

# Oral anticoagulants found to be more effective and cost-effective than heparin for cancer-associated thrombosis

December 26 2022

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A cost-effectiveness analysis comparing direct oral anticoagulants (DOACs) to low-molecular-weight heparin (LMWH) found that DOACs

are both more medically effective and cost-effective than LMWH when treating cancer-associated thrombosis (CAT). These findings may inform decisions on the clinical level as well as policy decisions. The analysis is published in *Annals of Internal Medicine*.

CAT is associated with an almost two-fold increase in mortality compared with patients with cancer but without thrombosis. They are also at a higher risk for recurrent venous thromboembolism (VTE), which has been shown in previous research to be associated with 80% more spent on health care costs. LMWH is considered the cornerstone of treatment for CAT, but DOACs have more recently come into [clinical use](#).

Researchers from the UC Davis Comprehensive Cancer Center and University of Cincinnati, conducted a cost-effectiveness analysis of four possible interventions for the treatment of CAT over the lifetime of a 63-year-old patient. Interventions included enoxaparin, apixaban, edoxaban, and rivaroxaban.

In their analysis, the authors found that apixaban was the least costly anticoagulant and was more effective than either LMWH or edoxaban. However, rivaroxaban was slightly more effective than apixaban, with an ICER of \$493,246 per quality-adjusted life-year (QALY). However, when the prices of drugs from GoodRx were modeled, rivaroxaban became most cost effective using contemporary threshold for societal willingness to pay.

The authors note their findings demonstrated a stark difference between the real-world cost of DOACs and the [drug prices](#) from U.S. Department of Veterans Affairs Federal Supply Schedule, have implications for value-based price benchmarks in the United States. The authors also add that the most clinically effective and cost effective DOAC depend on a patient's clinical characteristics, location of cancer, and side effects, as

well as the relative cost of each DOAC.

An accompanying editorial from authors at the Yale School of Medicine notes that while this analysis may underestimate the cost-effectiveness of apixaban in the real world, it shines by showing the benefit of aligning drug cost with effectiveness. The authors highlight the possibility of future drug-price negotiations in light of passage of the Inflation Reduction Act and note that the important uses of anticoagulants demonstrated in this analysis would make the drug class contenders for value-based price benchmarks.

**More information:** Anticoagulant Therapy for Cancer-Associated Thrombosis, *Annals of Internal Medicine* (2022). DOI: [10.7326/M22-1258](https://doi.org/10.7326/M22-1258). [www.acpjournals.org/doi/10.7326/M22-1258](http://www.acpjournals.org/doi/10.7326/M22-1258)

Editorial: *Annals of Internal Medicine* (2022). DOI: [10.7326/M22-3404](https://doi.org/10.7326/M22-3404). [www.acpjournals.org/doi/10.7326/M22-3404](http://www.acpjournals.org/doi/10.7326/M22-3404)

Provided by American College of Physicians

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