

## ***Direct oral anticoagulants in preventing venous Thromboembolism in Ambulatory Patients with cancer: A Systematic review and meta-analysis***

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### ***Abstract***

**V**enous thromboembolism (VTE) is the second highest cause of mortality among cancer patients<sup>1</sup>. Routine thromboprophylaxis is not being given to ambulatory cancer patient based on recent guidelines. **Methods:** A literature search of randomized controlled trials evaluating the use of direct oral anticoagulants (DOACs) as prophylaxis for VTE among ambulatory cancer patients was conducted in the following databases: PubMed, Cochrane Library, CENTRAL, clinicaltrials.gov, and HERDIN. The primary outcome was the incidence of VTE and the secondary outcomes were major and non-major bleeding episodes. Two independent reviewers assessed the methodological quality of the studies using the Cochrane risk of bias tool. The random effects model for dichotomous data was used with a 95% confidence interval. **Results:** Two randomized controlled trials were included in this study (N=1404). The incidence of VTE among ambulatory cancer patients on DOACs was significantly decreased (OR 0.53; 95% CI 0.31-0.89, I<sup>2</sup>=31%). The rates of major (OR 1.97; 95% CI 0.88-4.43, I<sup>2</sup>=0%) and non-major (OR 1.37; 95% CI 0.79-2.37, I<sup>2</sup>=0%) bleeding were not statistically significant.

**Conclusion:** This meta-analysis showed that the use of direct oral anticoagulants is associated with a statistically significant decrease in the rates of venous thromboembolism among high risk

ambulatory cancer patients receiving chemotherapy. There was no statistically significant difference in the rates of major and non-major bleeding. DOACs can be used as primary VTE prophylaxis. Further evaluation on more homogeneous population of cancer patients and more powered studies is needed.



### ***Biography:***

Dastynne Marie L. Dela Cruz, MD has completed her medical education at Pamantasan ng Lungsod ng Maynila- College of Medicine and is currently a first year medical resident at St. Luke's Medical Center-Quezon City.

[6th World Congress on Cardiology and Cardiovascular Therapeutics, Webinar](#), August 24-25, 2020

### ***Abstract Citation:***

Marie L. Dela Cruz, Direct oral anticoagulants in preventing venous thromboembolism in ambulatory patients with cancer: A systematic review and meta-analysis., WCCCT 2020, 6th World Congress on Cardiology and Cardiovascular Therapeutics; Webinar, August 24-25, 2020