

Impact Of Radiation Timing On Complications In Pre-pectoral Alloplastic Breast Reconstruction

A Single Institutional Retrospective Cohort Study

Anshumi Desai MD, Emily R. Finkelstein MD, Meaghan Clark BS, Samantha A. McLaughlin BS, Dylan Treger BS, Devinder Singh MD, Zubin Panthaki MD, John Oeltjen MD PhD, Sara Danker MD, Juan Rodolfo Mella-Catinchi MD MPH, Wrood Kassira MD
University of Miami, Division of Plastic and Reconstructive Surgery, Department of Surgery

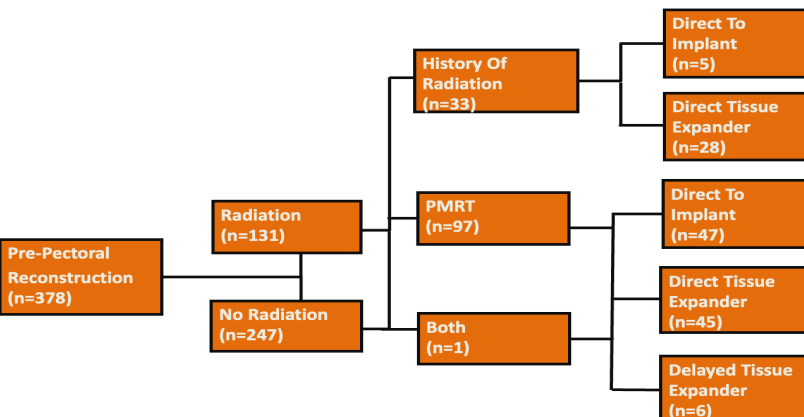
BACKGROUND

- Radiation is a known risk factor for major complications in prosthetic reconstruction.
- ✓ Reconstructive failure (20–50%)
- ✓ Major corrective surgery (40%)
- ✓ Capsular contracture (17–60%)
- ✓ Patient satisfaction and aesthetic outcomes
- Lack of dedicated outcomes data for pre-pectoral breast reconstruction in the setting of radiation.

OBJECTIVES

- ✓ Examine outcomes in Pre-pectoral Implant-based reconstruction
- With and without radiation
- Timing of radiation (Delayed vs Immediate)
- ✓ Immediate TE vs Immediate DTI vs Delayed TE
- ✓ Remote History of Radiation vs Post Mastectomy Radiation Therapy (PMRT) only

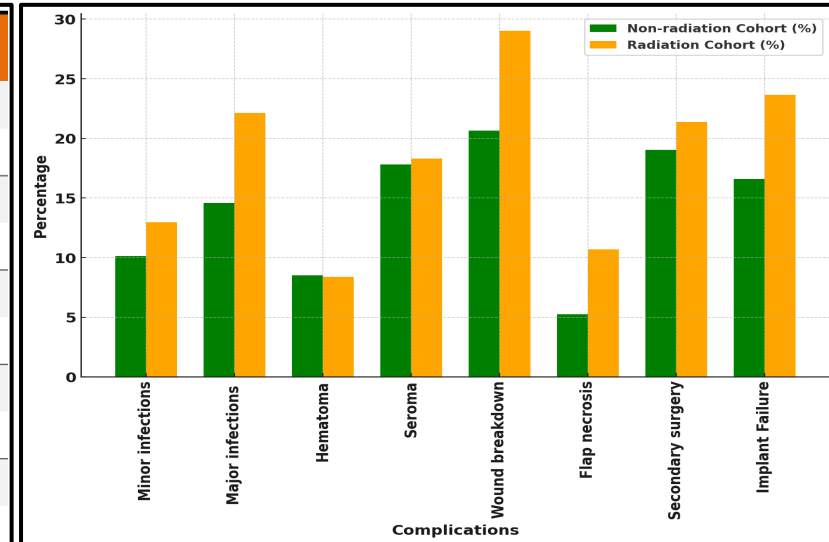
METHODS



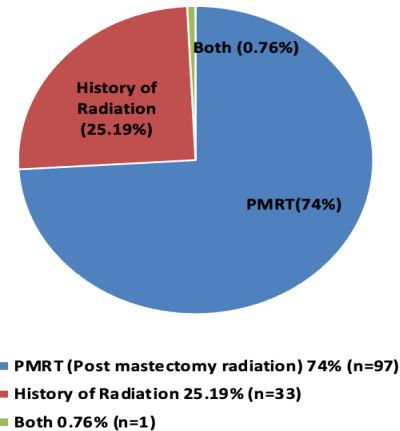
RESULTS

	PMRT (n=97)		Radiation History (n=33)	
Minor Infection	13	13.40%	3	9.09%
Major Infection	24	24.74%	5	15.15%
Hematoma	7	7.22%	4	12.12%
Seroma	15	15.46%	8	24.24%
Major Wound	31	31.96%	7	21.21%
Flap Necrosis	9	9.28%	5	15.15%
Re-operation	31	31.96%	7	21.21%
Implant Removal	24	24.74%	7	21.21%
Overall complications	154	19.80%	46	17.42%

p=0.0024



TIMING OF RADIATION



CONCLUSION

- ✓ Overall complications were more prevalent in the radiation cohort.
- ✓ Patients with radiation after immediate reconstruction had more complications than patients without radiation ($p < 0.05$).
- ✓ Overall complications increased in patients who received radiation in the setting of staged reconstruction compared to immediate DTI ($p < 0.05$).
- ✓ Post Mastectomy Radiation Therapy had more implant-related complications than those with a remote history of radiation but no adjuvant radiation ($p < 0.05$).