

Thromboembolic and Hemorrhagic Risks Following Mastectomy with versus without Direct-to-Implant Reconstruction: A Multicenter Propensity-Score Analysis

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INTRODUCTION

The Challenge

Breast cancer is the most common malignancy in women. Mastectomy is a key treatment. Postoperative **thrombotic and bleeding risks remain a concern**.

Reconstruction & Risk

Direct-to-implant (DTI) enables **single-stage reconstruction**. Increased complexity may raise risk of: Hematoma and DVT / PE

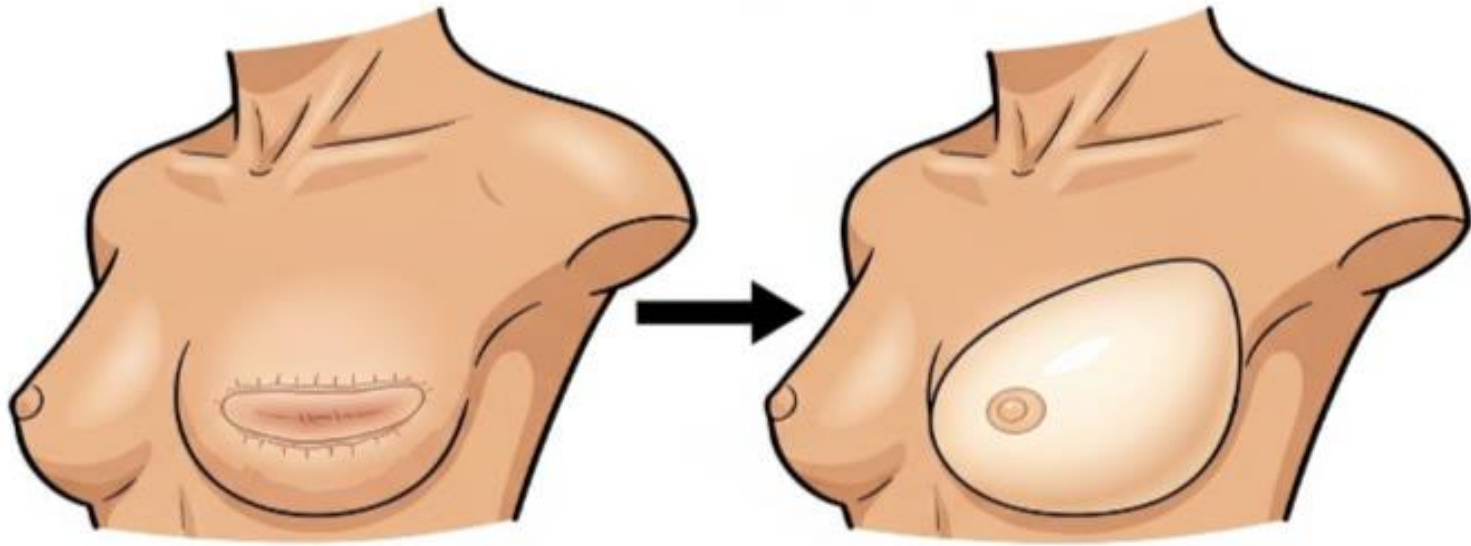
Research Question: Does immediate DTI reconstruction increase postoperative thromboembolic and hemorrhagic risk compared to mastectomy alone?

AIMS

•Compare **90-day thromboembolic and hemorrhagic outcomes** between:
MT alone
MT + immediate DTI reconstruction

•Hypothesis:
→ DTI is not associated with significantly increased **complication risk** after adjustment.

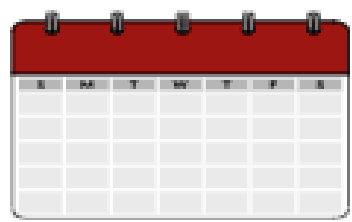
MT vs MT+DTI

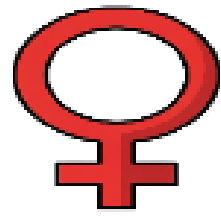


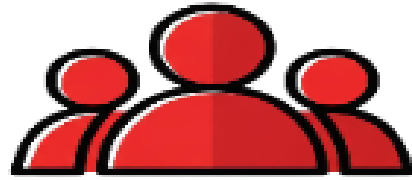
METHODS

•**Design:**
Multicenter retrospective cohort (TriNetX)

•**Matching:**
1:1 propensity score matching
Balanced for demographics, comorbidities, and medications

 2010-2025

 **Adult Female Patients**

 **11,538 Patients**

 **5,769 MT vs 5,769 MT + DTI**

RESULTS

Key Interpretation

Immediate DTI reconstruction was associated with **lower observed hematoma and DVT**
Reduction seen in both **hematoma and DVT**, with a trend toward reduced PE

Clinical Implications

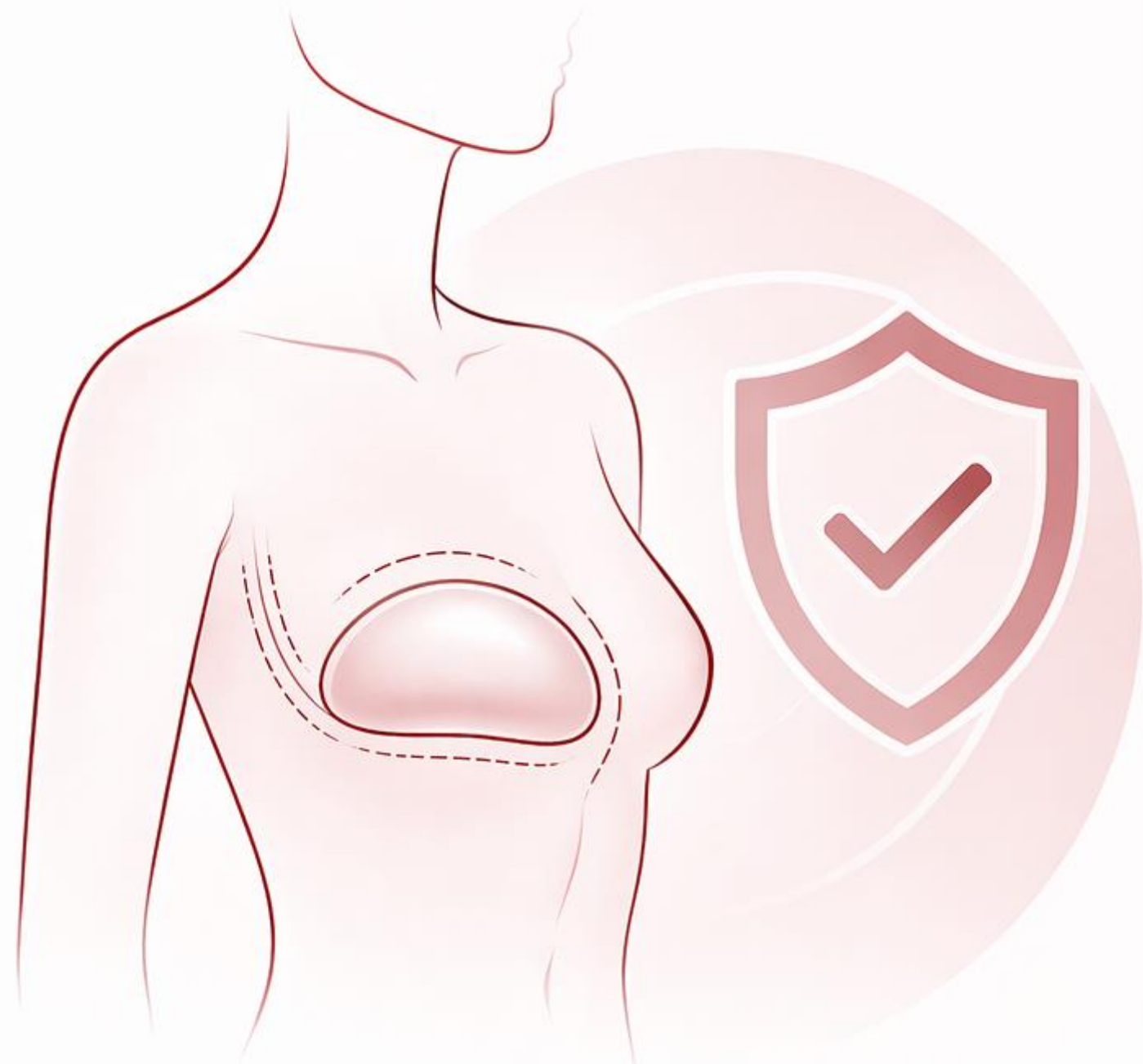
Findings suggest **procedure complexity alone may not increase perioperative risk**
Supports use of **immediate implant-based reconstruction in appropriate candidates**

Important Consideration

Results reflect **associations after matching**, not direct causation
Residual confounding and selection bias may still influence outcomes

CONCLUSIONS

Immediate DTI reconstruction was associated with lower rates of hematoma and DVT, with a trend toward reduced PE. These findings suggest that procedural complexity alone may not increase perioperative risk and that DTI can be a safe reconstructive option in appropriately selected patients.



90-Day Postoperative Outcomes

Propensity-matched cohort (n = 11,538)
(5,769 matched pairs)

MT (n = 5,769)

MT + DTI (n = 5,769)

Patients (%)

Hematoma

Deep Vein Thrombosis (DVT)

Pulmonary Embolism (PE)

1.4%

0.9%

33% Lower
p = 0.024

0.8%

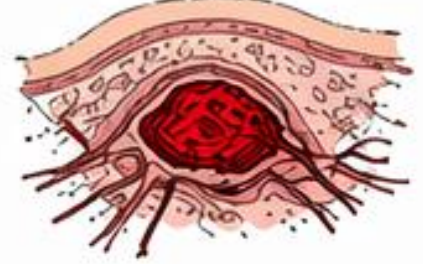
0.4%

54% Lower
p = 0.002

0.5%

0.3%

41% Lower
p = 0.076
(Not Significant)







 In this matched cohort, DTI reconstruction was associated with **lower observed rates of hematoma and DVT**, with a trend toward lower PE, at 90 days.

• Significant for hematoma and DVT

• PE reduction did not reach statistical significance (p = 0.076)

MT = Mastectomy; DTI = Direct-to-Implant Reconstruction

INSTITUTIONS

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