

Background

- <10% of patients undergo breast reconstruction following breast-conserving surgery.¹
- Oncoplastic reduction mammoplasty = partial mastectomy + breast reduction → optimizes aesthetic and oncologic outcomes.²
- Complication rate reported up to 34%... delays adjuvant treatment?³

Aim

- Investigate the incidence and impact of complications after oncoplastic reduction on timing to adjuvant radiation therapy.
- Identify if delays were related to specific surgical techniques.

Methods

- Retrospective review of oncoplastic reduction mammoplasty patients at UCSF between 2020-2023
- Exclusion criteria: patients who received adjuvant chemotherapy or required further surgeries prior to start of adjuvant radiation
- Primary outcome: time to adjuvant radiation therapy (delay = therapy initiation >12 weeks (84 days) after reduction)
- Complications = infection, delayed wound healing, seroma, and hematoma

Results

- Patient Demographics
- Total N = 104
 - Mean Age = 53.9 (± 12.1)
 - Mean BMI = 28.8 (± 6.4)
 - Average time to radiation = 85 days (± 49)
 - Average time to radiation if no delay = 72 days (± 46)
 - Average time to radiation if delayed = 110 days (± 44)

Figure 1. Clinical Characteristics of the Study Population

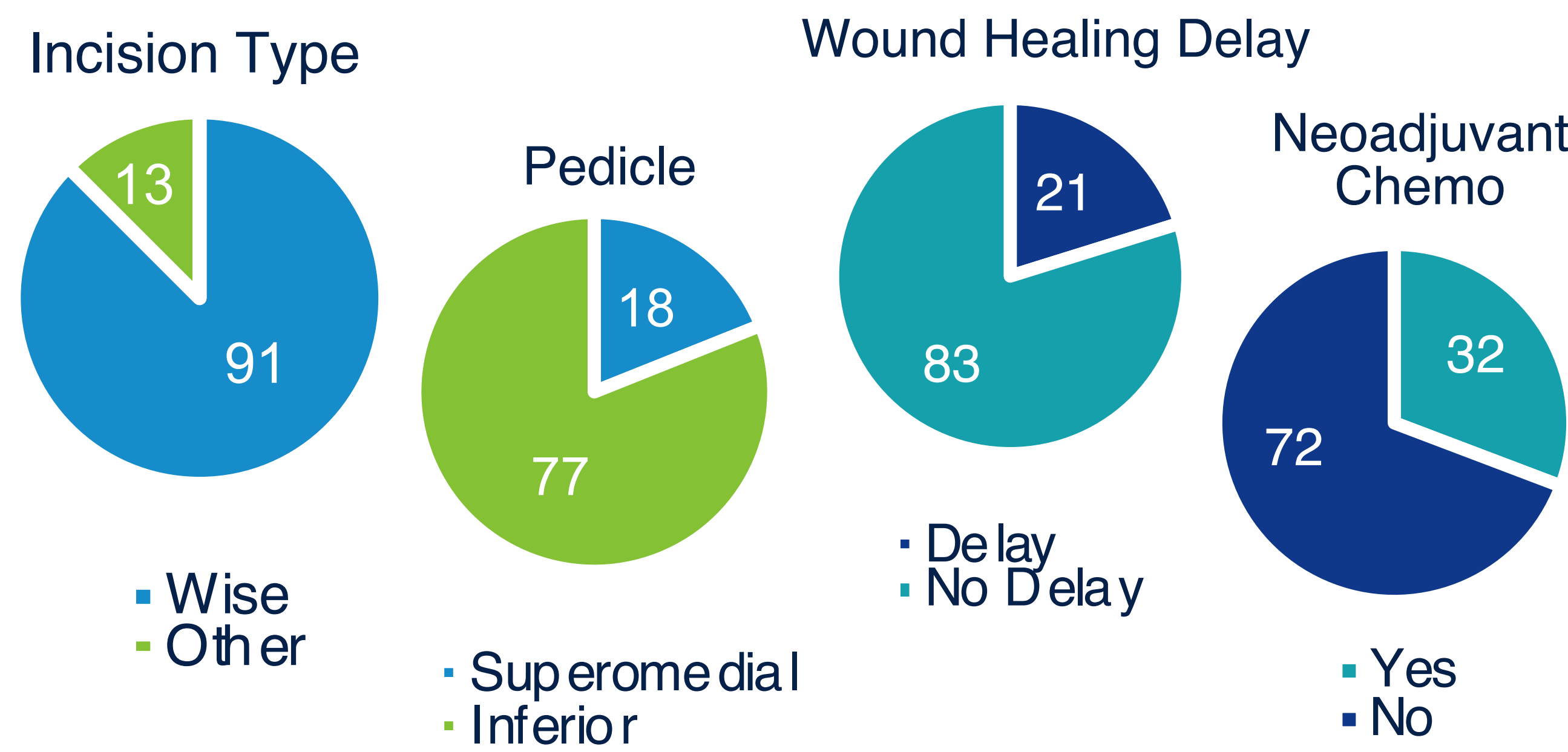


Table 1. Variables Associated with Delays in Adjuvant Radiation

	No Delay	Delay	P Value
Comorbidities			
Hypertension	21	11	.92
Diabetes	10	5	.98
Smoking	17	11	.46
Plastics Incision			.18
WISE	59	32	
Other	10	3	
Pedicle Type			.26
Superomedial	11	7	
Inferior	54	23	
Other Variables of Interest			
Mean BMI	27.9	30.5	.06
Neoadjuvant Chemo	25	7	.09
Wound Healing Complication	4	17	<.0001

Table 2. Predictors of Delays in Adjuvant Radiation

	Risk Ratio (CI)	P Value
Wound Healing Complication	6.11 (1.58 – 23.65)	.009

Table 3. Variables Associated with Wound Healing Complications

	No Comp	Comp	P Value
Comorbidities			
Hypertension	27	5	.96
Diabetes	11	4	.19
Smoking	23	5	.67
Plastics Incision			.55
WISE	76	15	
Other	12	1	
Pedicle Type			.04
Superomedial	16	2	
Inferior	67	10	
Other Variables of Interest			
Mean BMI	28.1	32.6	.005
Neoadjuvant Chemo	29	3	.26
Adjuvant Radiation Delay	4	17	<.0001

Table 4. Predictors of Wound Healing Complications

	Risk Ratio (CI)	P Value
BMI	1.15 (1.04-1.28)	.008

Conclusions & Next Steps

- Our study confirms that wound healing complications significantly impact timing of adjuvant radiation therapy (p<.0001)
- Patients who have wound healing complications are at 6.11 times more risk of a delay to adjuvant radiation than those who do not have wound healing complications
- Risk factors for wound healing complications include BMI (RR 1.15)
- Future directions → expand N and investigate impact of preoperative breast volume, tumor volume, and specific post-operative complications on outcomes

Acknowledgements and Citations

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1. Albornoz CR, Matros E, Lee CN, et al. Bilaterality and Reconstruction Rates in Breast Cancer Surgery: A National Perspective. J Clin Oncol. 2014;32(9):919–926. doi: 10.1200/JCO.2013.52.8645. 2. Losken A, Elwood ET, Styblo TM, et al. The role of reduction mammoplasty in reconstructing partial mastectomy defects. Plast Reconstr Surg. 2002;109:968-975. 3. Mattingly A, et al. Complication Rates Associated with Oncoplastic Reduction Mammoplasty: A Retrospective Review. J Surg Oncol. 2021;124(3):456-462. doi:10.1002/jso.26578.