

Title: A “CLOT” to handle: extended venous thromboembolism prophylaxis utilization after colorectal cancer resection is low regardless of patient factors or hospital characteristics

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Background: Venous thromboembolism (VTE) after colorectal cancer (CRC) resection is common and highly morbid. Extended pharmacologic VTE prophylaxis (ePPx) after cancer surgery lowers VTE risk and is recommended by major professional societies. Adherence is low in contemporary local and regional studies. This study assessed patient and hospital factors associated with receipt of ePPx after CRC resection in a national dataset.

Methods: The Surveillance, Epidemiology, and End Results (SEER)-Medicare dataset was used to identify patients over age 64 undergoing resection for CRC between 2016-2017. The primary outcome was receipt of ePPx within 7 days of discharge. Patient and hospital factors associated with receiving ePPx were identified using logistic regression.

Results: Of 23,527 patients, 4.7% received ePPx. Utilization increased from 2016 to 2017 (3.9% vs. 5.5%; $p < 0.001$). Patients treated at National Cancer Institute (NCI) designated hospitals received ePPx more frequently than teaching, non-NCI hospitals and non-teaching, non-NCI hospitals (10.2% vs. 5.6% vs. 1.7%; $p < 0.001$). Patients receiving care at larger hospitals by bed size quartile were more likely to receive ePPx compared to those at smaller hospitals (9.0% vs. 4.0% vs. 3.4% vs. 2.2%; $p < 0.01$). On multivariable regression, NCI status, larger bed size, White race (compared to Other), rectal tumor location and more recent year of treatment were independently associated with ePPx utilization. VTE events at 30- and 90-days were 1.87% and 2.63% respectively.

Conclusion: Utilization of ePPx after CRC surgery remains limited even in large, specialized hospitals. Further work is needed to understand this departure from guideline concordant care.

Figure 1: Factors associated with receiving extended pharmacologic VTE prophylaxis (ePPx) on multivariable logistic regression

