

The Effects Of BMI 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.
- Data is conflicting on **risk of acute complications** with prepectoral and subpectoral implant placement.
- Identifying **risk factors** contributing to reconstructive failure would 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

- **Prepectoral IBR and BMI >24 kg/m²** had higher rates of unplanned reoperations for **infection or wound dehiscence** while patients with BMI <24 kg/m² who received subpectoral IBR had lower rates of infection and dehiscence (7.6% vs. 2.5%; p=0.01)
- **Subpectoral IBR and BMI >24 kg/m²** had higher rates of **unplanned reoperations** compared to subpectoral IBR with BMI <24 kg/m²
- **Age did not predict unplanned reoperation rates** regardless of the plane of reconstruction

Conclusions

- **Subpectoral IBR and above average BMI** increased the risk of **unplanned reoperations**
- **BMI** had the **single greatest impact** on rates of **infection and wound complications** requiring unplanned reoperations.
- **Prepectoral IBR** carried a higher rate of **infection and wound complications** requiring reoperation.

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