

BACKGROUND

- Venous thromboembolism (VTE) is a highly prevalent complication of malignancy and one of the leading causes of morbidity and mortality.
- Risk factors for VTE in cancer patients can be patient-related, cancer-related, or treatment-related.²
- According to the National Comprehensive Care Network (NCCN), patients with malignancy who present with a deep vein thrombosis (DVT) or pulmonary embolism (PE) should be treated with low molecular weight heparin.³
- The purpose of this study is to review the rate of occurrence in specific cancer types, treatment of choice during admission and discharge, and risk factors for patients admitted for VTE at St. Claire HealthCare.

OBJECTIVES

- Primary Objective:**
- To characterize VTE patients with cancer who are admitted to the hospital and review current treatment practices at St. Claire HealthCare
- Secondary Objectives:**
- To assess the occurrence rate of VTE in specific cancer types
 - To identify patient-specific, cancer-specific, and treatment-specific risk factors in cancer patients admitted for VTE

METHODS

- **Design:** Single center, retrospective study reviewing the occurrence, treatment, and risk factors for VTE in oncology patients with malignancy
- **Performance Site:** St. Claire Regional Medical Center; Morehead, KY
- **Inclusion Criteria:** Cancer patients admitted to St. Claire Regional Medical Center who are ≥ 18 years of age who are being treated for a DVT or PE
- **Exclusion Criteria:** Patients with pre-existing coagulopathies such as antiphospholipid syndrome, Factor 5 Leiden mutation, or thrombophilia
- **Individuals Collecting Data:** Dr. Kaitlyn Bartley, PharmD (principal investigator)
- **Data To Be Collected:** age, gender, weight, serum creatinine, cancer type, active treatment for cancer, length of time of malignancy, reason for admission, VTE treatment of choice during hospital stay and discharge, home anticoagulation therapy, and history of VTE

STUDY DESIGN

VTE Initial Patient List	• DVT: 194 patients • PE: 314 patients
Cancer Diagnosis	• DVT: 38 patients • PE: 33 patients
Active Malignancy	• DVT: 20 patients • PE: 22 patients

PRIMARY OBJECTIVE

- 54.7% of patients were placed on guideline-preferred LMWH upon discharge

Anticoagulant	Admission (# of patients)	Discharge (# of patients)
Heparin	13	0
Enoxaparin	24	23
Warfarin	0	5
Direct Oral Anticoagulant (DOAC)	0	6
None/Transferred	5	8

SECONDARY OBJECTIVES

- 47.6% of patients had documented metastatic disease
- Lung and colorectal cancer types were found to be most common
- 38% were documented to be receiving active treatment

Treatment	# of Patients (%)
Active treatment	16 (38)
Not documented or not receiving treatment	26 (62)

Cancer Type	# of Patients (%)
Lung	10 (23.8)
Colon/rectal	10 (23.8)
Bladder	4 (9.5)
Pancreatic	4 (9.5)
Prostate	3 (7.1)
Uterine	2 (4.8)
Renal cell carcinoma	2 (4.8)
Others	7 (16.7)

CLINICAL IMPLICATIONS

- Identifying patient-specific, cancer-specific, and treatment-specific risk factors for VTE in cancer patients is an essential first step in preventing the occurrence of VTE
- Recognizing risk factors for VTE in cancer patients can allow for prompt identification of VTE
- Consequences of initiating inappropriate anticoagulation could result in patients experiencing VTE or more severe consequences such as death

CONCLUSIONS

- Patients with the following characteristics tended to have increased likelihood for having a VTE:
 - Male gender, increased age, increased body weight, metastatic disease, lung and colorectal cancer patients
- Although LMWH is the preferred anticoagulant in cancer patients, choose an agent based on the needs of each specific patient

REFERENCES

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