

THE IMPACT OF TAMOXIFEN THERAPY ON THROMBOTIC FLAP COMPLICATIONS: A *NATIONWIDE ANALYSIS*

POOJA S YESANTHARAO, MD MS; RACHNA GOLI, BS; JENNIFER SHAH, BS; CLIFFORD C. SHECKTER, MD; GORDON K. LEE, MD MBA; RAHIM S. NAZERALI, MD MHS FACS

Introduction

Perioperative practices regarding tamoxifen use in microvascular reconstruction vary widely, ranging from no cessation of therapy to holding therapy for 4 weeks prior to surgery. Furthermore, studies have reported conflicting data on the impact of tamoxifen on flap outcomes.

No literature has investigated this issue from a national standpoint. This is a nationwide analysis of tamoxifen’s impact on flap outcomes and VTE.

Methods

We conducted a retrospective cohort study using MarketScan (2014-2017).

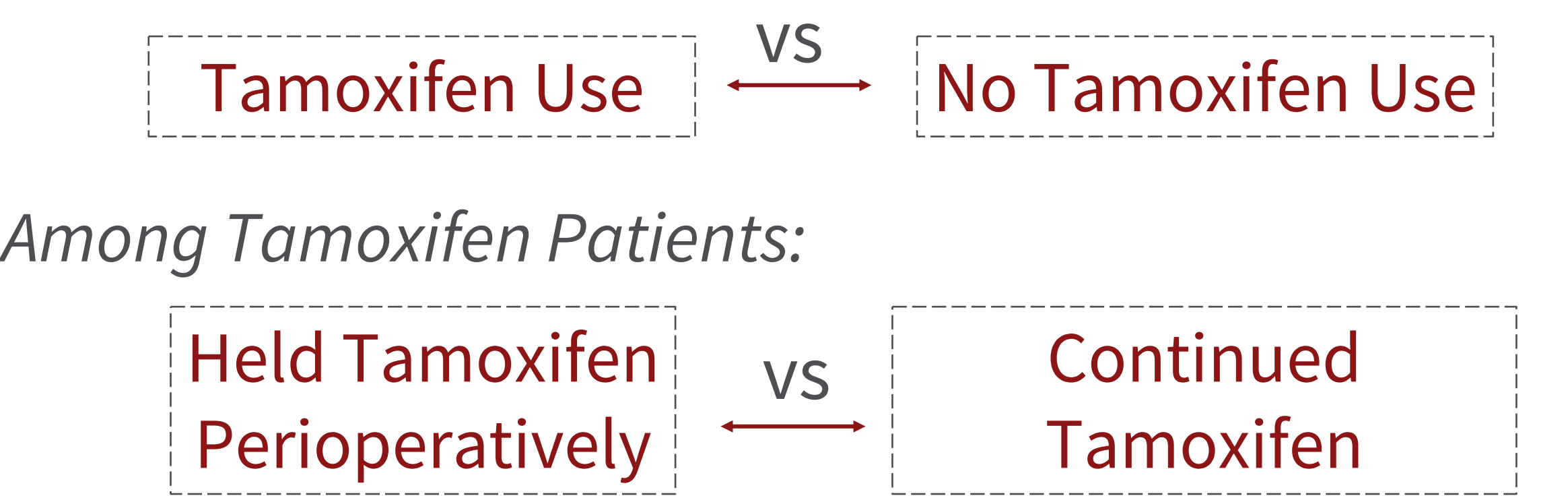
Inclusion Criteria:

- Premenopausal women (18-50 years of age) undergoing flap reconstruction

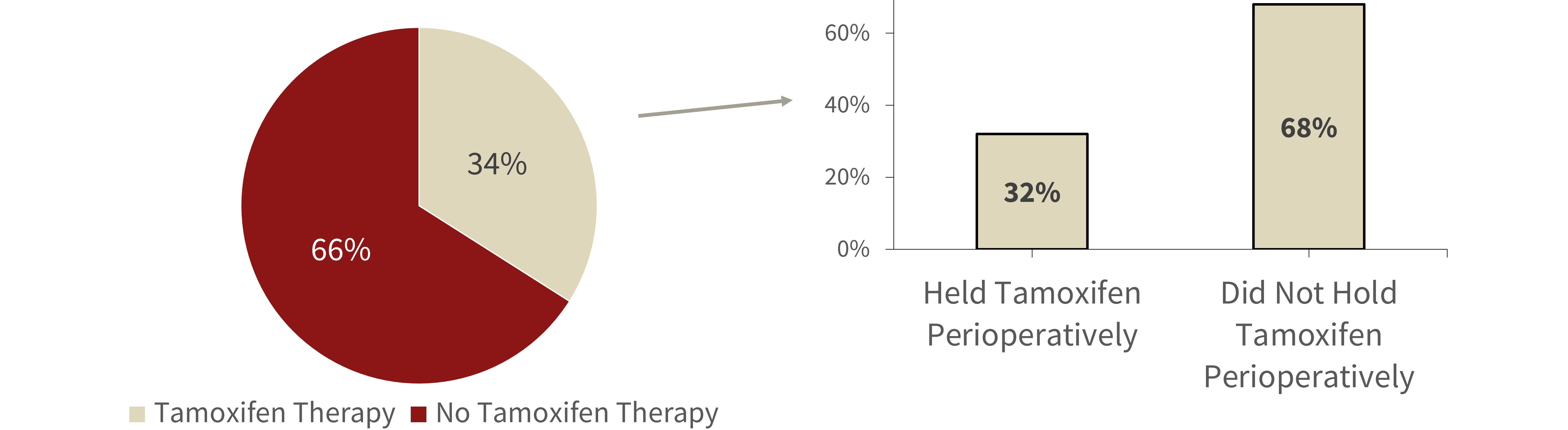
Exclusion Criteria:

- Pre-existing thrombotic conditions (Factor V Leiden, APS) or history of VTE

Flap complications and VTE rates within 90 days of surgery were compared between the following cohorts, stratifying by VTE risk (Caprini scores):

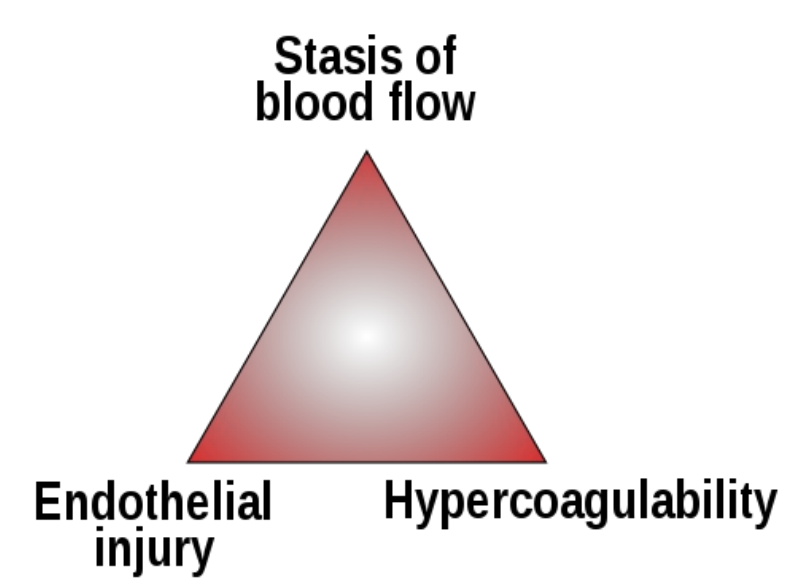


Results



Patient characteristics, including baseline Caprini risk scores, did **NOT** significantly differ between study cohorts.

	Flap Failure	VTE
Tamoxifen Vs. Non-Tamoxifen	Adjusted Odds Ratio: 1.00 (CI: 0.77-1.34)	Adjusted Odds Ratio: 1.03 (CI: 0.91-1.29)
Tamoxifen vs Non-Tamoxifen (<u>High Risk Patients</u>)	Adjusted Odds Ratio: 1.00 (CI: 0.83-1.22)	<i>Adjusted Odds Ratio: 1.2 (CI: 1.01-1.28)</i>
Tamoxifen Held Perioperatively vs. Continued	Adjusted Odds Ratio: 1.00 (CI: 0.94-1.08)	Adjusted Odds Ratio: 1.02 (CI: 0.87-1.19)



These data suggest that tamoxifen may not substantially increase thrombotic risk on top of the thrombogenicity inherent to microvascular anastomosis. Thus, continuing tamoxifen perioperatively may not place patients at a substantially higher risk for flap failure.

Conclusions

- Perioperative tamoxifen use did not significantly increase microvascular complications and flap failure rates in microsurgical breast reconstruction.
- Patients on tamoxifen therapy with thrombotic risk factors (i.e., high Caprini risk scores) had greater risk for postoperative venous thromboembolism.

Implications

- Understanding the risk of tamoxifen therapy on microvascular reconstruction can inform evidence-based guidelines and can help to identify patients who may benefit from prolonged postoperative chemoprophylaxis for VTE.

Limitations

- Retrospective review of a national database built on claims data, susceptible to coding errors/discrepancies
- Perioperative tamoxifen use may not be accurately captured by prescription claims.