

## Introduction

This study aims to perform a comprehensive systematic review and meta-analysis to evaluate the impact of anticoagulation therapy on clinical outcomes following ventral hernia repair (VHR).

## Material & Methods

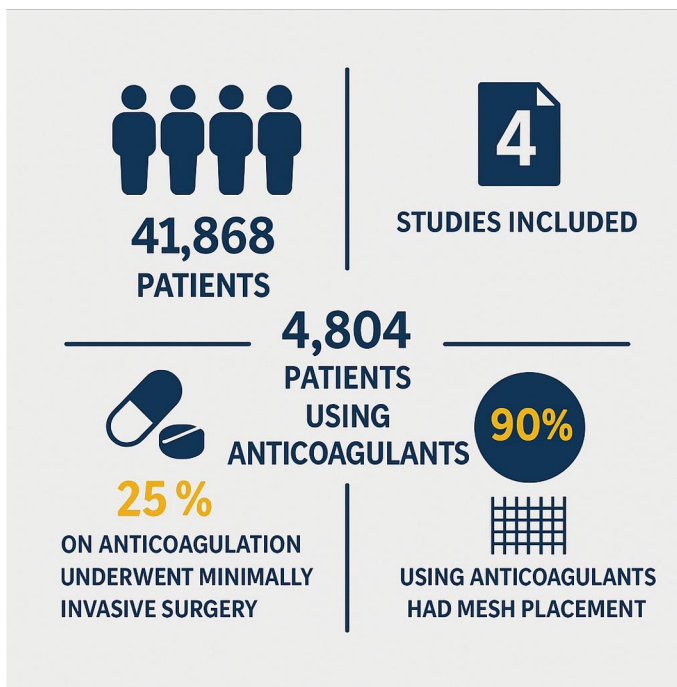
A thorough online search was conducted using PubMed, Cochrane, and Embase. Studies comparing the use of anticoagulation therapy following VHR were included. The results analyzed were blood-related reoperation, hemorrhagic/thrombotic complications, length of stay, and transfusion rates. Statistical analysis was performed with Review Manager 5.4 using a random-effects model.

## Results

From 1,278 records, 4 studies were included, encompassing 41,868 patients (anticoagulants use = 4,804; no anticoagulation = 32,649), with 25% on anticoagulant therapy submitted to minimally invasive surgery (MIS). Additionally, 90% of patients using anticoagulants underwent mesh placement (Figure 1). Overall analysis showed increased hemorrhagic/thrombotic complications (RR 2.34; 95% CI 1.13 to 4.84;  $p = 0.02$ ), bleeding-related reoperation (RR 6.57; 95% CI 4.34 to 9.94;  $p < 0.00001$ ), and longer hospital stays (MD 1.69 days; 95% CI 0.66 to 2.72 days;  $p = 0.001$ ) in patients using anticoagulant medications. However, transfusion rates (RR 2.14; 95% CI 0.58 to 7.95;  $p = 0.26$ ) demonstrated comparable results between groups (Figure 2).

# Do Anticoagulants Have an Impact on the Clinical Outcomes of Ventral Hernia Repair? A Systematic Review and Meta-Analysis

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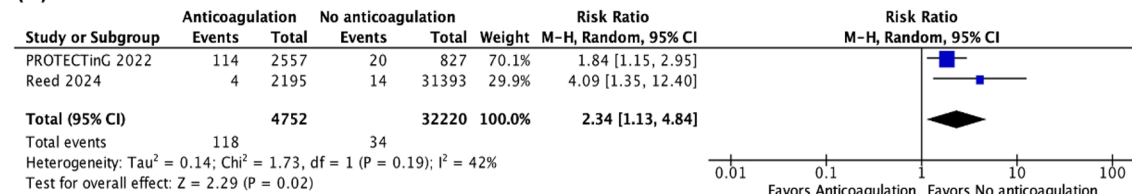
**Figure 1.** Summary of patient distribution and key characteristics.

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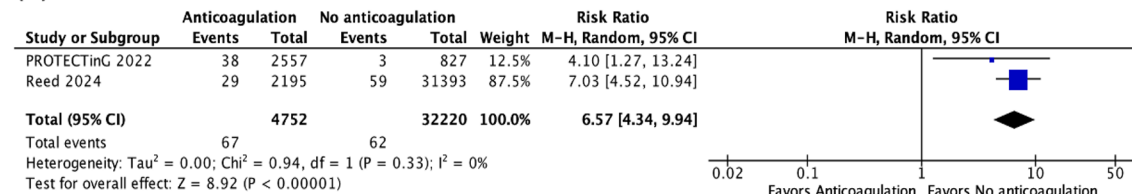


## Ventral Hernia Repair

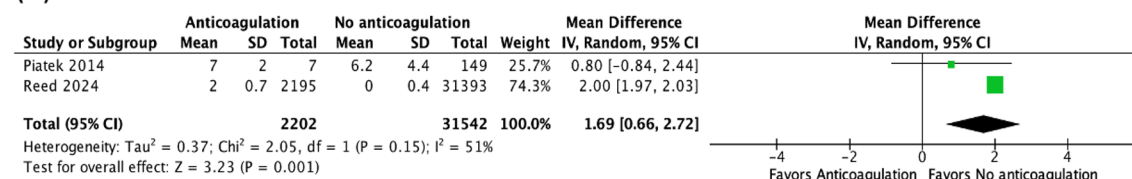
(A)



(B)



(C)



**Figure 2.** (A) Anticoagulant therapy following ventral hernia repair was associated with significantly increased hemorrhagic/thrombotic complications; (B) bleeding-related reoperations; and (C) longer hospital stays.

## Conclusion

The use of anticoagulant therapy following VHR is associated with increased hemorrhagic/thrombotic complications, bleeding-related reoperations, prolonged hospitalization, and similar transfusion rates. Further research is still required to validate these findings and explore the impact of MIS on anticoagulated patients following VHR.