



The 65th ASH Annual Meeting Abstracts

POSTER ABSTRACTS

332. THROMBOSIS AND ANTICOAGULATION: CLINICAL AND EPIDEMIOLOGICAL

Venous Thromboembolism Outcomes Among Cancer and Non-Cancer Patients Managed with Patient-Centric Guideline-Driven Protocol

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Purpose/Introduction: Patients with cancer and venous thromboembolism (VTE) have higher complication rates including thrombosis recurrence and bleeding. Real world prospective clinical outcome estimates of VTE management comparing cancer and non-cancer patients are limited. To assess VTE recurrence, major bleeding, and clinically relevant non-major bleeding (CRNMB) in patients with cancer and without cancer, the prospective Mayo Clinic Thrombophilia Clinic Registry was analyzed. **Methods:** Upon recruitment, consecutive patients with confirmed acute VTE (03/01/2013 - 04/30/2023) were treated in a standardized, guideline-sanctioned, protocol driven strategy incorporating shared patient-decision making. Patients were divided into groups based on cancer status. After enrollment, patients were actively followed at 3 month intervals, in person whenever feasible, by mailed questionnaire or scripted phone interview to assess vital status, medication compliance, VTE recurrence, major bleeding and CRNMB.

Results: Over the study time-frame, 2,064 patients (53.8% male, 46.2% female) with a cancer and 2,647 patients (54.9% male, 45.1% female) without cancer were enrolled. The most common cancers were gastrointestinal (n=423, 20.5%), pancreatic (n=287, 13.9%), genitourinary (n=198, 9.6%), hematologic (n=171, 8.3%), and lung cancer (n=170, 8.2%). Patients with cancer were older, had lower weight and lower platelet counts compared to non-cancer patients (Table 1). Pulmonary embolism (PE, 52.6% vs 43.7%, p<0.001), upper extremity DVT (9.1% vs 6.0%, p<0.001), and splanchnic DVT (11.1% vs 6.9%, p<0.001) were more frequent among cancer patients. In contrast, leg DVT was more frequent among non-cancer patients (65.4% vs 47.2%, p<0.001). While mean duration of anticoagulation was similar between groups, notable differences in 3 month and > 9 month durations were evident as were initial anticoagulant choices (Table 1). Despite a well-organized protocol driven and guideline sanctioned management strategy, patients with active cancer experienced a 2.2-fold higher rate of VTE recurrence (p<0.001) and a 1.8 fold higher rate of major bleeding (p<0.001) compared to non-cancer patients (Table 2). CRNMB rates did not differ by cancer status.

Conclusions: In this large prospective, guideline-driven and patient-centric registry of VTE management, patients with cancer had significantly higher rate of VTE recurrence and major bleeding, compared to non-cancer patients. These data provide important estimates for power calculations for future randomized trials of VTE treatment.

Disclosures No relevant conflicts of interest to declare.

Table 1. Demographic, clinical, and treatment data for patients with cancer and non-cancer treated for acute venous thromboembolism (VTE).

Variable	Patients with cancer n=2064	Patients without cancer n=2647	p
Age, years Mean (SD) range	62.5 (12.4) 18.0-96.0	59.4 (16.0) 17.0-99.0	<0.001
Female, n (%)	954 (46.2%)	1195 (45.1%)	0.462
Weight, kg Mean (SD) Range	85.6 (22.1) 32.0-234.0	92.9 (25.4) 27.0-236.0	<0.001
Platelet count, x 10 ⁹ /L Range	239.7 (125.5) (2.0-1001.0)	245.8 (101.3) (9.0-1138.0)	<0.001
Lower extremity DVT, n (%)	974 (47.2)	1732 (65.4)	<0.001
Upper extremity DVT, n (%)	230 (11.1)	183 (6.9)	<0.001
Splanchnic DVT, n (%)	187 (9.1)	160 (6.0)	<0.001
Pulmonary embolism, n (%)	1085 (52.6)	1157 (43.7%)	<0.001
Pulmonary embolism and DVT, n (%)	440 (21.3)	613 (23.2)	0.132
Duration of anticoagulation, month Mean (SD)	7.5 (9.7)	6.5 (8.0)	0.883
Anticoagulation time period, n (%) Month 0-3 >3-6 >6-9 >9	625 (30.3) 682 (33.0) 298 (14.4) 459 (22.2)	395 (14.9) 1701 (64.3) 280 (10.6) 271 (10.2)	<0.001
First anticoagulant used, n (%) Apixaban Rivaroxaban Low Molecular Weight Heparin Heparin unfractionated Warfarin Argatroban Dabigatran Bivalirudin Fondaparinux	373 (18.1) 151 (7.3) 117 (54.2) 405 (19.7) 10 (0.5) 1 (0.0) 2 (0.1) 0 (0.0) 1 (0.0)	668 (25.5) 328 (12.5) 706 (26.9) 860 (32.8) 48 (1.8) 4 (0.2) 4 (0.2) 1 (0.0) 1 (0.0)	<0.001

SD – standard deviation; DVT – deep vein thrombosis

Table 2. Outcome of anticoagulation.

Outcome Rate/ 100 person-years	Patients with cancer	Patients without cancer	p
VTE recurrence	6.00	2.59	<0.001
Major bleeding	5.04	3.08	<0.001
CRNMB	6.38	6.45	0.783

Figure 1

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