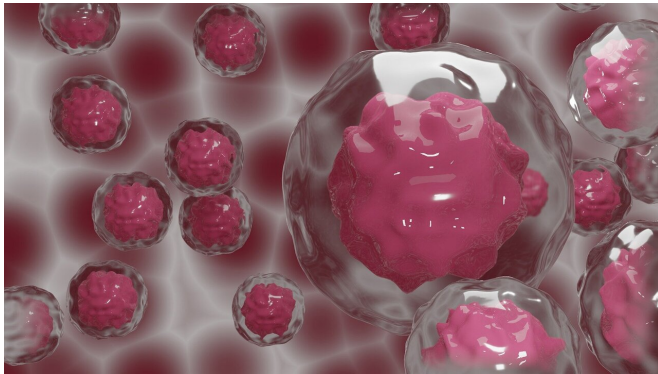


Study provides clarity on use of anticoagulants in gastrointestinal cancers

4 June 2021, by Joe Dangor



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A study by Mayo Clinic researchers provides some clarity in the use of direct oral anticoagulants (DOAC), such as apixaban and rivaroxaban, to treat acute venous thromboembolism (VTE) in patients with gastrointestinal cancers. The findings were published Wednesday, June 2, in *Mayo Clinic Proceedings*.

Among the study's findings:

- Rivaroxaban showed no higher risk of bleeding in luminal gastrointestinal [cancer](#) and should not be considered contraindicated in this group of patients.
- Apixaban showed a higher risk of bleeding in patients with luminal gastrointestinal cancer, and it should be used with great caution to treat this type of cancer until more studies are available to establish its safety.
- Direct oral anticoagulants can be used in patients with venous thromboembolism and nonluminal [gastrointestinal cancers](#), such as pancreatic cancer and hepatobiliary cancer. This is similar to the way patients with nongastrointestinal cancers are

treated for venous thromboembolism.

"It is well known that nearly 1 in 5 patients with cancer will develop a clot in the veins, referred to as either a deep vein thrombosis or [pulmonary embolism](#)," says Waldemar Wysokinski, M.D., Ph.D., a Mayo Clinic cardiologist. "Clotting events can be deadly, with pulmonary embolism being the second most common cause of death in [cancer patients](#)."

Dr. Wysokinski says patients with cancer who are treated with anticoagulants for venous thromboembolism have a higher risk of a new clot formation and bleeding, and every anticoagulant should be specifically checked for its effectiveness and safety in this group of patients.

"In the past, the front-line treatment for VTE in patients with cancer was low molecular weight heparin, or LMWH, injected via syringe," says Dr. Wysokinski. "However, between 2018 and 2020, three new anticoagulants—edoxaban, rivaroxaban and apixaban—previously approved by the FDA (Food and Drug Administration) for VTE treatment were specifically evaluated in patients with cancer-associated VTE and found to be noninferior to LMWH, specifically dalteparin."

Dr. Wysokinski says that in the randomized clinical trial with rivaroxaban, a safety analysis of patients treated with this blood thinner identified four major bleeding events that occurred among 11 patients, or 36% of patients, whose cancers were located in the upper portion of the gastrointestinal tract—esophagus or esophagus-stomach junction—compared to one major bleeding event in 19 patients, or 11% of patients, treated with low molecular weight heparin. This observation resulted in excluding patients with this type of cancer from further enrollment in this trial.

Dr. Wysokinski says that a retrospective analysis of patients with gastrointestinal cancer enrolled in a

study comparing efficacy and safety of another direct oral anticoagulant—edoxaban—to low molecular weight heparin showed a nearly fourfold higher risk of major bleeding in patients treated with this blood thinner, compared to patients treated with low molecular weight heparin.

"These two observations prompted changes in medical guidelines recommending against using DOACs such as rivaroxaban or edoxaban in patients with GI cancer in favor of LMWH," says Dr. Wysokinski. "We felt that these recommendations were based on a very small number of patients and that the findings would require further evaluation to define if restrictions on the use of DOACs applied to all blood thinner of this category—and to the whole group of patients with GI cancers or only to patients with luminal GI cancers."

Dr. Wysokinski says at the time his team completed its analysis and submitted their study for publication, there were no studies of patients with cancer-associated venous thromboembolism that compared apixaban to low molecular weight heparin in a subgroup of patients with gastrointestinal cancer. He says that while the current study showed no higher risk of bleeding in patients with luminal gastrointestinal cancer treated with rivaroxaban, there was a higher risk of bleeding in [patients](#) treated with apixaban.

"Our study does not support the observations of previous [clinical trials](#) of rivaroxaban, but it does raise concerns regarding the use of apixaban in this type of cancer and indicates the need for further studies to establish its safety," says Dr. Wysokinski.

More information: Damon E. Houghton et al, Bleeding in Patients With Gastrointestinal Cancer Compared to NonGastrointestinal Cancer Treated With Apixaban, Rivaroxaban, or Enoxaparin for Acute Venous Thromboembolism, *Mayo Clinic Proceedings* (2021). [DOI: 10.1016/j.mayocp.2021.04.026](#)

Provided by Mayo Clinic

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