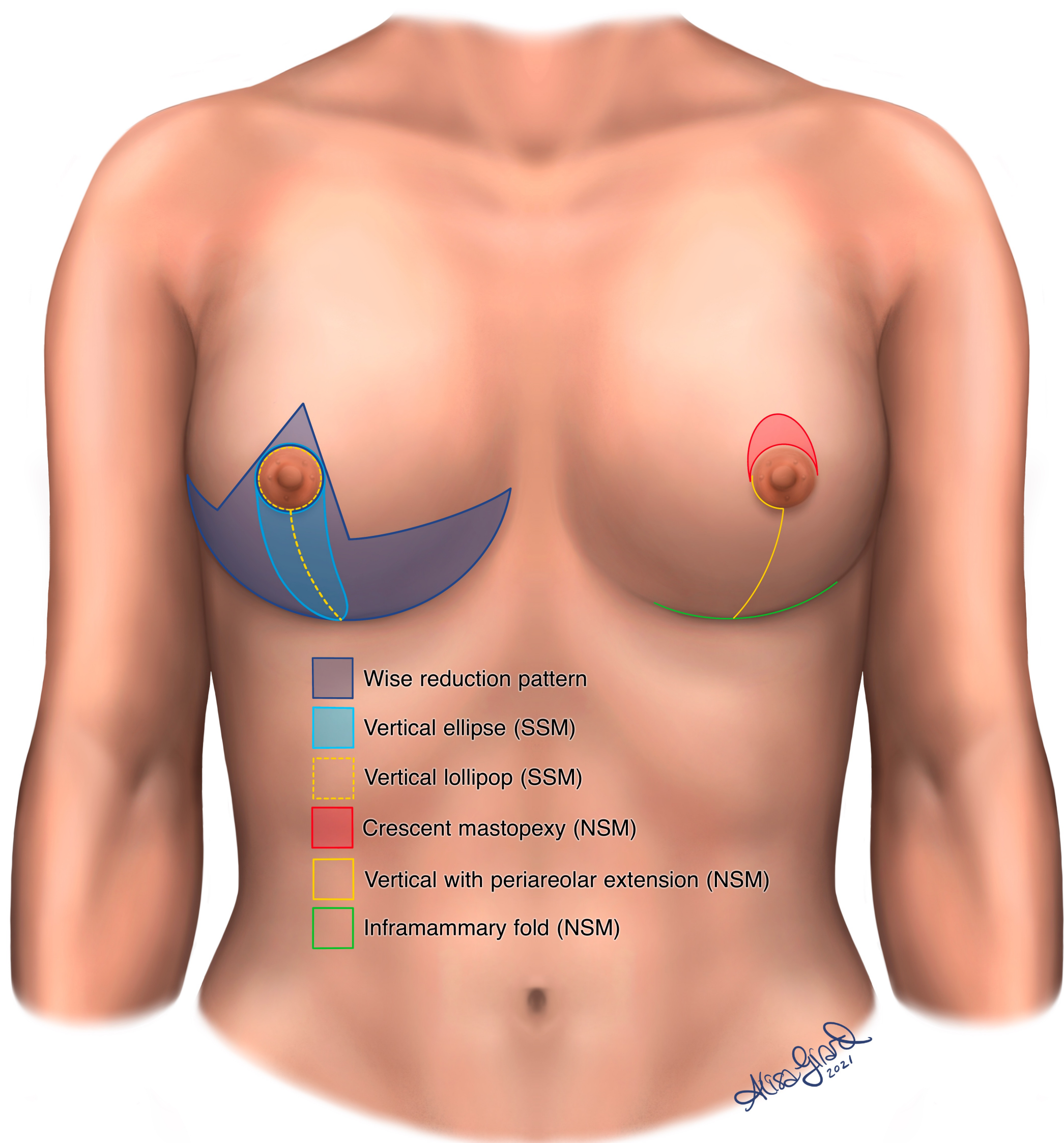
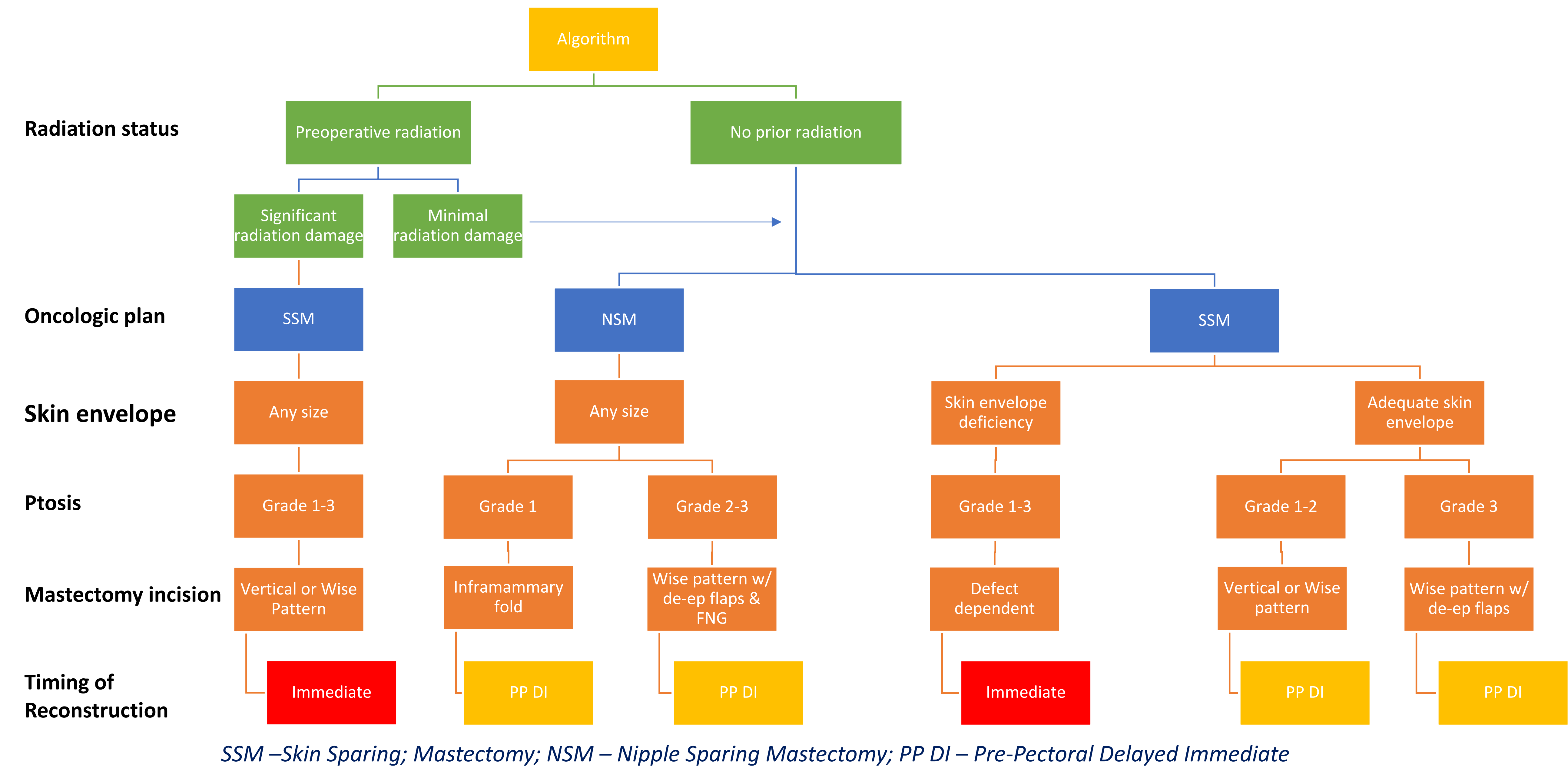


Introduction

The current trends toward pre-pectoral tissue expander placement and nipple sparing mastectomies have decreased morbidity and improved cosmetic outcomes for delayed immediate breast reconstruction. The authors aim to delineate an algorithm for patients undergoing autologous breast reconstruction.

Methods

- Single institution, prospectively maintained patient database
- Factors considered in surgical decision-making for reconstruction: type of mastectomy, incision pattern, plan for radiation, pre-operative breast volume and degree of ptosis
- Breast complication rates compared between immediate and delayed-immediate reconstruction groups



Characteristic	Value
Total patients, n	84
Breasts, n	131
Age, mean (range)	48.39 (25-67)
BMI, mean (range)	28.74 (16.5-43.2)
Smokers, %	4.8
BRCA +, %	17.9
Average follow-up (months)	8.25

	Immediate	Delayed-Immediate	p-value
Total number of breasts	62	48	
Nipple-sparing mastectomy	41	27	
Skin-sparing mastectomy	21	21	
Major Complication	20	2	<0.001
Mastectomy flap necrosis	20	0	<0.001
NAC necrosis	12	0	<0.001
Flap loss	0	1	
Hematoma requiring return to OR	0	1	
Minor Complication	7	13	0.046
Incisional dehiscence	5	13	
Seroma	2	0	
Hematoma requiring evac in office	0	0	
Total Major Complication Rate	20 (32.3%)	2 (4.2%)	<0.001
Total Minor Complication Rate	7 (11.3%)	13 (27.1%)	0.046

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Results

Preoperative photograph of a 44 year-old female with breast cancer (3A). The patient underwent bilateral nipple sparing mastectomies through inframammary fold incisions and placement of bilateral pre-pectoral tissue expanders with acellular dermal matrix (3B). Seven months after reconstruction with bilateral DIEP flaps and 3 months after skin paddle removal (3C).

Conclusions

Pre-pectoral delayed-immediate breast reconstruction results in a decreased major breast complication rate, including mastectomy flap necrosis and nipple areolar complex necrosis, compared to immediate autologous breast reconstruction. This algorithm serves as a useful guideline for surgical decision making in autologous breast reconstruction.