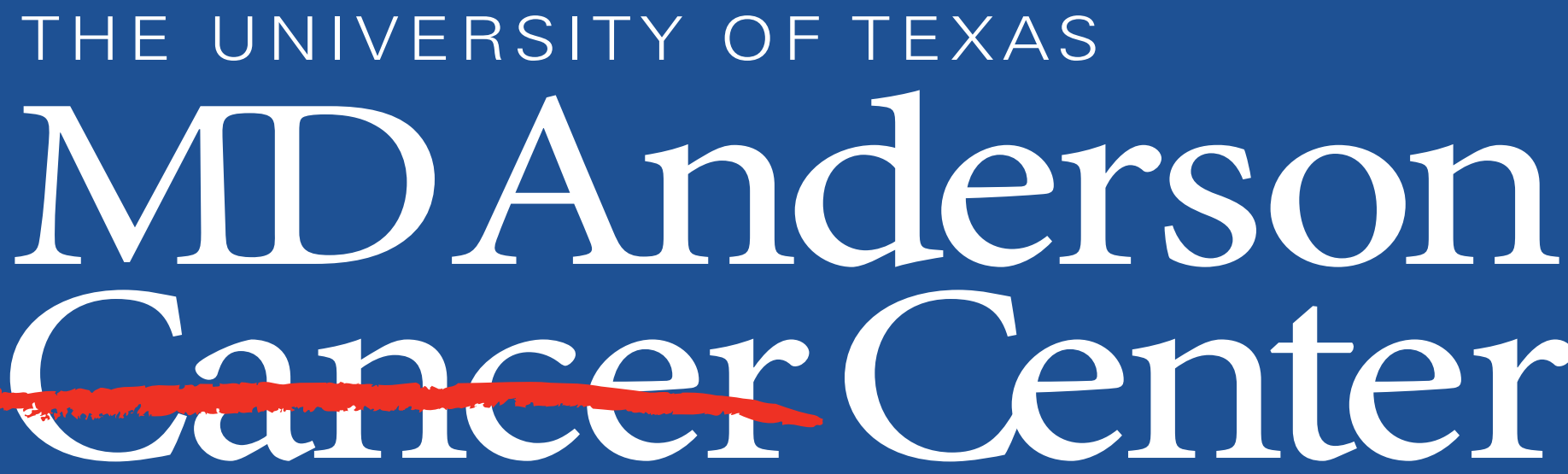




Oncoplastic Reconstruction in the Setting of Prior Cosmetic Augmentation

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Background

This study explores the surgical management and reconstruction options for augmented breasts in the context of breast conservation therapy (BCT) for breast cancer.

Hypothesis

We hypothesized that there would be no difference in the rates of complications, revisions, or patient satisfaction in patients who maintained their breast augmentation versus those that had their implants removed in the context of BCT.

Methods

We conducted a retrospective review of 142 patients who underwent BCT at a single center from March 2016 to March 2022. The study included patients who had a preexistent cosmetic augmentation at the time of breast cancer diagnosis and BCT. Patient demographics, clinical and treatment characteristics, breast implant details, reconstructive technique, complications, and revisions were recorded. Patient-reported outcomes were assessed using the BREAST-Q Breast-Conserving Therapy module.

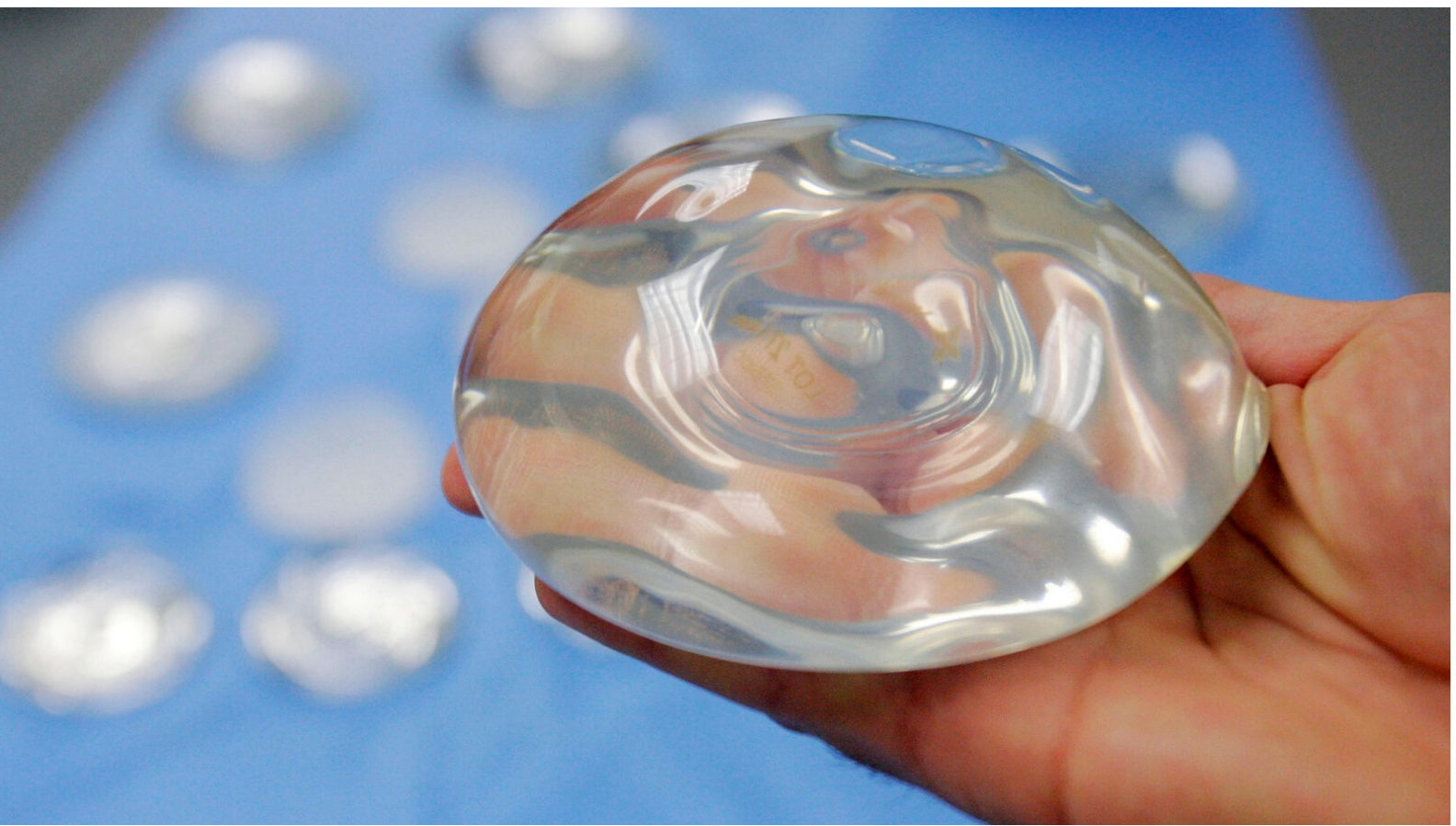


Figure 1. Patient Decision Pathways for Implant Management During Breast Conservation Therapy in Augmented Breasts

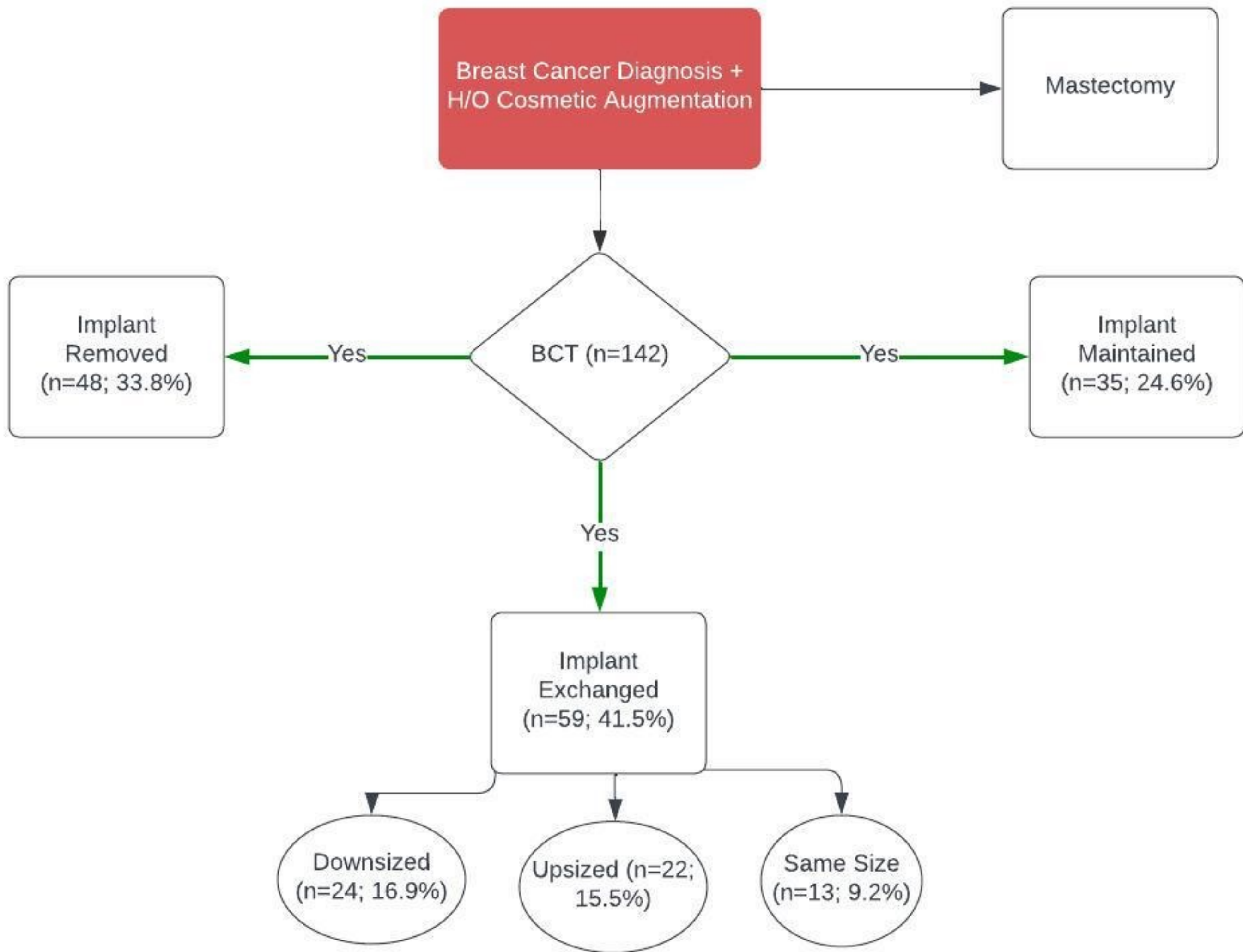
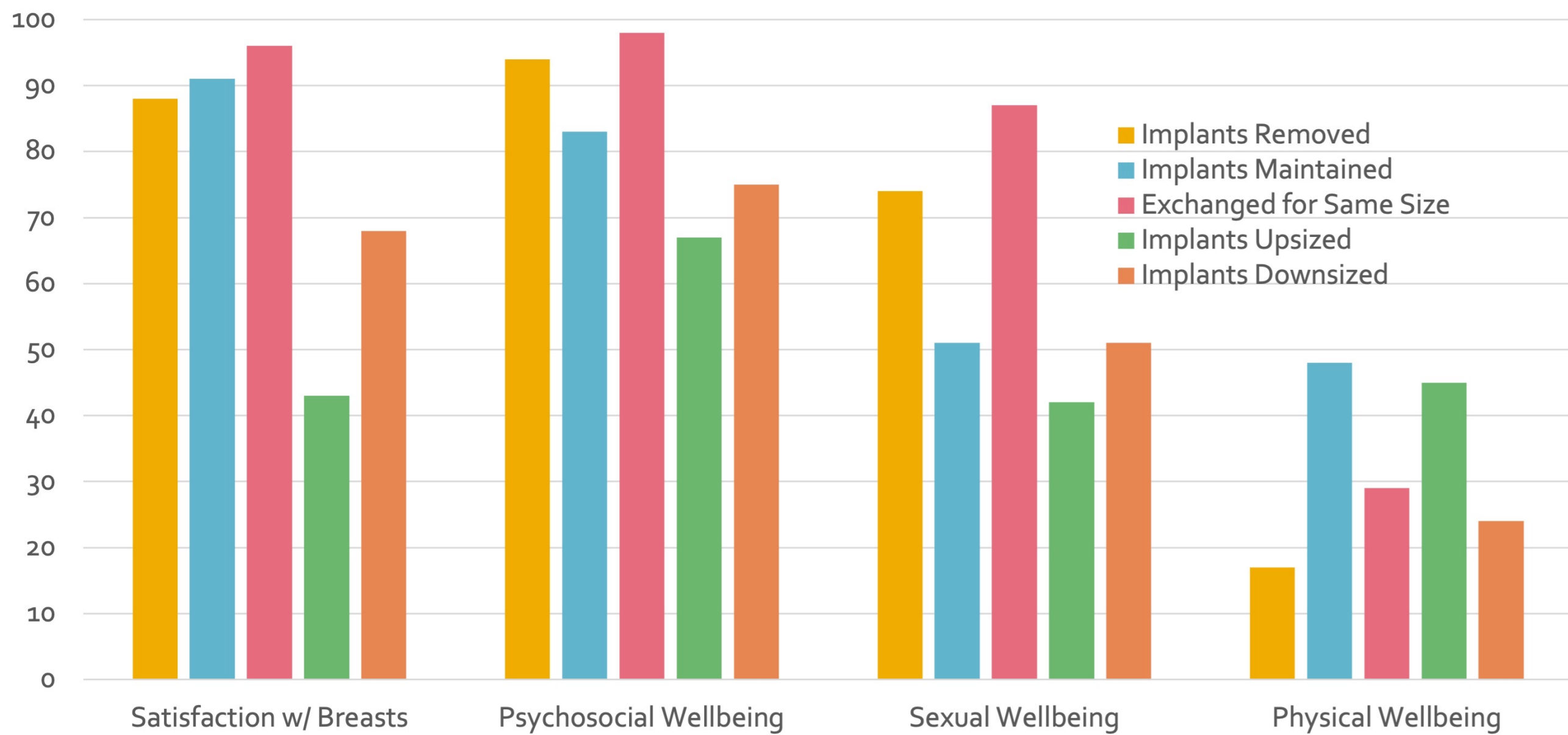


Figure 2. BREAST Q Lumpectomy Module



Results

Ninety-three (65.5%) patients chose to maintain their implants, while 49 (34.5%) elected to have them removed during BCT. Patients with submuscular implants were more likely to maintain their implants. Oncoplastic mastopexy was associated with higher complication rates, particularly in patients opting for implant downsizing. However, multivariate logistic regression did not identify implant management strategy as an independent predictor for complications or revisions. Surgical site infection was the only predictor of implant explantation. Patient-reported outcomes did not differ significantly between the different implant management cohorts.

Conclusion

This study demonstrates that maintaining breast implants during BCT does not increase the risk of complications or revisions. Overall, BCT in augmented women was found to be a safe approach, with high patient satisfaction.

Table 1. Implant Management and Oncoplastic Reconstructive Strategies versus Complications

	Any Complication, n (%)	Reoperative Complication, n (%)	Revision Rate, n (%)	Baker Grade 3 or 4 CC, n (%)	Implant Explantation Rate for Complication or CC, n (%)
Elective Implant Removal at Segmental Mastectomy (n=48)	3 (18.8)	2 (4.2)	10 (30.3)	n/a	n/a
Local Tissue Rearrangement (n=8)	0 (0)	0 (0)	2 (25)	n/a	n/a
Oncoplastic Mastopexy (n=40)	3 (7.5)	2 (5)	1 (2.5)	n/a	n/a
Chest Wall Perforator Flap (n=0)	n/a	n/a	n/a	n/a	n/a
Implants Maintained (n=35)	0 (0)	0 (0)	5 (14.3)	3 (8.6)	0 (0)
Local Tissue Rearrangement (n=29)	0 (0)	0 (0)	5 (17.2)	3 (10.3)	0 (0)
Oncoplastic Mastopexy (n=4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Chest Wall Perforator Flap (n=2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Exchange-Upsize (n=22)	3 (13.6)	1 (4.5)	5 (22.7)	2 (9.1)	2 (9.1)
Local Tissue Rearrangement (n=11)	1 (9)	1 (9)	1 (9)	0 (0)	1 (9)
Oncoplastic Mastopexy (n=11)	2 (18.1)	0 (0)	4 (36.4)	2 (18.2)	1 (9)
Chest Wall Perforator Flap (n=0)	n/a	n/a	n/a	n/a	n/a
Exchange-Downsize (n=24)	9 (37.5)	3 (12.5)	9 (37.5)	3 (12.5)	3 (12.5)
Local Tissue Rearrangement (n=4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Oncoplastic Mastopexy (n=19)	8 (42.1)	2 (10.5)	8 (42.1)	3 (15.8)	3 (15.8)
Chest Wall Perforator Flap (n=1)	1 (100)	1 (100)	1 (100)	0 (0)	0 (0)
Exchange-Same size (n=13)	1 (7.7)	0 (0)	4 (30.8)	3 (23.1)	1 (7.7)
Local Tissue Rearrangement (n=11)	0 (0)	0 (0)	3 (27.3)	2 (18.2)	0 (0)
Oncoplastic Mastopexy (n=2)	1 (50)	0 (0)	1 (50)	1 (50)	1 (50)
Chest Wall Perforator Flap (n=0)	n/a	n/a	n/a	n/a	n/a

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