

ANTICOAGULANT PRIMARY PROPHYLAXIS

EXTERNAL VALIDATION OF THE SAVED SCORE IN A CANADIAN REGIONAL CANCER CENTRE COHORT: A REAL-WORLD ANALYSIS

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Introduction. Venous thromboembolism (VTE) remains a significant complication in multiple myeloma patients receiving immunomodulatory drugs, with incidence rates of 3-26%. The SAVED score was developed to stratify VTE risk using readily available clinical variables. While initial validation demonstrated strong discriminatory ability in large academic centers, real-world performance in community cancer centers has not been characterized. This study aims to validate the SAVED score in a Canadian Regional Cancer Centre cohort.

Methods. We reviewed 182 multiple myeloma patients who began lenalidomide treatment between January 2013 and February 2025 at the Durham Regional Cancer Centre, with follow-up through January 2026. The SAVED score was calculated using age >80 years (+1), Asian ethnicity (-3), prior VTE (+3), surgery within 90 days (+2), dexamethasone 120-160 mg monthly (+1) or >160 mg monthly (+2). Patients were classified as low risk (SAVED 0-1) or high risk (≥ 2). Primary outcome was VTE during lenalidomide therapy, confirmed by imaging. Statistical analysis included Fisher exact test, Kaplan-Meier survival analysis with log-rank test, and ROC curve analysis. Sensitivity analyses excluded patients with prior VTE and tested alternative cutoffs (≥ 3).

Results. Median age was 79 years. Overall VTE rate was 12.6% (23/182). Low-risk patients (n=139, 76.4%) had 5.8% VTE rate vs 34.9% in high-risk patients (n=43, 23.6%). Odds ratio was 8.77 (95% CI 3.39-22.69, $p < 0.001$). The SAVED score demonstrated acceptable discrimination with AUC 0.735 (95% CI 0.611-0.849). Kaplan-Meier analysis showed clear separation (log-rank $p < 0.001$), with median VTE-free survival of 943 days (2.6 years) in high-risk vs 2,703 days (7.4 years) in low-risk patients. Sensitivity analyses confirmed robustness: excluding prior VTE (n=162) yielded OR 8.73 ($p < 0.001$); alternative cutoff ≥ 3 showed OR 6.88 ($p < 0.001$).

Conclusions. The SAVED score successfully stratified VTE risk in our community cancer center cohort, with high-risk patients demonstrating a 9-fold increased odds of VTE and significantly shorter VTE-free survival. These results support SAVED score-guided thromboprophylaxis decisions in community practice settings where most myeloma patients receive care. Future work should focus on evaluating the impact of SAVED score-guided thromboprophylaxis on VTE reduction and the cost-effectiveness of risk-stratified approaches to thromboprophylaxis in the community cancer center setting.