

Background

- Breast and axillary surgery in Stage IV breast cancer (BC) is outside current national guidelines.
- This has been a topic of debate as recent prospective publications indicate potential survival benefit with breast/axillary surgery in select Stage IV patients.

Objectives

- To assess the current practice & outcomes of primary site (breast/axillary) surgery in de novo stage IV BC patients at an academic medical center.

Methods

- Women >18 years, single academic center, with de novo stage IV BC diagnosed from 2011-2016
- Retrospective chart review.
- At follow-up, patients with stable disease versus those who had mortality were compared for differences.

Results - Demographics (Table 1)

- 265 de novo Stage IV BC patients were identified
 - 10.2% (n=27) had primary site surgery

Characteristic	Count (Percentage)
Age (years)	56 +/- 4
Race	
Caucasian	23 (85.1%)
African American	4 (14.8%)
Insurance Status	
Medicare	13 (48.1%)
Medicaid	2 (7.4%)
Private	12 (44.4%)
Genetic Testing Status	
Positive	3 (11.1%)
Negative	7 (25.9%)
Not Tested	17 (62.9%)

Results – Tumor & Treatment Data (Table 2)

- Systemic therapy was first line of treatment in 66.6% (n=16)
- Surgery was more commonly performed for treatment intent (n=23, 85.1%) rather than palliation (n=4, 14.8%)
 - Mastectomy was most common (n=21, 85.1%)
 - 30d mortality (0%) & morbidity (n=1, 3.7%) were low

Tumor Size (cm)	6.2 +/- 3.7
T stage	
T1	3 (11.1%)
T2	7 (25.9%)
T3	7 (25.9%)
T4	10 (37.0%)
N stage	
N0	10 (37.0%)
N1	12 (44.4%)
N2	1 (3.7%)
N3	4 (14.8%)
Number sites with metastatic disease	
1	10 (37.0%)
2-3	12 (44.4%)
4-5	5 (18.5%)
Metastatic Sites	
Bone	22 (81.5%)
Liver	11 (40.7%)
Lung	9 (33.3%)
CNS	4 (14.8%)
Visceral	1 (3.7%)
1 st Cancer Treatment	
Systemic Therapy	18 (66.6%)
Primary Breast/axillary surgery	9 (33.3%)

Results – Follow-up Data (Table 3)

- Average follow-up was 40±9 months.
 - 59.2% (n=16) were stable
 - 33.3% (n=9) had mortality
 - 7.4% (n=2) had systemic progression

Results – Follow-up Data (Table 3, cont')

- No significant differences were identified between stable versus mortality patients, including order of treatment.
- There was no difference in goal of surgery for stable versus mortality patients (p=0.60)

Characteristic	Stable (n=16)	Mortality (n=9)	p-value
Age	54 +/- 13	61 +/- 15	0.23
Insurance Status			0.22
Private	8 (50%)	2 (22.2%)	
Medicare	8 (50%)	5 (55.5%)	
Medicaid	0 (0%)	2 (22.2%)	
Tumor size (cm)	6.1 +/- 3.9	6.4 +/- 3.9	0.85
T stage			0.7
T1	2 (12.5%)	1 (11.1%)	
T2	3 (18.8%)	3 (33.3%)	
T3	5 (31.3%)	1 (11.1%)	
T4	6 (37.5%)	4 (44.4%)	
N stage			0.4
N0	7 (43.8%)	2 (22.2%)	
N1	5 (31.3%)	6 (66.7%)	
N2	1 (6.3%)	0 (0%)	
N3	3 (18.8%)	1 (11.1%)	
# Metastatic Sites			0.26
1	7 (43.8%)	2 (22.2%)	
2-3	7 (43.8%)	5 (55.5%)	
4-5	2 (12.5%)	2 (22.2%)	
1 st Treatment			1.0
Systemic	10 (62.%)	6 (66.7%)	
Surgery	6 (37.5%)	3 (33.3%)	
Follow-up (mo.)	47 +/- 17	29 +/- 20	0.02*

Discussion

- Few de novo stage IV patients undergo primary site surgery.
 - This illustrates concordance between clinical practice and national guidelines, but discordance with emerging scientific evidence.
- Multidisciplinary development of patient care pathways may allow for balancing national guidelines & scientific evidence to safely identify Stage IV patients likely to benefit from surgery.