
13th Annual Meeting
Phoenix, AZ

Deanna J. Attai, MD, FACS
Communications Committee Chair
The American Society of Breast Surgeons
• Mission is to improve the practice of breast surgery thereby improving patient outcomes
• Advocate for surgeons who seek excellence in the care of breast patients
• Annual meeting as a forum for the exchange of ideas and promotion of education, research, and development of advanced surgical techniques
• Modern breast surgeons provide more than operative care for women with breast disease.
• Involved in the prevention, diagnosis and treatment of breast disease
• Breast care becoming more precise and individualized
• Detailed understanding is critical to improved outcomes and survival rates
Several presentations will follow which demonstrate the broad range of expertise of surgeons involved in the care of women with breast disease.
Does Infrared Thermography Predict the Presence of Malignancy in Patients with Suspicious Radiologic Breast Abnormalities?

Guilfoyle CM, Collett AE, Christoudias MK, Barrio AV, Frazier TG

Comprehensive Breast Center, Bryn Mawr Hospital
Disclosure

- This study was funded by the Humler Oncology Foundation
INTRODUCTION

- No Touch Breast Scan (NTBS) non-invasive non-radiation based imaging tool
- Dual infrared cameras and computer analysis
- Measures and compares breast surface thermal abnormalities and asymmetries
INTRODUCTION

- Scoring system (0 to 10)
  - Green is low (0 to 3)
  - Yellow is intermediate (4 to 6)
  - Red is high (7 to 10)

No Touch Breast Scan
AIM

➢ To evaluate whether NTBS could predict breast cancer in patients undergoing minimally invasive biopsy for suspicious imaging abnormalities
MATERIALS AND METHODS

- IRB approved prospective non-randomized study
- October 2009 to May 2011

No Touch Breast Scan

181 Patients

187 Imaging Abnormalities

NTBS (including opposite breast)

Minimally Invasive Biopsy
MATERIALS AND METHODS

- Comparison of tissue pathology to NTBS scan results
- “High specificity” mode (NTBS1) prior to 10/15/2010
- “High sensitivity” mode (NTBS2) following 10/15/2010
- All patients prior to 10/15/2010 were retrospectively re-evaluated in the NTBS2 mode
- We are reporting both sets of results
## RESULTS

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Number of Radiologic Abnormalities</strong></td>
<td>187</td>
<td></td>
</tr>
<tr>
<td><strong>Median Age at Biopsy (yrs)</strong></td>
<td>52.5</td>
<td></td>
</tr>
<tr>
<td><strong>Radiologic Abnormalities, n (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcifications</td>
<td>77</td>
<td>41%</td>
</tr>
<tr>
<td>Mass</td>
<td>104</td>
<td>56%</td>
</tr>
<tr>
<td>Abnormal Enhancement</td>
<td>5</td>
<td>3%</td>
</tr>
<tr>
<td>Diffuse Skin Thickening</td>
<td>1</td>
<td>&lt;1%</td>
</tr>
<tr>
<td><strong>Type of Biopsy, n (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stereotactic</td>
<td>90</td>
<td>48%</td>
</tr>
<tr>
<td>Ultrasound Guided</td>
<td>73</td>
<td>39%</td>
</tr>
<tr>
<td>MRI Guided</td>
<td>7</td>
<td>4%</td>
</tr>
<tr>
<td>Other</td>
<td>17</td>
<td>9%</td>
</tr>
</tbody>
</table>
RESULTS

- **PROSPECTIVE (NTBS1)**
  - 178 patients evaluated (3 excluded)
  - 50 patients had 52 positive breast biopsies

- **RETROSPECTIVE (NTBS2)**
  - 156 patients evaluated (22 excluded)
  - 44 patients had 46 positive breast biopsies

<table>
<thead>
<tr>
<th>Scan</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>PPV</th>
<th>NPV</th>
<th>+ contralateral scans</th>
</tr>
</thead>
<tbody>
<tr>
<td>NTBS1</td>
<td>50%</td>
<td>67%</td>
<td>37%</td>
<td>77%</td>
<td>24%</td>
</tr>
<tr>
<td>NTBS2</td>
<td>87%</td>
<td>48%</td>
<td>40%</td>
<td>90%</td>
<td>47%</td>
</tr>
</tbody>
</table>
CONCLUSIONS

- NTBS cannot discriminate between benign and malignant lesions in patients with suspicious imaging abnormalities.
- The higher sensitivity mode (NTBS2) results in an unacceptable number of false positives.
- The role of infrared thermography as a screening tool requires further study.
Long-Term Results of Excision Followed by Radiofrequency Ablation (eRFA) as The Sole Local Therapy for Breast Cancer

Misti Wilson, Sohelia Kourorian, Christiano Boneti, Laura Adkins, Brian Badgwell, Jeanette Lee, V. Suzanne Klimberg

Winthrop P. Rockefeller Cancer Institute

University of Arkansas for Medical Sciences
Problem

• 20-75% Patients Require 2nd or Even 3rd Surgery to Obtain Clear Margins

• XRT has Significant Side-Effects: Breast Fibrosis, ↓Cosmesis, Inconvenient & Even Impossible for Rural and Poor Patients

• Less Than 80% of Patients Receive Their Prescribed XRT Putting Them at Risk for Recurrence
We hypothesized that excision followed by radiofrequency ablation (eRFA) to extend the margin by 1 cm

1) May decrease the re-excision rate
2) May provide similar therapeutic benefit to XRT at the time of the initial operation.
Methods

- 73 Pts with IMC ≤ 3.0 cm, Clin Neg Nodes
- Tumor Size: 1.0 ± 0.54 cm
- All Patients had Lumpectomy and RFA Without XRT
- 55 Month Median Follow-up
Results

- 16/19 Patients (84%) with Close or Focally Positive Margins Spared Re-excision
- Only 3 Patients of 73 (4%) Required a 2nd Surgery
Results

• Median Follow-up:
  – 55 ± 21 months (13-91 months)

• 1 LR in the Tumor Bed

• 3 Elsewhere Recurrences:
  – 3 Ipsilateral
    • IDC → IDC (> 5 cm from site)
    • IDC → Mucinous
    • Mucinous → Mucinous
Cosmesis

- Cosmesis Was Scored in 40 Patients
- RTOG Cosmesis Scoring Criteria
- 90% of Patients Reported Good to Excellent Cosmesis
  - 18 (45%) Excellent
  - 18 (45%) Good
  - 4 (10%) Fair
Conclusions of eRFA

• Less Repeat Surgery
• May Replace XRT in Some Patients
• Good to Excellent Cosmesis in 90% of Patients
• Multicenter ABLATE trial
  – Radiofrequency Ablation after Breast Lumpectomy Added to Extend Intraoperative Margins

http://surgery.uams.edu/ablate
Gender Differences in Breast Cancer: Analysis of 13,000 Male Breast Cancers from the National Cancer Data Base.

Jon M. Greif, DO, FACS, Christopher M. Pezzi, MD, FACS, V. Suzanne Klimberg, MD, FACS, Lisa Bailey, MD, FACS, Marlene Zuraek, MD.

1 Carol Ann Read Breast Health Center, Alta Bates Summit Medical Center, Oakland, CA.  
2 Abington Memorial Hospital, Abington, PA  
3 University of Arkansas for Medical Sciences, Little Rock, AR  
4 Stanford University School of Medicine, Palo Alto, CA
Background and Objectives

- Male breast cancer is rare.
- No one individual or institution can accumulate enough experience with male breast cancer to permit meaningful comparisons with female breast cancer.
- It has been more than a decade since the National Cancer Data Base (NCDB) was analyzed to compare male to female breast cancer.
- This update examines gender differences in demographics, tumor characteristics, treatments and outcomes.

Methods

- All patients with breast cancer entered into the NCDB from 1998 through 2007 were compared for differences in gender.
- Males were then compared to females for differences in age, race/ethnicity, histology, grade, tumor size, lymph node involvement, hormone receptor status, course of first treatment, and overall survival.
- Statistical significance was determined by chi square test and odds ratio (OR) for categorical variables and by non-parametric test for continuous variables.
- Survival rates were calculated using the Kaplan-Meier method and compared by log-rank test.
- Statistical significance was set at p less than or equal to 0.05.
Results

- 13,457 cases of male breast cancer were identified, representing 0.9% of all breast cancers, and compared to 1,439,866 female breast cancers.*
- Males with breast cancer were more often African American (11.7 vs 9.9%, OR 1.19) and less often Hispanic (3.6 vs 4.5%, OR 0.74).*
- Males with breast cancer were older (mean age 63 vs 59 years old).*
- Males had larger tumors (median 20.0 vs 15.0 mm).*
- Males were less likely to have grade 1 tumors (16.0 vs 20.7%).*
- Males were more likely to have lymph node metastasis (41.9 vs 33.2%, OR 1.45).*
- Males were more likely to have distant metastasis (4 vs 3%, OR 1.39).*

[*All of these differences were highly statistically significant (p<0.0001).]
Results

- Males were less likely to have lobular carcinoma (10 vs 18%, OR 0.51).*
- Males were more likely to be estrogen receptor positive (88.3 vs 78.2%, OR 2.10) and progesterone receptor positive (76.8 vs 67.0%, OR 1.63).*
- Males were less likely to have a partial mastectomy (33 vs 62%, OR 0.31) and less likely to receive radiation (35.9 vs 50.4%, OR 0.55).*

[*These differences were highly statistically significant (p<0.0001).]

- There was no statistically significant difference in chemotherapy rates (males with 40.1 vs 39.8% for females, OR 1.01, p=0.40).
- There was a small, but statistically significant difference in hormonal therapy rates (males with 41.2 vs 42.4% for females, OR 0.95, p=0.006).
Results

- Mean follow up of male breast cancer patients was 51 months, vs 57 months for female breast cancer patients.

- Differences in overall survival (OS) were highly statistically significant (p<0.0001) for all patients by gender:
  - 5-year OS for women with breast cancer was 83% (median survival 129 months)
  - 5-year OS for men with breast cancer was 74% (median survival 101 months).

- When OS was compared by stage, females with breast cancer had highly statistically significantly improved 5-year OS (p<0.0001) for Stage 0 (94 vs 90%), Stage I (90 vs 87%) and Stage II (82 vs 74%) breast cancer.

- There were no differences in 5-year OS for Stage III (56.9 vs 56.5%, p=0.99) or Stage IV (19 vs 16%, p=0.20) breast cancer.
Conclusions

- Differences are demonstrated in demographics, tumor characteristics, some aspects of treatment and in outcomes.
- Men lag behind women in overall survival of early stage breast cancer.

Opportunities for improvement are:

- to increase awareness of male breast cancer amongst men and their health care providers, and
- to insure that men with breast cancer are receiving optimal treatment: Local, Regional and Systemic Therapy according to the already established guidelines for the treatment of female breast cancer.
Biology, not choice of mastectomy versus lumpectomy, dictates recurrence in high-risk breast cancer

Cureton EL, Yau C, Alvarado MD, Krontiras H, Ollila DW, Ewing CA, Monnier S, Esserman LJ on behalf of the I-SPY 1 TRIAL Investigators
Introduction

• Neoadjuvant chemotherapy often used for locally advanced breast cancer
• May downstage patients from mastectomy to lumpectomy
• Is breast conservation safe?
Methods: I-SPY 1 trial

- Prospective neoadjuvant trial
- 9 clinical centers
- Patients with $\geq 3$ cm invasive breast cancer

Median follow up 3.9 years
### Local versus Distant Recurrence

<table>
<thead>
<tr>
<th>Time from Original Cancer to First Recurrence</th>
<th>No Local Recurrence</th>
<th>Time from Local Recurrence to Distant Recurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Distant Recurrence only</td>
<td>Synchronous</td>
</tr>
<tr>
<td>0-2 years</td>
<td>19</td>
<td>2</td>
</tr>
<tr>
<td>2-5 years</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>&gt;5 years</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>35</td>
<td>10</td>
</tr>
</tbody>
</table>
## Recurrence by Treatment Type

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Radiation</th>
<th>Recurrence</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Local</td>
<td>Distant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BCT</td>
<td>90 (44%)</td>
<td>78 (87%)</td>
<td>8 (7%)</td>
<td>16 (18%)</td>
<td></td>
</tr>
<tr>
<td>Mastectomy</td>
<td>116 (56%)</td>
<td>92 (79%)</td>
<td>8 (7%)</td>
<td>29 (25%)</td>
<td></td>
</tr>
<tr>
<td>All patients</td>
<td>206</td>
<td>170 (83%)</td>
<td>14 (7%)</td>
<td>45 (22%)</td>
<td></td>
</tr>
</tbody>
</table>
Conclusions

• Local and distant recurrence is affected by aggressive biology and response to treatment but **NOT** by type of surgery

• If radiation is indicated, breast conservation should be attempted as it has less complications and is safe in this high risk population
Improved Tumor Bed Control with Mammosite® Accelerated Partial Breast Irradiation

Peter D. Beitsch, MD FACS
ASBS May 5, 2012
Scottsdale, AZ
Improved Tumor Bed Control with Mammosite

• **Hypothesis:**
  • APBI with Mammosite controls the tumor bed better than external beam whole breast irradiation
Improved Tumor Bed Control with Mammosite

• Methods:
  • ASBS Mammosite Registry completed accrual/closed: July 2004
    – 1440 pts enrolled (1449 cases)
    – 97 Institutions
    – 233 Investigators
    – 1255 invasive/194 DCIS
    – Median F/U 60 months
Improved Tumor Bed Control with Mammosite

- Results:
  - 5 yr actuarial rate of IBTR 3.61%
    - Tumor Bed 1.0%  (28% of recurrences)
    - Elsewhere 2.5%  (72% of recurrences)
## Whole Breast Irradiation - Recurrence

<table>
<thead>
<tr>
<th>Study</th>
<th>N</th>
<th>F/U</th>
<th>TR</th>
<th>EF</th>
<th>Contra</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith, et al</td>
<td>1152</td>
<td>5 yr</td>
<td>4.3%</td>
<td>3.0%</td>
<td>NR</td>
</tr>
<tr>
<td>Huang, et al</td>
<td>1339</td>
<td>12 yr</td>
<td>6.6%</td>
<td>3.8%</td>
<td>NR</td>
</tr>
<tr>
<td>Komoike, et al</td>
<td>1901</td>
<td>NR</td>
<td>7.1%</td>
<td>1.9%</td>
<td>NR</td>
</tr>
<tr>
<td>Antonucci, et al</td>
<td>199</td>
<td>10 yr</td>
<td>2%</td>
<td>2%</td>
<td>8%</td>
</tr>
<tr>
<td>Krauss, et al</td>
<td>1448</td>
<td>10 yr</td>
<td>5%</td>
<td>2%</td>
<td>9%</td>
</tr>
<tr>
<td>Abd-Alla, et al</td>
<td>267</td>
<td>8 yr</td>
<td>7.0%</td>
<td>2.6%</td>
<td>NR</td>
</tr>
</tbody>
</table>
Improved Tumor Bed Control with Mammosite

• **Discussion:**
  
  • **Historical WBI IBTR**
    – tumor bed recurrences (~69%) twice as common as elsewhere recurrences (~31%) (range 50-86%)

  • **Mammosite Registry IBTR**
    – tumor bed recurrences (~28%) considerably less common than elsewhere recurrences (~72%)
Conclusion:
- APBI with Mammosite balloon brachytherapy may control the tumor bed more effectively than whole breast irradiation.
Information on these presentations and additional notable research may be found at

http://www.breastsurgeons.org/presskit/NewsReleases.php