



The Effects Of Radiation Status On Reconstructive Failure Rates In Prepectoral And Subpectoral Implant-based Breast Reconstruction

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Background

- **Implant-based breast reconstruction (IBR)** remains the most common reconstructive approach following mastectomy.
- While **subpectoral IBR and prepectoral IBR** both offer good results, **multiple factors** should be considered preoperatively to offer each patient the best tailored implant-based reconstructive approach.
- Identifying **risk factors** contributing to reconstructive failure will help in patient selection for each of these options.

Methods

Retrospective review of all breast reconstructions performed after mastectomy

Total Mastectomy

- Women aged 18 years to 99 years of age
- Years 2007 to 2021
- Mastectomy for cancer or hereditary risk
- All mastectomies performed at Cedars-Sinai Medical Center

Breast Reconstruction

- At least 9 months follow up after final reconstruction
- All breast reconstruction techniques (implant and autologous)
- All breast reconstructions performed at Cedars-Sinai Medical Center

Results

- Infection rates were highest in patients who underwent radiation and had prepectoral IBR (7.6%) and were comparable between prepectoral IBR without radiation (3.8%) and subpectoral IBR with radiation (3.6%).
- Higher rates of aesthetic reoperations occurred in subpectoral IBR with radiation (11.4%) in comparison to prepectoral IBR with radiation (1.3%) ($p<0.05$.)

Conclusions

- Infection rates trended higher in prepectoral IBR regardless of radiation status while aesthetic reoperations occurred at a higher rate for subpectoral IBR with radiation.
- Radiation affects aesthetic results and reoperation for infection or wound dehiscence differently in prepectoral and subpectoral IBR. These risks should be discussed with patients when considering IBR techniques

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