

Lay Summary

Venous thromboembolism (VTE) is a major cause of morbidity and mortality in patients with cancer. Although the relative risk of VTE in cancer patients is up to 50-fold higher than in patients without cancer, the absolute risk varies depending on the subtype of cancer and the cancer treatment, and patient-related factors. The risks of VTE recurrence and bleeding during anticoagulant treatment for cancer-associated VTE are also higher than in non-cancer patients but vary with each cancer subtype.

Patients with hematologic malignancies represent a heterogeneous group with different thrombosis and bleeding risks. They are typically underrepresented in the few randomized controlled trials evaluating anticoagulant therapy in cancer patients. Consequently, thrombosis management in patients with hematologic malignancy is typically extrapolated from results based largely on patients with solid tumors, but these populations have many differences including hospitalization rates, risk of infection, use of indwelling catheters, multi-drug treatments with potentially critical drug-drug interactions, and higher likelihood of severe cytopenias that may complicate anticoagulation management.

The restricted inclusion of hematologic malignancies in thrombosis treatment studies has led to a knowledge deficit regarding anticoagulant safety and efficacy, and thus, optimum management for these patients remains unknown. More precise risk estimates regarding efficacy and safety of anticoagulant modalities in patients with hematologic malignancies may provide valuable information to clinicians that have critical impact on patient outcomes. A systematic review with individual patient-level meta-analysis on treatment of acute VTE in patients with hematologic malignancies can help narrow this knowledge gap.