

A single surgeon's experience with postoperative complications following Bilateral Breast Reduction in patients with complex autoimmune and immunodeficient conditions.

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INTRODUCTION

- ❖ **Bilateral breast reduction (BBR)** boasts a satisfaction rate of nearly 90% for **Macromastia**.(1)
- ❖ Plastic surgeons are increasingly confronted by patients with autoimmune diseases and immunodeficiencies.
- ❖ These conditions and their immunosuppressive treatment regimens are understudied in the perioperative setting and raise concerns for proper wound healing.(2-4)
- ❖ Purpose: evaluate whether **BBR patients with autoimmune or immunodeficient conditions have increased risk for postoperative complications.**

METHOD

- ❖ **Retrospective review of a single plastic surgeon's BBR cases from January 2013 - June 2024.**
- ❖ Qualifying Diagnoses: Lupus, Scleroderma, Sjogren's Syndrome, Sarcoidosis, Crohn's, Multiple Sclerosis, Psoriatic Arthritis, Rheumatoid Arthritis, Ankylosing Spondylitis, Sickle cell disease, and Cystic Fibrosis.
- ❖ Of 790 cases, 28 met inclusion criteria.
- ❖ Chart review extrapolated demographics, BMI, comorbid conditions, immunomodulatory medications, pre-operative measurements, resection weights, and postoperative outcomes.
- ❖ **Minor complications:** wound breakdown necessitating a care regimen, surgical site infection requiring antibiotics, or hematoma or seroma warranting non-operative treatment.
- ❖ **Major complications:** minor complications requiring acute or sub-acute re-operation.
- ❖ Analysis via **Chi Square** and **Fisher's Exact tests.**

RESULTS

- ❖ Patients with autoimmune/immunodeficiencies comprised 3.5% of all BBRs.
- ❖ All patients except one underwent an **inferior pedicle reduction**.
- ❖ **10%** of patients experienced **major complications**, **61%** experienced **minor complications**.
- ❖ **Immunomodulatory medication use** across all conditions revealed a **statistically significant negative association** with **minor complications** using Chi Square test ($p<0.05$).
- ❖ **Biologics use** revealed a **statistically significant negative association** with **minor complications** using Fischer's Exact test ($p<0.05$).

Primary Diagnosis	% of total patients	39.2	34.25	Immunomodulatory Medications
		Average Age	Average BMI	
Lupus (5)	17.86%	32.8	34.44	80%
Rheumatoid Arthritis (5)	17.86%	57.83	33.07	100%
Crohn's (3)	10.71%	38	38.43	33.33%
Sickle Cell (3)	10.71%	23	31.68	0%
Sjogren's (3)	10.71%	43.67	35	66.67%
Multiple Sclerosis (2)	7.14%	22.5	38.94	50%
Psoriatic Arthritis (2)	7.14%	47	32.28	50%
Sarcoidosis (2)	7.14%	42.5	38.34	50%
Ankylosing Spondylitis (1)	3.57%	30	32.58	100%
Cystic Fibrosis (1)	3.57%	22	27.54	0%
Scleroderma (1)	3.57%	41	34.31	0%
Unspecified Autoimmune (1)	3.57%	48	41.16	100%

Table 1: Patient demographic information stratified by qualifying diagnosis. Overall average measurements noted in blue.

Primary Diagnosis	% of total patients	10%	61%	Length of Follow-Up	Special Treatments
		Major Complications	Minor Complications		
Sickle Cell (3)	10.71%	33.33%	100%	2	100%
Sarcoidosis (2)	7.14%	0%	100%	3.75	100%
Cystic Fibrosis (1)	3.57%	0%	100%	1	100%
Scleroderma (1)	3.57%	0%	100%	4	0%
Crohn's (3)	10.71%	0%	66.67%	2.67	0%
Sjogren's (3)	10.71%	0%	66.67%	5	33.33%
Multiple Sclerosis (2)	7.14%	0%	50%	2	0%
Lupus (5)	17.86%	0%	40%	3.5	20%
Rheumatoid Arthritis (5)	17.86%	28.57%	28.57%	3	42.86%
Psoriatic Arthritis (2)	7.14%	0%	0%	6.5	0%
Ankylosing Spondylitis (1)	3.57%	0%	0%	3	100%
Unspecified Autoimmune (1)	3.57%	0%	0%	6	0%

Table 2: Patient outcome information stratified by qualifying diagnosis. Overall average measurements noted in blue.

Immunomodulatory Medications*	% of total patients
Prednisone (6)	21.40%
Hydroxychloroquine (6)	21.40%
Methotrexate (5)	17.80%
Adalimumab (3)	10.70%
Sulfasalazine (3)	10.70%
Infliximab (2)	7.14%
Rituximab (2)	7.14%
Topical Corticosteroid (2)	7.14%
Azathioprine (1)	3.57%
Hydrocortisone Sodium Succinate (1)	3.57%
Fingolimod (1)	3.57%
Ocrelizumab (1)	3.57%
Golimumab (1)	3.57%
Etanercept (1)	3.57%

Table 3: Percent of patients on specific immunomodulatory medications.

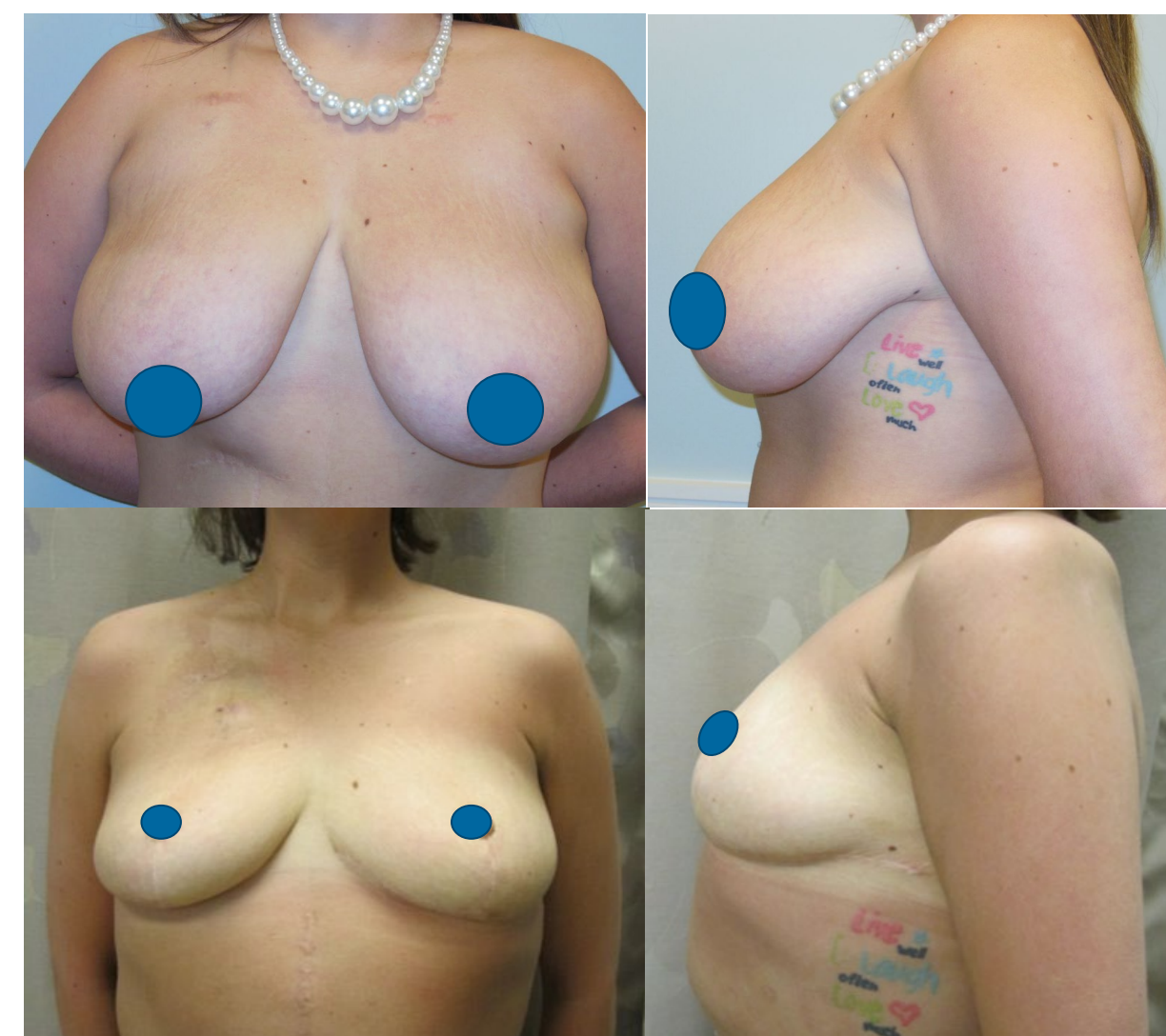


Figure 1: Cystic Fibrosis
❖ 22 y.o. female
❖ Hepatic Failure – Liver transplant 8 months after BBR
❖ Deceased – 11 years after BBR

❖ Resection amounts: R- 396 gm, L- 406 gm
❖ Complication: Slight left nipple malposition revised 6 months after BBR



Figure 2: Systemic Lupus Erythematosus
❖ 30 y.o. female
❖ Immunosuppression
❖ BMI: 32
❖ Estimated Bra Size: 42H

❖ Bilateral inferior Pedicle, Wise Pattern
❖ Resection amounts: R-1,594 gm, L- 1,668 gm
❖ Complication: Left breast seroma/abscess treated with oral antibiotics

CONCLUSIONS

- ❖ Patients with **autoimmune/immunodeficient conditions** have **high rates of wound breakdown and surgical site infection**. However, these **patients rarely experienced major complications**.
- ❖ Patients who used **immunomodulators and biologics** reveal **fewer minor complications** than expected, which may highlight a **protective effect**.

LIMITATIONS & NEXT STEPS

- ❖ Limitations: **Small patient population, retrospective review**, and potential **confounding variables**.
- ❖ Next Steps: **Expand this evaluation** to all BBRs performed by all plastic surgeons at MUSC within the same timeframe.

DISCLOSURES

- ❖ Previous Presentations:
 - ❖ International Conference - Breast Surgery Workshop and World Consensus Conference, April 2025. Attending Lecture.
 - ❖ National Conference - Plastic Surgery the Meeting, October 2025. Resident Oral Presentation.

REFERENCES

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