane “adheres” to breast
  - Large transducer size - ~ 15cm x 17cm

- U-Systems = curved - dedicated system

- Siemen’s = flat - multipurpose system
  - ACUSON S2000 = + HHUS and elastography
  - Add on tower, transducer, software, monitor
U-Systems
SomoV ABUS
Siemens Acuson S-2000 ABVS
Procedure takes ~ 15 minutes

- **System Depth is Chosen**
  - A cup = 3cm, B cups = 4 cm, C or larger = 5cm

- **Each scan takes 60 seconds**
  - 300 – 500 images depending on system/breast

- **3 Views Standard - AP, Lat, and Med**

Positioning Protocols Provides Standardized Reproducible Images
Up to 5 Views for Full Coverage Depending on Breast size/Thorax width

Superior

Lateral

Medial

Inferior

AP
Technical Tips – There is a Learning Curve

- **System depth levels are chosen by bra cup size by asking patient.**
  - Size selection is made on the scan station monitor
- **Patient lays down - 45 degree angle sponge is placed under her**
  - Allows for the nipple to point upward for centering on thorax and reducing thickness of breast
- **Arm is moved to position to include and not stretch breast tissue**
- **Thick layer of lotion (rather than gel) is placed on the breast**
  - Reduces air bubbles, easier for transducer to move.
- **The transducer has a membrane (mesh) that conforms to the breast**
- **Membrane is fixed by a button control**
- **Then slight compression is applied**
- **The scan begins**
- **Scan station displays the live transverse image**
- **Tech is able to verify the depth level selected is appropriate.**
Reported Advantage is Coronal View

- Valuable for surgeons as breast is laid out in same position during surgery

Breast with multiple cysts
Courtesy U-Systems
Automated Breast Ultrasounds
Courtesy U-Systems
Reliable, Repeatable Image Acquisition
For Lesion Follow-up

Same breast, same area, 2 years apart.
• **Case 1 Summary**
  
  – Age 84
  – Density BI-RADS III (51-75% Fibroglandular)
  – Mammo BI-RADS 2 (Benign Findings)
  – 9 mm Invasive Ductal Carcinoma
  – Left Breast, Upper Outer Quadrant
Case I Mammogram MLO
Case 1 ABUS
Workflow Optimizing Example

- Mammography techs perform the AWBUS
- US techs look at the slices on the workstation
  - Bookmark areas of interest.
- WBUS could mean more work and more demand for the sonographers’ skills.
  - More HHUS exams if abnormality is suspect
  - More biopsies to R/O breast cancer
The FP Cost of WBUS

- 4 x’s the risk of a biopsy
  - Mammography alone
    - 1 in 40
  - The combination of mammo + HHUS
    - 1 in 10 women
- PPV about the same
  - Mammo = ~ 39%
  - AWBU = 38%

- Kevin M. Kelly, MD, Judy Dean, MD, W. Scott Comulada, Sung-Jae Lee, "Breast cancer detection: radiologists' performance using mammography with and without automated whole-breast ultrasound"
...the cost of the false positive (FP) must be weighed against the cost of a false negative (FN) exam.

...in the age of minimally invasive invasive breast biopsy, it is unlikely that most women would fear a FP.

Thomas Kolb, MD, Medical Advisory Board, Women’s Voices for Change
• 93% indicated they would want additional screening if told they had DBs.
• 98% of women would have a biopsy if a suspicious mass were found.
• 90% that had a FP biopsy, indicated they would still opt for the additional screening the following year.
Reimbursement is a Challenge

- No reimbursement mandate in CA
- No reimbursement code for screening WBUS
  - Therefore @ payer's discretion
Coding For Inconclusive Mammogram

- Not abnormal but requires further testing to r/o malignancy and can be used
  - the provider is documenting “evidence of” a particular condition, not an uncertain diagnosis per Coding Clinic

- Resulted in ICD-9 793.82:
  - Dense breasts NOS (not otherwise specified)
  - Inconclusive mammogram NEC (not elsewhere classified)
  - Inconclusive mammography due to dense breasts

- May help get insurance companies to pay

  - ICD and CPT Coding — Subtle Changes You May Have Missed By JoAnn Baker, CCS, CPC-H, CPC, CHCC, Radiology Today, Vol. 11 No. 2 P. 8, February 2010
FDA Approves ABUS Screening Modality

- FDA approved U-Systems use as “screening” modality w/mammo
- Will help advance screening code
  - reimbursement potential!!!!!

- September 18, 2012
Molecular Breast Imaging (MBI) – Detection on the Molecular Level

- Uses a radioisotope chosen to concentrate in the breast
- Evaluated using a scintillation camera
- Any region larger, brighter, or located in different sites than normal is regarded as diagnostic or at least suspicious of having a disease process.
Value of MBI for DB Women = 96% PPV

- Less likely to be (+) in benign lesions
  - Reduction in FP’s
- Less likely to be (-) in cancerous lesions
  - Increased CD rate
  - Reduction of FN’s

Why Not For Screening?

- **Lifetime Fatal Cancer Radiation Risk**
  - Single BSGI exam in 40 yr old.
  - 20 to 30 x’s mammo risk for cancers in other organs of the body, including the intestines, kidneys, bladder, gallbladder, uterus, ovaries, and colon.
  - RSNA 2011

- **Currently MBI research is investigating ½ to ¼ dosage**
  - but AWBUS has no radiation
Frost and Sullivan Technology Prediction for Women with DBs

- AWBUS and DBT are forecast to someday replace conventional 2D mammography for women with DBs.

- AWBUS will continue to grow thru 2015 and then slow down if DBT begins to show value at this same level.

- The company based its prediction on the:
  - increase in BD legislation and
  - advent of new technologies.

The Impact of Notification And Supplemental Whole Breast Imaging
Implementing a Breast Ultrasound Screening Service in a High Volume Clinical Practice

Jinnah A. Phillips, MD

Available at u-systems.com/download/innovators-breast-ultrasound-screening
Initial Patient Selection + Exam

- **BI-RADS BD 3 or 4 + BIRADS Cat I or II**
  - No clinical or mammography findings

- **Modality Support Team for initial US**
  - Contacted both the physician and patient
    - Obtained order from the physician
    - Scheduled the patient for the ultrasound.

- **Returning patients**
  - Must present w/an order
Exam Timing ~ 30 Patients a Day

- **AWBUS done by mammo techs**
  - 70% of exams
    - No specific certification
    - Learning curve is minimized due to knowledge of breast positioning
    - 30 minutes at first - 20 minutes now

- **WBHHUS done by US techs**
  - 30% of exams
    - 45 minutes
    - Also do DX and follow-up of AWBUS
AWBUS Interpretation + Reporting

• **Batch read with current/previous mammograms**
  ◦ **Initial** - 10 minutes
  ◦ **Current** – 2 to 3 minutes
    • 5 min w/complicated cases

• **Patients receive a lay letter**
• **Callbacks handled like mammograms**
Lessons Learned by
Sutter Health North Bay Women’s Center

Dennis McDonald, MD

Improving Quality and Efficiency in the Breast Center — A Whitepaper, Volpara in the Integration of Adjuvant Breast Ultrasound into a Screening Program, Gerald R. Kolb, JD,
RF Education/Notification

- **Data mining from reporting system**
  - BIRADS BD 3 and 4’s = >50% BD

- **RF’s informed**
  - About the benefits of ABUS for THEIR patients with DBs
Then Notified/Educated Patients

- Informed patients w/DB tissue of the implications to:
  - mammo sensitivity
  - BC risk
- Provided information
  - both by mail and in the center.
Interacting on Behalf of Patient
400% Increase in Patient Compliance

...extending the screening process to a recall seems to be too much for many women.

...the patient is not going to want to consult with her RF in most instances. [with approval from the educated PCP] patients...will be quite fine with the explanation coming from the breast doc.

Dennis McDonald, MD
Set Up The Protocol

- Allows technologist to advise an AWBUS if patient has >50% BD tissue
Breast Density - Qualitative Assessment
Graded by ACR Standards

- BI-RADS 1: Almost entirely fat
- BI-RADS 2: Scattered fibroglandular densities
- BI-RADS 3: Heterogenously dense
- BI-RADS 4: Extremely dense breasts
80% Have BIRADS 2 or 3

Breast density in the U.S.

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

Extremely dense breasts
10%

Heterogeneously dense breasts
40%

Almost entirely fatty breasts
10%

Scattered areas of fibroglandular density in breasts
40%

Courtesy ACR - New patient education brochure on breast density
Subjective Scoring is Unreliable

- Only a 62% RAD agreement in BIRADS BD scoring
  - When the mammogram is NOT very fatty or very dense

- Technical factors can influence decision

- May vary in subsequent year w/same patient or differing interpreter
Sometimes Even Those Closest Cannot Tell 😊

They're not up there any more Walter.
Automated BD Volume Displayed at AWS W/In 90 seconds After FFDM

Density-Based Ultrasound Protocol

Courtesy Volpara

WBUS

or

ABUS
$25-40 Savings With Same Day Exams

- **Allows integrated interpretation**
  - increasing efficiency and accuracy
- **RF/Patient receive both results together**
  - Reduces mailing costs, staff resources,
  - Increases RF/Patient satisfaction
- **Eliminates nonmedical costs**
  - i.e. scheduling of separate tests
Barriers and Incorporating ABUS Screening Into Routine Clinical Practice

, Judy Dean, MD
Diagnostic Imaging - 3/27 and 4/3/12
Santa Barbara practice
RF Education Message
Personalized Medicine – Cite the Studies

- Mammography remains an important tool
  - As a gateway or entry point to the screening process.
- For ~ 40% of women w/ DB tissue,
  - it is not appropriate to stop at mammography
- For these women, ABUS can help to uncover cancers not seen on the mammogram
RF’s Want Best For Their Patients

- When cancer found by AWBUS:
  - Personally call RF’s
  - Present cases at tumor boards to show value to colleagues
  - List on pathology referral forms “US-detected mass”

- Physicians have become very accepting of AWBUS studies.
My Staff Doesn’t Want to “Sell”

- They were reminded they can help reduce interval cancers with ABUS.
  - Showed them the studies
  - Shared the successes

- Technologists educate patients
  - Explain their breast density when ABUS will be valuable for them.
  - Show difference between fatty and dense breasts
Both these women have cancer...

What about her cancer?

7 mm invasive tumor
Patients Can Relate And Understand Why AWBUS Is of Value

Both these women have cancer...
As The Years Go By…. There Will Be Changes
One Thing NEVER Changes ..... Women Talk and Talk and Talk and.....

- As cancers found by ABUS....
  - Women spread the word
  - Usage/compliance goes up
  - Women willing to pay and/or help support those that cannot thru fundraising.
So... Although There is a Time When The Breasts Should NOT Be Melons! 😊
Don’t Let Them Loose Their Lemons Or Melons
With A Common Goal
Helping Her Thrive – We Will Too!

Have Questions?
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