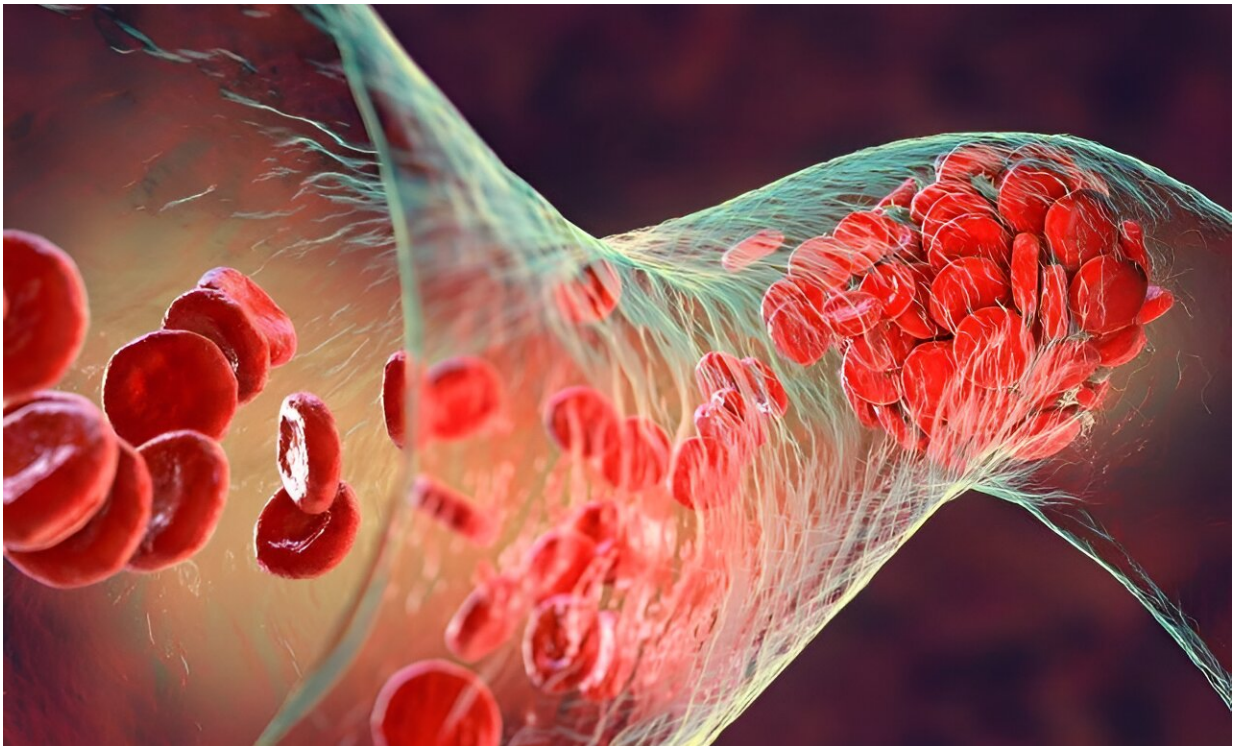


Rate of venous thromboembolism increases with cancer surgery, study finds

February 2 2024, by Elana Gotkine



The rate of venous thromboembolism is increased in association with cancer surgery, according to a study [published](#) online Feb. 2 in *JAMA Network Open*.

Johan Björklund, M.D., Ph.D., from the Karolinska Institutet in

Stockholm, and colleagues examined the one-year risk of venous thromboembolic events after major cancer surgery in a register-based retrospective observational matched cohort study. Patients who underwent major surgery for cancer of the bladder, breast, colon or rectum, gynecologic organs, kidney and upper urothelial tract, lung, prostate, or gastroesophageal tract were matched with cancer-free members of the general population in a 1:10 ratio (432,218 patients with cancer and 4,009,343 cancer-free comparators).

The researchers found that for all cancers, the crude one-year cumulative risk of pulmonary embolism was higher among the cancer surgery population, with absolute risk differences of 2.69, 0.59, 1.57, 1.32, 1.38, 2.61, 2.13, and 0.57 percentage points for [bladder cancer](#), [breast cancer](#), [colorectal cancer](#), gynecologic organ cancer, kidney and upper urinary tract cancer, [lung cancer](#), gastroesophageal cancer, and [prostate cancer](#), respectively.

Comparing patients who underwent cancer surgery with matched comparators, the cause-specific hazard ratio for pulmonary embolism peaked just after discharge and plateaued 60 to 90 days later. For all cancers except breast cancer, the hazard ratio was 10 to 30 times higher at 30 days after surgery. The hazards decreased but never reached the level of the comparison cohorts apart from prostate cancer.

"The results highlight the need for individualized venous thromboembolism risk evaluation and prophylaxis regimens for patients undergoing surgery for different cancers," the authors write.

More information: Johan Björklund et al, Risk of Venous Thromboembolic Events After Surgery for Cancer, *JAMA Network Open* (2024). [DOI: 10.1001/jamanetworkopen.2023.54352](https://doi.org/10.1001/jamanetworkopen.2023.54352)

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