

The background of the slide features a large, faint watermark of the Rutgers University seal, which is a circular emblem with a sunburst in the center and the words "RUTGERS UNIVERSITY" around the perimeter.

RUTGERS

THE STATE UNIVERSITY
OF NEW JERSEY

Locally-Advanced Ulcerative T4b Breast Cancer; Are Reconstructive Attempts Feasible?

Aditya Sood MD, MBA, Lily Daniali, MD, Kameron Razzedah BS,
Edward S. Lee MD, Jonathan Keith MD

Rutgers University - New Jersey Medical School
Division of Plastic Surgery
Newark, NJ USA

*Nothing to disclose

Background

- A subset of women with locally-advanced breast cancer (LABC) present with fungating tumor mass eroding and infiltrating the surrounding breast skin (T4b).
 - Present in 5-10% of cases in economically developed countries
 - 20-25% of cases worldwide
- These patients often present with chronic pain, large open wounds, frequent infections, malodorous drainage, social isolation, and general debilitation that present enormous therapeutic challenges.
- Optimal surgical management of LABC continues to be a source of controversy.

Background cont.

- Newark, NJ, USA (vs. total US population)
 - Total population 2013: 278,427 / 8,900,000
 - Foreign born 2013: 26.9% / 20.8%
 - Primary language not English: 45% / 29.6%
 - Bachelor's or higher 2008-12: 12.5% / 35.4%

Materials/Methods

- Single-center experience (IRB approved)
- Retrospective review
- 12 treated patients from 2011-2014
 - Received reconstructive surgeries following resection of fungating T4b breast tumors

Results

- **Table 1:** T4b Fungating Breast Tumor Patient Demographic & Social Characteristics

Variable	Value (%)
No. of Patients	12
Age, years	
Mean	52.6
Range	33-74
Race	
African-American	7 (50)
Caucasian	1 (8)
Hispanic	4 (33)
Social History	
Recent US Immigrant (<2 years)	1 (8)
Recent Homelessness (<1 year)	1 (8)
Currently Unemployed	5 (42)
English Speaking	5 (42)
Living Alone	4 (33)

Results cont.

- **Table 2:** Clinical Presentation & Pre-Operative Assessment of the Patient with a Fungating T4b breast tumor

Variable	Value (%)
Location of First Presentation	
Emergency Department	3 (25)
Charity Care Clinic/ Community Clinic	7 (58)
Private Office	2 (17)
Chief Complaint on Presentation	
Open wound and/or skin involvement	12 (100)
Pain	8 (66)
Malodorous Drainage	3 (25)
Breast mass increasing in size	3 (25)
Patients Reason for Delayed Presentation	
Embarrassment	2 (17)
Psychiatric Condition	3 (25)
Prior Misdiagnosis	1 (8)
Fear of Treatment	3 (25)
Tumor Size	
Mean (cm ²)	810.2
<300 cm ²	6 (50)
300-600 cm ²	2 (17)
>600 cm ²	3 (25)
Hemodynamic Instability on Arrival	2 (17)
Neo-adjuvant Chemotherapy	4 (42)
Neo-adjuvant Radiotherapy	2 (17)
Extent of Disease as Assessed by Imaging	
Loco-regional Spread	3 (25)
Distant Metastasis	6 (50)

Results cont.

- **Table 3:**Pre-Operative Laboratory Characteristics

Variable	Mean	SD
Albumin	3.4	1.0
Hemoglobin	9.8	2.6
WBC	12.8	10.5
Platelets	316.9	139.8
INR	1.1	0.17
CRP	0.65	0.15

*Notably: Two patients had presented in shock, with one patient having a hemoglobin of 4.2

Results cont.

- Table 4:** Characteristics of Oncologic & Reconstructive Management of T4b Fungating Breast Tumors



Variable	Value (%)
<u>Oncologic Management</u>	
<i>Breast</i>	
Modified Radical Mastectomy with Axillary Lymph Node Dissection	9 (75)
Radical Mastectomy	2 (17)
<i>Chest Wall</i>	
Ant pec major fascia resected	4 (33)
Additional chest wall muscles resected	2 (17)
<u>Pathology</u>	
Breast specimen with clear margins (R0)	7 (58)
<u>Reconstructive Surgery</u>	
<i>Area requiring reconstruction (cm²)</i>	
Mean	473
>300	2 (17)
300-600	6 (50)
601-900	4 (33)
<i>Procedures Performed</i>	
Thoracoepigastric Advancement Flap	4 (33)
Latissimus Dorsi Flap	5 (41)
Trapezius Flap	1 (8)
Extended vertical & transverse rectus abdominus flap	1 (8)
Split-thickness skin graft	6 (50)
<i>Timing of Reconstructive Surgery</i>	
Immediate	10 (83)
Delayed	2 (17)
<i>Total # of Reconstructive Surgeries</i>	
1	7 (58)
2	5 (41)

Results cont.

- **Table 5:** Postoperative outcomes.

	Value (%)
<u>Surgical Site at 6 weeks follow-up</u>	
Healed	7 (58)
Open wound requiring dressings	3 (25)
Not reported	2 (17)
<u>Post-operative Pain Palliation</u>	
Reduced pain	9 (75)
Persistent or increased pain	2 (17)
Not reported	1 (8)
<u>Post-operative Wound Palliation</u>	
Improved wound qualities (odor, drainage)	10 (84)
Unimproved wound qualities	1 (8)
Not reported	1 (8)
<u>Adjuvant Therapy</u>	
Chemotherapy	4 (33)
Radiation	1 (8)

Results cont.

- **Table 5c.** Postoperative complications.

	Value (%)
Persistent wound drainage	2 (17)
Dehiscence requiring OR revision	1 (8)
Infection requiring course of antibiotics	1 (8)

Case 1

- 61 yoF, Haitian descent, presented to the clinic with pain of Right breast, arm, back pain. Found to have a 15 x 13.5 x 11 cm lateral breast mass with peu d'orange and ulceration.
- Dx: inflammatory breast cancer with axillary lymphadenopathy and no distant mets.
- Treatment: neo-adjuvant chemotherapy, MRM and LND
- Wound: 884 cm²



Case 1 cont.

- Immediate reconstruction with a latissimus myocutaneous flap and reverse abdominoplasty.
- Hospital stay 4 days, discharged with nursing care and outpatient chemotherapy.
- Reported improved pain, no complications.
- Postoperative survival: 294 days



Case 2

- 38 yoF, Hispanic descent, presented to the clinic complaining of pain in her chest with movement of her arm. Found to have a left lateral breast ulcerative lesion measuring 9 x 8 x4 cm.
- Dx: Invasive ductal carcinoma with metastasis.
- Treatment: neo-adjuvant chemotherapy, MRM, LND
- Wound: 300 cm²



Case 2 cont.

- Immediate reconstruction with advancement of local axillary skin and STSG 300 cm².
- Hospital stay was 6 days. Received postoperative radiation.
- Reported improved pain, no complications.
- Postoperative survival: living



*One month postop

Conclusions

- LABC continues to be the presenting form of disease in a significant percentage of breast cancer patients.
- Microsurgical breast reconstruction techniques are reliable and efficacious in palliating pain and reducing wound care needs in patients with fungating T4b breast tumors.
- Fasciocutaneous flaps (thoracoepigastric) and latissimus dorsi myocutaneous flaps were the most commonly utilized coverage options in our cohort.
- Non-English speaking, social isolation, and psychiatric illness all play a part in delayed presentation.