Universal Principles of Breast Cancer Surgery

- Maximum local control
- Optimal cosmesis – preservation of normal tissue
- Cost control
- Operative efficiency
  - OR time
  - Number of procedures
**Oncoplastic Promotions - Web Sites & Physicians**

"it is all about a holistic approach"
"a new paradigm, the next SNB"
"a necessary evolution and final refinement"
"a philosophy that requires passion, vision, knowledge of anatomy, appreciation and understanding of esthetics, symmetry, and breast function"
"additional years fellowship"
School of Oncoplastic surgery (ASBS)?

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**Oncoplastic Training Levels**

I – Monolateral and displacement techniques, skin incisions, deepithelization, glandular mobilization and reshaping, purse string central quadrant
II – Bilateral and replacement techniques, breast reduction, mastopexy, N/A recon
III – expander/implant techniques
IV – autologous flaps, pedicled or free flaps

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**Oncoplastic Claims**

- 20% of BCS require revisions to correct defect or asymmetry
- 40% of non-oncoplastic excisions have (+) margins
- Indications include extensive DCIS, lobular CA, multi-focality, partial or poor responses to neo-adjuvant therapy, recurrence
General Principles of Oncoplastics

- Wide margin clearance with large specimen
  - Skin excision frequently included
  - Substantial volume reduction of treated breast
- Breast rearrangement via various reduction patterns to redistribute volume loss
- Nipple realignment, re-centralization, or replacement (mastopexy)
- Contra-lateral symmetry ("sculpting")

Reduction Pattern

Mastopexy
Challenging Oncoplastics Margins

- Benefit of "wide margin clearance"
  - JR Benson, MJ Silverstein, et al
  - Wide excision up to 2 cm margins
  - 100 gram specimens
  - > 4cm areas of DCIS
  - Large (>4cm) cancers

Challenging Oncoplastics Margins

- What about positive margins after BCT with breast parenchymal rearrangement?
  - Staged procedures after margin analysis?
  - Does not avoid need for radiation
  - Boost or MTX

  - No large studies of recurrence rates

Oncoplastic Results

  - 101 patients undergoing BCT with reduction mammoplasty
  - (+) margins 11%
    » Mastectomy or XRT boost
    » No re-excisions
  - 9.4% local recurrence
  - 80% excellent to fair cosmetics
Challenging Oncoplastics
Procedural Details

- Nipple/areola rearrangements
  - Scar length
    - Long and multiple
    - Locations
  - Drains
  - Complications 26%
    - Fat necrosis related to mammographic density
    - Infection
    - Dehiscence/delayed wound healing 9%
    - Nipple numbness

scar length

Size Reduction and Mastopexy

- Adverse tumor-breast ratio?
  - Breast becomes even smaller
- Breast smaller and higher postoperatively
  - New clothes/bras
- Contra-lateral matching procedure?
  - Paternalism
  - How is this discussed?
Personal Patient Survey

- Anonymous
- No selection criteria other than BCT
- “Did you at any point consider a cosmetic procedure on your other (unaffected) breast to make it match the affected side?”
  - Only 8% desired smaller breasts and/or contra-lateral “sculpting” procedure

Time Expenditures

- Pre-op markings
- Both breasts prepped, draped in field
- 4 hours OR time?!
- Multiple surgeons for some procedures
- Post-operative care
  - POD#1 office visits

Cost

- MRI for all patients
- Staged procedures?
- OR time
- Tools, equipment, drains, etc.
- Overnight hospitalization
- Surgeons fees
- 3-4 weeks return to work
Oncoplastics – My Opinion

- Hybridization of oncologic surgery and plastic surgery
- Over-application of surgical procedures
- Promotional excess
- Significant complications and scar length
- Cost!!!
- Inefficient

My Alternative Approach

- Simple
- Expedient
- Efficient
- Effective
- Primum non nocere

Overview

- Patient selection
- Skin crease incisions
- Minimal but clear margins for invasive CA
- Seroma creation
- Contour and size preservation
- No contra-lateral surgery
Preoperative Strategy

- Patient selection
  - Anticipate poor cosmetics/high recurrence
    - Extensive DCIS
    - Adverse tumor/breast ratio
    - Multi-centric disease
    - Consider skin-sparing mastectomy and immediate reconstruction
      - Local recurrence minimized!
    - Consider neo-adjuvant treatment to shrink the tumor

Neo-adjuvant Therapy

- Is any operation harder when the tumor is smaller?
  - ACOSOG Z1031
    - 4 cm mean tumor size, hormone receptor (+)
    - 70% clinical response rate to multiple AI
    - 53% conversion to BCT from MTX
    - 82% BCT
    - Superb patient tolerance

Neo-adjuvant Chemotherapy

- pCR 20-67% depending on tumor, drugs given
- St. Elizabeth experience 50% pCR
- Enhanced BCT
- Smaller volume excised
- Equivalent survival and local control
  - McArthur HL. Nature Reviews Clinical Oncology 7, 2010
  - NSABP B-18
Margins

- Monica Morrow, Annals Surgical Oncology 2009
- Tumor-free margins with invasive cancer, DCIS
- More specialized surgeons and smaller margins
- No increase in local control with > mm margin
- Influence of systemic therapy on IBTR
- No evidence of increased local control with wider excision of large amounts of DCIS
- Don’t need massive margin clearance!
  - “hate the cancer, love the breast” - AEG

Incisions

- Limited length, curvilinear
- Skin creases
- Rare skin excision
- Nipple-areolar border
- Radial incisions medially
- Infra-mammary incisions
- Incisions over tumors if needed
  - Allow least amount of normal tissue to be removed
  - Allows accurate margin evaluation

Incision Choices
Contour and Shape Preservation

- No tissue rearrangement
- No dead space closure
- Two layer (subcutaneous, subcuticular) skin closure
- Intentional seroma
  - “special sauce”
    - ¼ lidocaine, ¼ marcaine, ½ saline
    - Injected post closure to restore contour

Economy of Time

- Routinely 30 minutes OR time
  - Segmentectomy + sentinel node dissection (+/- frozen)
  - Blue dye only SLND
  - 100% outpatient
  - A consideration for high volume surgeons
    - 250 BCS/year

Cosmetics

- No alteration of breast size
- No change in contour
- No reason for contra-lateral matching procedure
Typical BCS

Breast Preservation
Personal Patient Data
“How would you rate the overall appearance of your treated breast?”

Outstanding – no visible scar, normal contour
Excellent – minimal scar, nearly normal contour
Good – acceptable scar, minor volume loss
Fair – noticeable scar, significant volume loss
Poor – wide/long scar, major asymmetry

Personal Patient Data
Survey Results

Cosmetics
40% Outstanding
36% Excellent
14% Good
10% Fair
0% Poor

Satisfaction level
68% Very/extremely satisfied
24% Satisfied
8% Prefer smaller size
Cancer Local Control

• Recurrence rates well-established with traditional techniques

• Expansion of BCT to large tumors and large amounts of DCIS not proven to improve local control

Appropriate Circumstances for Oncoplastics

• LOQ/LIQ tumor with adverse tumor/breast ratio
  – OPS
  – Partial breast reconstruction
  – Neo-adjuvant rx

• Possible poor postoperative cosmetics
  – Large and pendulous, back pain, etc.
  – Ptosis?
  – Previous surgical biopsies altering volume
Summary

- Excellent cosmetics and cancer control do not always require dramatic surgical techniques
- Patient selection/anticipation paramount
- Consider neo-adjuvant techniques
- Modern skin/nipple sparing mastectomy is a reasonable alternative to extensive local surgery
- Oncoplastics = Sand wedge