SABCS 2019
Updates on Local Therapy: SURGERY

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No Disclosures
Outline:

- **Expert Session Talks**
  - Initial Axillary Management (ES5-2)
  - Surgical Considerations after NET (ES5-3)

- **Abstracts**
  - Prevention and Management of Residual Breast Tissue after Mastectomy (OTE-06-01)
  - Breast Satisfaction and QOL in Young Women (PD6-01)
  - ERAS in Microsurgical Breast Reconstruction (PD6-02)
  - Accuracy of post-NAC Images to Predict Pathological Response (GS5-03,04,05)
Initial Axillary Management (ES5-2)

- Avoiding ALND in **clinically** node negative but **pathological** N+ patients:
  - ACOSOG Z0011
  - AMAROS

- Avoiding ALND in cN+ patients: the **role of neoadjuvant therapies**
Initial Axillary Management (ES5-2)

- **ACOSOG Z0011**
  - cT1-T2, cN0 undergoing **BCT and SLNB**
  - If SLN+ with no gross disease intra-op, randomized NFS vs ALND
  - All patients received whole breast RT

- NO statistical difference in LRR or Survival after 9 years
Initial Axillary Management (ES5-2)

- **EORTC AMAROS**
  - cT1-T2, cN0 undergoing **MASTECTOMY** and **SLNbx**
  - If SLN+ with no gross disease intra-op, randomized to ALND vs ART
  - NO statistical difference in LRR, OS, or DFS after 10 years
EORTC AMAROS 10-year Data

10-year cumulative incidence rate of axillary recurrence:
ALND 0.93% (95%CI: 0.18; 1.68)  (7 / 744 patients)
AxRT  1.82% (95%CI: 0.74; 2.94)  (11 / 681 patients)

HR: 1.71; 95%CI: 0.67-4.39
P = 0.365
Axillary Nodal Management Following Neoadjuvant Chemotherapy
A Review

Melissa Pilewskie, MD; Monica Morrow, MD

DOI 10.1245/s10434-017-6016-y

ORIGINAL ARTICLE – BREAST ONCOLOGY

The Optimal Treatment Plan to Avoid Axillary Lymph Node Dissection in Early-Stage Breast Cancer Patients Differs by Surgical Strategy and Tumor Subtype

Melissa Pilewskie, MD1, Emily C. Zabor, MS2, Anita Mamtani, MD1, Andrea V. Barrio, MD1, Michelle Stempel, MPH1, and Monica Morrow, MD1
The Landmark Series: Axillary Management in Breast Cancer

Carla S. Fisher, MD¹, Julie A. Margenthaler, MD², Kelly K. Hunt, MD³, and Theresa Schwartz, MD⁴
Surgical Considerations after NET (ES5-3)

HR+, Her2- with the lowest response to NAC
Increasing use of NET in the neoadjuvant setting

Surgical Considerations after NET (ES5-3)

<table>
<thead>
<tr>
<th>Year Diagnosed</th>
<th>Neoadjuvant endocrine therapy</th>
<th>Neoadjuvant chemotherapy</th>
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<tbody>
<tr>
<td>2012</td>
<td>14.1%</td>
<td>85.9%</td>
</tr>
<tr>
<td>2013</td>
<td>16.2%</td>
<td>83.8%</td>
</tr>
<tr>
<td>2014</td>
<td>15.1%</td>
<td>84.9%</td>
</tr>
<tr>
<td>2015</td>
<td>19.5%</td>
<td>80.5%</td>
</tr>
</tbody>
</table>

Surgical Considerations after NET (ES5-3)

- **Duration is unclear** – patients only receive a small portion of what they usually would (several months, opposed to 5+ years)

- But what do we do in those patients with residual nodal disease after NET?
  - **Huge GAP in the literature**
  - Usually extrapolate from NAC data

- Much less likely to downstage the axilla, but increases ability for BCT

Prevention and Management of Residual Breast Tissue after Mastectomy (OTE-06-01)

Deutschmann C, Pfeiler G. - Medical University of Vienna, Vienna, Austria

### Grossly-visible Breast on MRI after Mastectomy for Cancer

<table>
<thead>
<tr>
<th>Mast. Type</th>
<th>Number Breasts Evaluated</th>
<th>Percent with Grossly-Visible Residual Breast Tissue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>107</td>
<td>3%</td>
</tr>
<tr>
<td>Skin Sparing</td>
<td>138</td>
<td>13%</td>
</tr>
<tr>
<td>Nipple Sparing</td>
<td>140</td>
<td>66%</td>
</tr>
</tbody>
</table>

Prevention and Management of Residual Breast Tissue after Mastectomy (OTE-06-01)

- **Ongoing Study**

- Multicenter questionnaire to centers in both Europe and the US

- Designed to *develop guidelines* on how to both prevent and manage residual breast tissue after mastectomy
Breast Satisfaction and Quality of Life in Young Women (PD6-01)


- Younger women are more likely to undergo bilateral mastectomy and receive post-op RT compared to older women

- Previous study suggested better QOL in women undergoing BCT vs Mastectomy
Breast Satisfaction and Quality of Life in Young Women (PD6-01)

Breast Satisfaction and Quality of Life in Young Women (PD6-01)

- BREAST-Q Tool given to >700 women treated over a 10-year period in the Young Women’s Breast Cancer Study
- All women were diagnosed before age 40

- **357 women** with Stage 0-3 disease who underwent mastectomy
- Median age = 36y
- 41% had RT
- 75% underwent bilateral mastectomy
  - 81% expander/implant
  - 16% autologous
  - 3% complex
Breast Satisfaction and Quality of Life in Young Women (PD6-01)

Unadjusted BREAST-Q Scores stratified by RT

<table>
<thead>
<tr>
<th>BREAST-Q Domain</th>
<th>Autologous - RT N=29</th>
<th>Autologous +RT N=27</th>
<th>Implant - RT N=174</th>
<th>Implant +RT N=113</th>
<th>Complex N=13</th>
<th>Global p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with Breasts, mean (sd)</td>
<td>67 (19)</td>
<td>63 (18)</td>
<td>64 (18)</td>
<td>53 (18)</td>
<td>58 (22)</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Physical well-being, mean (sd)</td>
<td>81 (13)</td>
<td>80 (14)</td>
<td>80 (15)</td>
<td>77 (14)</td>
<td>67 (18)</td>
<td>0.01</td>
</tr>
<tr>
<td>Psychosocial well-being, mean (sd)</td>
<td>71 (18)</td>
<td>64 (18)</td>
<td>72 (20)</td>
<td>66 (23)</td>
<td>62 (20)</td>
<td>0.03</td>
</tr>
<tr>
<td>Sexual well-being, mean (sd)</td>
<td>54 (21)</td>
<td>50 (24)</td>
<td>52 (20)</td>
<td>47 (22)</td>
<td>48 (27)</td>
<td>0.26</td>
</tr>
</tbody>
</table>

Determine the benefits of an ERAS pathway for patients undergoing microsurgical abdominal flap reconstruction

- Retrospective analysis over a 3-year period

- ERAS Pathway:
  - Pre-op Counseling
  - Nutrition Optimization
  - Peri-op fluid management
  - Early mobilization
  - Multimodal analgesia

- Pre-ERAS group: 205 patients, 204 patients in ERAS group
ERAS in Microsurgical Breast Reconstruction (PD6-02)

- Age, laterality, timing of reconstruction, and number of abdominal surgery – similar between the 2 groups ($p > 0.05$)

- **BMI** and incidence of **autoimmune disease** were significantly higher in the pre-ERAS groups ($p < 0.05$)

- ERAS Patients:
  - 46% less intraoperative narcotics
  - 31% less post-operative narcotics
  - 29% reduction in LOS
Diagnosing residual disease and pCR after NAC in BC by image-guided vacuum-assisted biopsy: results of a prospective multicenter trial (GS5-03)


- Evaluate the accuracy of VAB to diagnose ypT0 after NAC (prior to surgery)
- Multicenter, prospective trial at 21 sites in Germany, over 2 years
- 451 Patients (initially planned for 600)
- All patients initially cT1-cT3
- All received VAB after completion of NAC prior to surgery
- VAB results compared to surgical pathology
Diagnosing residual disease and pCR after NAC in BC by image-guided vacuum-assisted biopsy: results of a prospective multicenter trial (GS5-03)


- Study designed to prove the FNR of VAB is <10%

- Stopped early, at the interim analysis: **FNR 17.8%**
<table>
<thead>
<tr>
<th>Table 1</th>
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<tbody>
<tr>
<td>Primary efficacy analysis</td>
</tr>
<tr>
<td>residual disease in i.g.VAB specimen</td>
</tr>
<tr>
<td>no residual disease in i.g.VAB specimen</td>
</tr>
<tr>
<td>residual disease in surgery specimen (n=208)</td>
</tr>
<tr>
<td>no residual disease in surgery specimen (n=190)</td>
</tr>
<tr>
<td>FNR (95% CI)</td>
</tr>
<tr>
<td>NPV (95% CI)</td>
</tr>
<tr>
<td>PPV (95% CI)</td>
</tr>
<tr>
<td>*whole tumor was removed by i.g.VAB, thus not false positive</td>
</tr>
</tbody>
</table>
Accuracy of post-neoadjuvant chemotherapy image-guided breast biopsy to predict the presence of residual cancer: A multi-institutional pooled analysis (GS5-04)


- Given the increasing use of NAC-imaging to assess response, aimed to pool the data on image-guided biopsies to predict residual disease

- Possibly help to support trials to omit surgery in selected patients

- Pooled data from 3 Hospitals:
  - Royal Marsden Hospital
  - Seoul National University Hospital
  - MD Anderson Cancer Center
166 women who underwent post-NAC image-guided bx
Mean age = 49
Overall pCR was 51.2%

pCR based on phenotype:
- HR+/Her2- = 16.1%
- HR+/Her2+ = 44.7%
- HR-/Her2+ = 69.0%
- TNBC = 66.1%
- Majority underwent VAB
- Median needle size = 10 gauge
- Median samples = 6

- Overall FNR of 18.7%
## GS5-04

### Results: diagnostic accuracy

% (95% CI)

<table>
<thead>
<tr>
<th></th>
<th>All histologic types (N=159)*</th>
<th>Invasive ductal carcinoma</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All subtypes (N=153)</td>
<td>HR+/HER2- (N=25)</td>
</tr>
<tr>
<td><strong>False Negative Rate</strong></td>
<td><strong>18.7</strong> (9.8 – 26.8)</td>
<td>17.4 (8.4 – 25.4)</td>
</tr>
<tr>
<td><strong>Negative Predictive Value</strong></td>
<td><strong>84.3</strong> (76.7 – 91.8)</td>
<td><strong>86.2</strong> (79 – 93.4)</td>
</tr>
</tbody>
</table>

* 7 patients had non-representative image-guided biopsy and were excluded from the analysis.
Accuracy of post-neoadjuvant chemotherapy image-guided breast biopsy to predict the presence of residual cancer: A multi-institutional pooled analysis (GS5-04)

- Exploratory subset analysis (n=76):
  - Those patients with residual abnormality < 2cm
  - At least 6 vacuum-assisted CNB
  - **FNR of 3.2%**, NPV of 97.4%, overall accuracy of 89.5%

- Further subset analysis of **Her2+ or TNBC (n=66)**
  - **FNR of 4.2%**, NPV of 97.2%, overall accuracy of 87.9%

- De-escalation trials should consider these findings in trial design
Primary analysis of NRG-BR005, a Phase II trial assessing accuracy of tumor bed biopsies in pCR in patients with clinical/radiological complete response after NAC to explore the feasibility of BCT without surgery (GS5-05)

Basik M, Cecchini RS, De Los Santos JF, et al

Can CNB + clinical exam + tri-imaging appropriately identify those patients with pCR?
NRG-BR005 Schema

Operable focal or multifocal T1-T3, stage I-IIIA invasive ductal carcinoma (all receptor phenotypes) with clinical complete response by physical exam and radiological complete or near-complete response by tri-modality imaging after neoadjuvant systemic therapy

REGISTRATION

IMAGE-GUIDED CORE BIOPSY

SURGERY
(Lumpectomy)
Toward Omitting Surgery in Patients with pCR after NAC: interim analysis of the MICRA trial (GS5-06)

Peeters V et al.

- Prospective study
- Patients had MRI before and after NAC, followed by biopsy
- T1 N0 M0 tumors only (both clinical exam and imaging)
- N=167
RESULTS

<table>
<thead>
<tr>
<th>135 patients</th>
<th>32 patients</th>
</tr>
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<tr>
<td>rCR on MRI</td>
<td>rPR on MRI</td>
</tr>
</tbody>
</table>

MRI alone is not accurate enough to detect pCR or residual disease after PST

FNR = 37%