

**SRI LANKA MEDICAL ASSOCIATION OF NORTH AMERICA
EASTERN REGION INC.
PRESENTS**

**SLMANA EAST
CHARITY BALL
ANNUAL GENERAL MEETING
&
SCIENTIFIC SESSIONS
ON
NOVEMBER 12TH, 2011**



**NEW YORK HILTON AND TOWERS
1335 Avenue of The Americas New York, NY**

Reconstructive Options in Breast Cancer

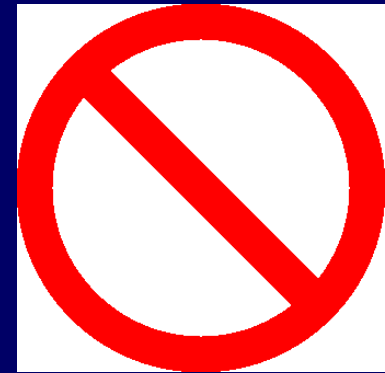


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Disclosures

- **No financial interests**
- **No industry support**

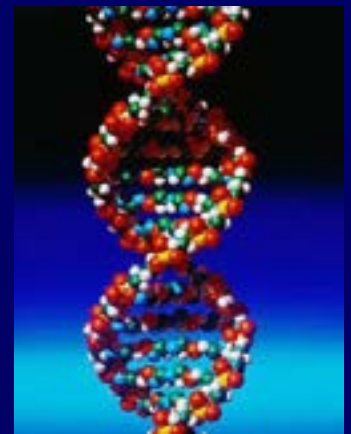


Objectives

- Discuss the impact/sequelae of breast cancer therapy
- Highlight reconstructive options
- Review cutting-edge techniques

Breast Cancer Overview

- **Lifetime risk: 1 out of 8 women**
 - +family hx with +BRCA gene: *much* higher risk
- **Up to 30% undergo mastectomy**
- **Loss of breast impacts a woman's well being**
 - society places importance on the female breast
- **Restoration of the removed breast can have beneficial psychological effects**



<http://www.cristyli.com/?p=1837>

Psychological Effects of Reconstruction

■ Diminished anxiety and depression

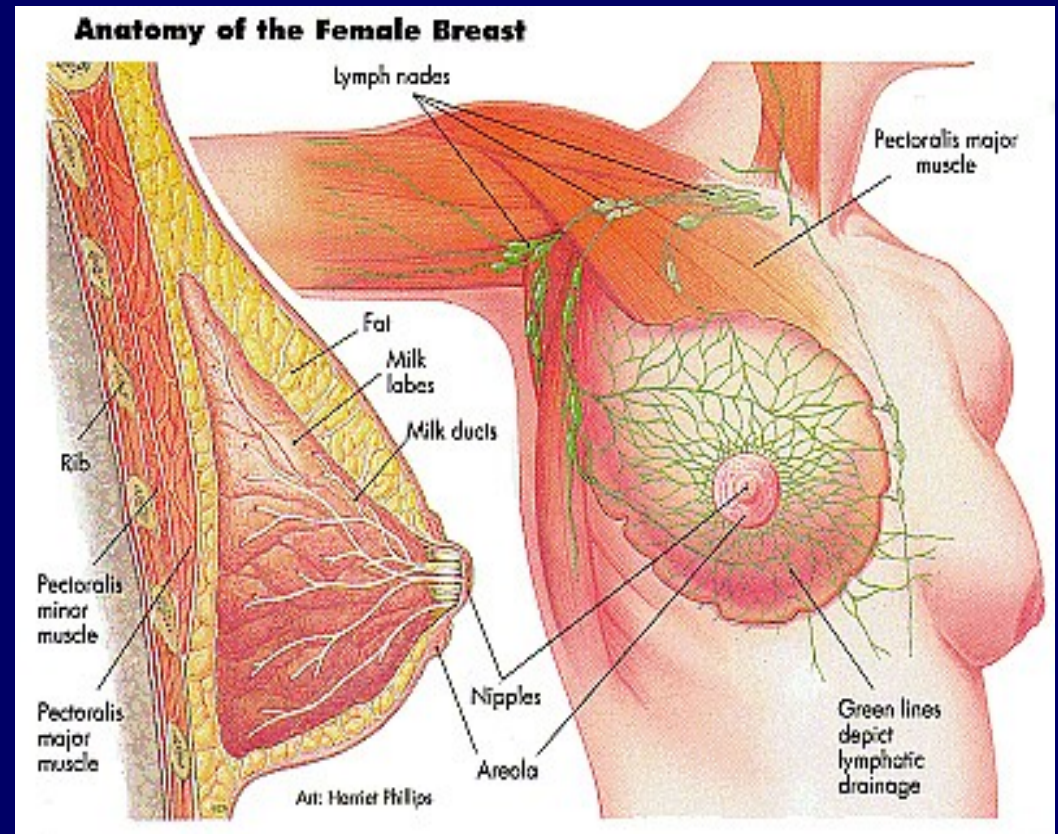
- 304 recon pts, 114 pts w/o recon ($p=0.01$)
- Fernandez-Delgado et al. Satisfaction with and psychological impact of immediate and deferred breast reconstruction. *Annals of Oncology* 2008:1430-1434.

■ Improved self-esteem, body image, and sexuality

- Atisha et al. Prospective analysis of long-term psychosocial outcomes in breast reconstruction: two-year postoperative results from the Michigan Breast Reconstruction Outcomes Study. *Ann Surg* 2008:1019-1028.

Treatment Modalities

- Lumpectomy
- MRM
- SLND/ALND
- XRT
- Chemo



Lumpectomy/XRT Sequelae



http://www.plasticsurgerypractice.com/issues/images/2009-05/2009-05_05-02.jpg

Mastectomy



<http://1.bp.blogspot.com/-61o7Q4t91lg/TWfVGoLUS9I/AAAAAAAAANw/z35VausxJhg/s1600/mastectomy.jpg>

Mastectomy/XRT Sequelae



Goals of Reconstruction

- **Psychological well-being**
 - minimize deformity, morbidity
 - achieve symmetry
 - help patients move on with their lives
- **Improve local tissue quality/healing**
 - chronic nonhealing wounds
 - especially after XRT

Reconstructive Settings

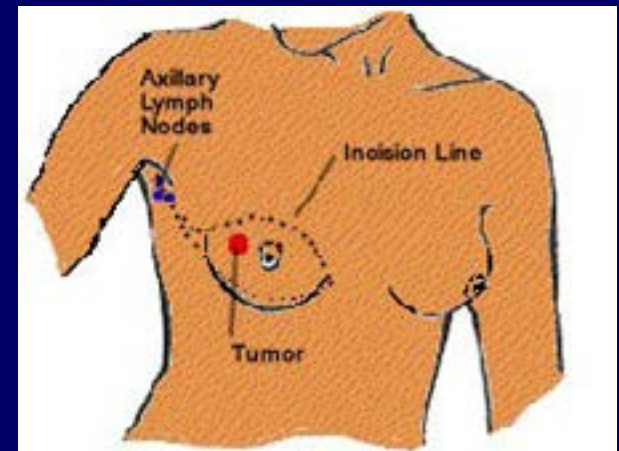
■ Cancer Reconstruction

- post-mastectomy
- lumpectomy/
partial mastectomy
- oncoplastic surgery
- S/p XRT



■ Congenital Amastia

- Poland's Syndrome



Reconstructive Options

- **Implant-based reconstruction**
 - single-staged
 - two-staged with tissue expansion
- **Autologous tissue transfer**
 - +/- implant augmentation
- **NAC reconstruction**
- **Contralateral symmetry surgery**
- **Oncoplastic techniques**



Reconstructive Thought Process

***choose options based on:**

- **Defect**
 - size
 - location
- **Anatomy**
- **Medical history, prior/future XRT**
- **Patient desires**

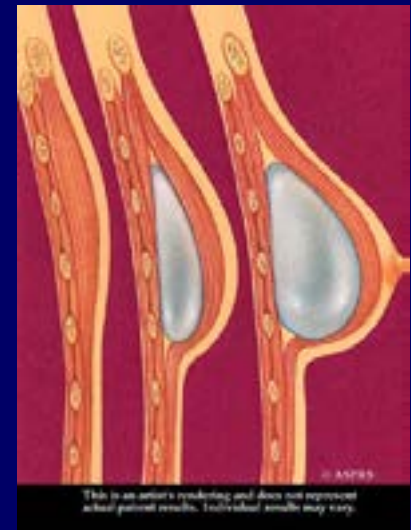
Single Staged Implant-based Recon

- Adequate skin, inadequate volume
- **Indications:**
 - Skin-sparing mastectomy
 - Large volume lumpectomy
- **Complications:**
 - Implant infection
 - Rupture
 - Mastectomy skin flap necrosis
 - Capsular contracture



Multistaged: Tissue expansion

- Inadequate skin, inadequate volume
- Temporary implant expanded over several months
 - Skin envelope hypertrophy
 - Later exchanged for final permanent implant
- Indication:
 - Traditional mastectomy (with wide skin excision)



<http://www.breastreconstruction.ca/pictures/implants/mstectomyscar.jpg>

Autologous Tissue Transfer

- Inadequate skin and volume
- Flap: composite tissue island with its own blood supply
- Ideal in radiated tissues where local blood supply is compromised
 - Better wound healing, tissue quality
- **Indications:**
 - Tissue deficient radiated fields
 - Severe tissue deficiency preventing wound closure
 - Patient's desire to avoid synthetic implants

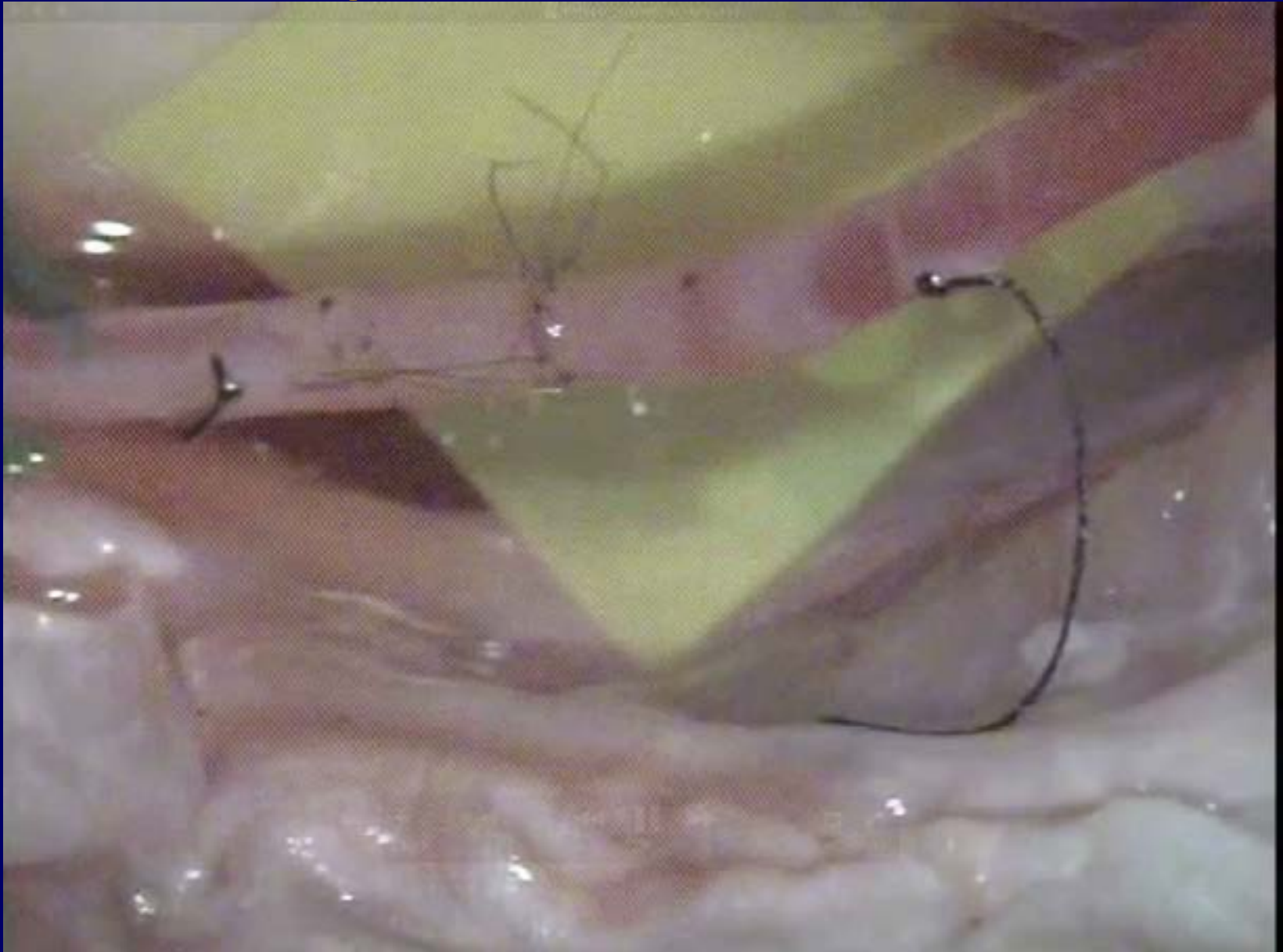


http://wsip-24-248-24-17.hr.hr.cox.net/source/images/image_popup/w7_tramflap.jpg

Autologous Tissue Transfer

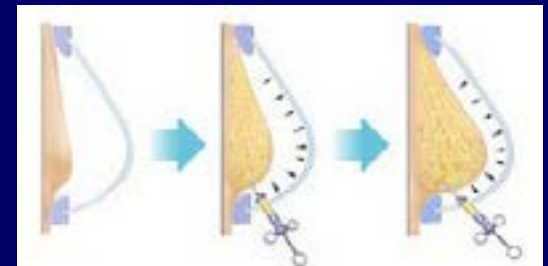


Autologous Tissue Transfer



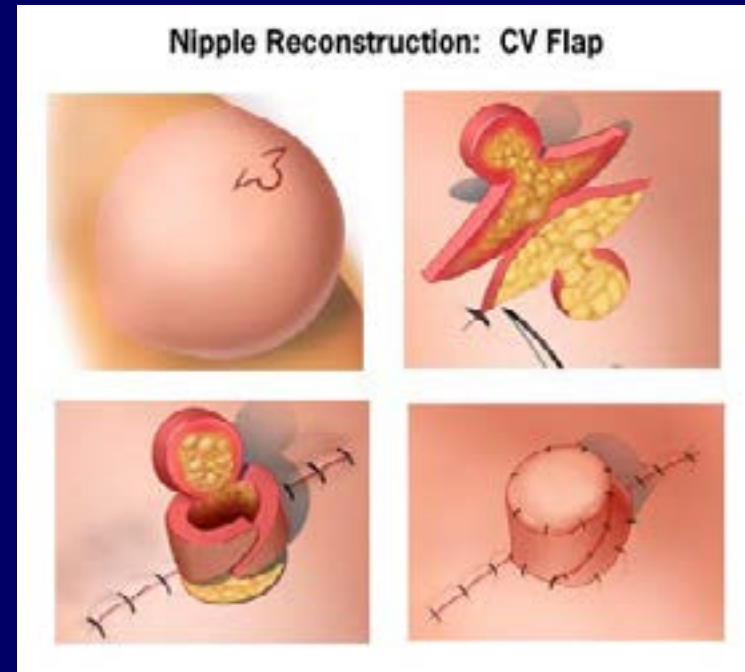
Autologous Fat Grafting

- **Volume deficiency**
- **Lipoaspirate transfer to areas of volume deficiency**
 - > 50% graft volume loss may necessitate multiple injections
 - Preadipocyte: fat stem cell
- **New research**
 - Rejuvenation of radiation-damaged tissues
 - Expression of paracrine tissue growth factors
- **Indications:**
 - Smaller volume deficiencies
 - Contour irregularities; Total breast recon?



Nipple-Areola Recon

- **Office-based procedure**
 - local flaps
 - full-thickness skin graft
 - tattooing



<http://www.mdanderson.org/patient-and-cancer-information/cancer-information/cancer-topics/cancer-treatment/breast-reconstruction/nipple-cv-flap.jpg>

Symmetry Surgery

- **Manipulation of the healthy breast**
 - Covered by the Women's Health and Cancer Rights Act (1998)
- **Reduction**
- **Augmentation**
- **Mastopexy**

Oncoplastic Surgery

- **Breast conserving therapy: 20-30% deformity rate**
- **Combined Breast Onc / PRS approach to lumpectomy**
 - allows wider resection margins
 - local tissue rearrangement, fill in lumpectomy cavities
- **Institute Curie Study:**
 - 540 patients (compared to BCT literature)
 - slightly better survival and recurrence profiles (not powered)
 - *much better aesthetic outcomes*
- **Indications:**
 - moderate to large volume lumpectomies (>10% volume)

Clough K, Cuminet J, Fitoussi A, Nos C, Mosseri V. Cosmetic sequelae after conservative treatment for breast cancer: classification and results of surgical treatment. *Ann Plast Surg* 1998;41:471–481.

D'Aniello C, Grimaldi L, Barbato A, Bosi B, Carli A. Cosmetic results in 242 patients treated by conservative surgery for breast cancer. *Scand J Plast Reconstr Hand Surg* 1999;33:419–422.

Reconstructive Examples



http://www.swancenteratlanta.com/wp-content/uploads/before-after/breast_reconstruction_01b.jpg



http://www.pschr.com/before-after/breast_reconstruction_01.jpg



http://ww1.prweb.com/prfiles/2009/03/09/2218014/0_houston_breast_reconstruction_2.jpg

Reconstructive Examples



http://www.alwaysyouthful.com/images/breast_reconstruction_surgery.jpg

Mastectomy Recon

- **SEER database review of 51,702 mastectomy patients**
- **Approximately 17% of mastectomy patients undergo reconstruction**
- **Multivariate analysis: improved survival?**
 - **mortality hazard ratio: 0.62, $p < 0.001$**
 - **confounding factors**
 - **no worse survivals in factor-matched groups**
 - ***implies that reconstruction is safe***

Why So Few Reconstructions?

- **Informed refusal**
- **Unable to medically tolerate surgery**
- **Women's Health and Cancer Rights Act, 1998**
 - **Group health plans, insurance companies, HMO's that cover mastectomy must also cover reconstruction**
- **Many women do not know or understand their options and rights regarding reconstruction**

Take-Home Messages

- **Reconstructive solutions exist for almost any post-resection deformity (if medically able to tolerate surgery)**
- **Modern techniques are improving patient outcomes with less invasive modalities**
- **Patients must understand their options, including reconstruction, in order to make a truly informed decision**
 - **Consider adding your local reconstructive Plastic Surgeon to the care team**

Additional Resources

- Mathes Plastic Surgery, Vol 6: Trunk and Lower Extremity.
- Grabb and Smith's Plastic Surgery.
- Coleman SR, Saboeiro AP. Fat grafting to the breast revisited: safety and efficacy. *Plast Reconstr Surg* 2007;119(3):775-85; discussion 786-7.
- Fitoussi A, Berry M, Fama F, et al. Oncoplastic breast surgery for cancer: analysis of 540 consecutive cases. *Plas Recon Surg* 2010;125:454-462.
- Klimberg V, Harms S, Korourian S. Assessing margin status. *Surg Oncol* 1999;8(2):77-84.
- Jacobson J, Danforth D, Cowan K, et al. Breast conservation versus mastectomy in stage I and II breast cancer. *N Engl J Med* 1995;332:907-911.

Q & A

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