

# Incidental Venous Thromboembolism in Cancer Patients

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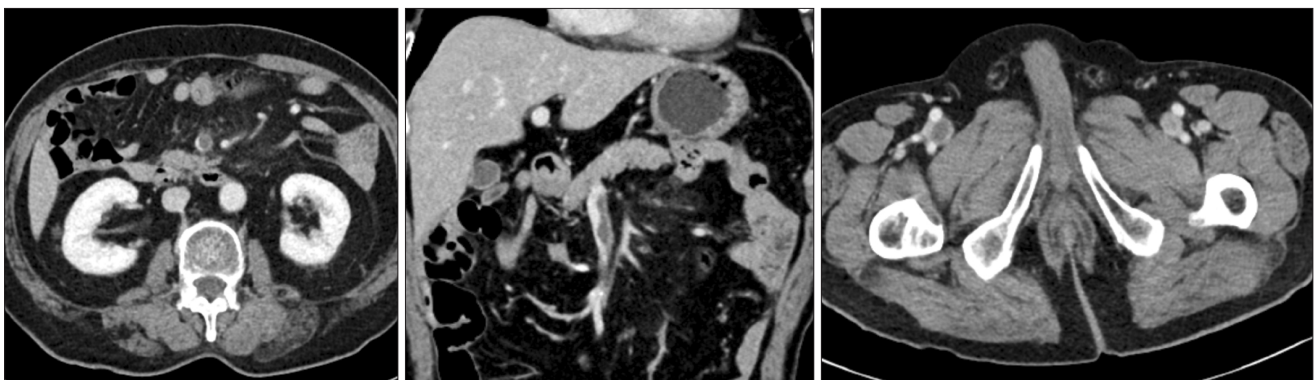
**QUESTION:** The first case is an 80-year-old male who came to clinic for multifocal venous thromboembolisms incidentally found in abdominopelvic computed tomography (CT). Six months earlier, he underwent laparoscopic left hemicolectomy and diagnosed as descending colon cancer, pT4aN2bM0, Stage IIc. He completed adjuvant capecitabine and oxaliplatin combination chemotherapy for six months. Except mild dyspnea sustained after surgery, the patient did not complain any abdominal pain, leg edema, or aggravation of dyspnea. Laboratory tests showed normal bone marrow, liver, and kidney function. Abdominopelvic CT was done for response evaluation after chemotherapy, and segmental bland thrombus in superior mesenteric vein and right common iliac vein was noted (Fig. 1).

The second case is a 40-year-old female who came to clinic for venous thromboembolisms incidentally found in abdominopelvic CT. She was diagnosed with advanced

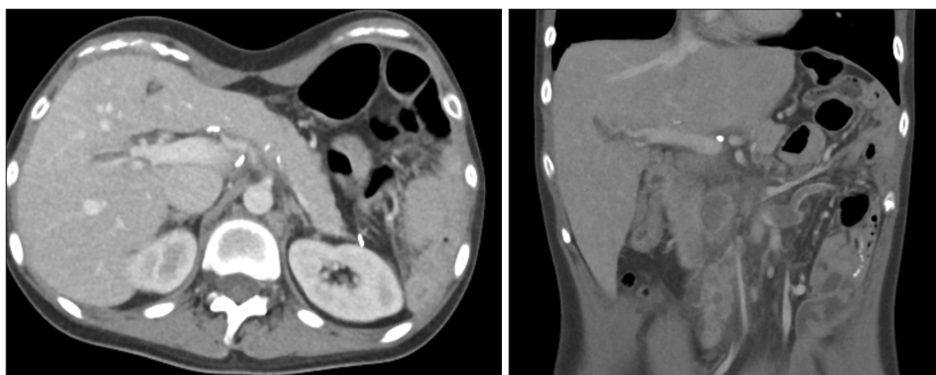
gastric cancer with Krukenberg tumor and underwent total gastrectomy with bilateral salpingo-oophorectomy two years before. Progressive multiple distant metastasis led to continuing palliative chemotherapy with various regimens, and she had been received TS-1 and cisplatin combination therapy for recent two months. The patient had complained chronic indigestion and abdominal discomfort during whole period of palliative chemotherapy; however, there was no aggravation or development of any gastrointestinal symptom recently. For response evaluation, abdominopelvic CT was done and newly developed thrombus in right anterior portal vein was found (Fig. 2).

For these two patients, should we start anticoagulation therapy?

**ANSWER:** Anticoagulation therapy for three to six months is recommended for the first case who had inci-



**Fig. 1.** Computed tomography shows thrombus in superior mesenteric vein and right common iliac vein.



**Fig. 2.** Computed tomography shows thrombus in right anterior portal vein.

dental deep vein thrombosis (DVT). Case-by-case decision making is needed after evaluating potential risk-benefit of anticoagulation for the second case who had incidental visceral vein thrombosis (VVT) only.

**REVIEW:** Cancer-associated venous thromboembolism (CA-VTE) can be developed in various vessels, such as pulmonary embolism (PE), DVT, VVT, or cerebral venous thrombosis [1]. The incidence of CA-VTE is increasing, and its development is associated with patient's poor prognosis, regardless of cancer type and stage [1,2]. Therefore, prevention and proper management of CA-VTE has become a major issue in cancer treatment. Incidentally found CA-VTE by imaging study without notable symptoms takes 20 to 50% of all CA-VTE, which could be frequently confronted during management of cancer patients. VVT is known to be the majority of asymptomatic CA-VTE, and most of patients with sole VVT had no related symptom in previous studies [3,4]. Because PE and DVT are related to poor prognosis regardless of symptom, it is recommended to give three to six months of anticoagulation treatment for cancer patient who had symptomatic or asymptomatic PE and/or DVT [5]. However, in sole VVT without symptoms such as ascites, hepatomegaly, or abdominal pain, its relationship with poor prognosis is still unclear. In a Korean study with patient who had gastrointestinal cancers, 82.4% of patient with asymptomatic VVT had no anticoagulation. Among them, 47% showed spontaneous resolution of VVT, and 49% showed increase or decrease of extent without symptom development [3]. The latest ASCO guideline for CA-VTE recommends case-by-case decision making after evaluating

potential risk-benefit of anticoagulation for patients with incidental VVT so far; however, this recommendation is derived from informal consensus with insufficient quality of evidence. The effect of incidental VVT on patient's prognosis should be evaluated more in future study.

## FUNDING

None.

## CONFLICTS OF INTEREST

No potential conflict of interest relevant to this article was reported.

## REFERENCES

1. Khorana AA, Mackman N, Falanga A, et al. Cancer-associated venous thromboembolism. *Nat Rev Dis Primers* 2022;8:11. <https://doi.org/10.1038/s41572-022-00336-y>
2. Khorana AA, Francis CW, Culakova E, Kuderer NM, Lyman GH. Thromboembolism is a leading cause of death in cancer patients receiving outpatient chemotherapy. *J Thromb Haemost* 2007;5:632-634. <https://doi.org/10.1111/j.1538-7836.2007.02374.x>
3. Kang M, Suh KJ, Kim JW, et al. Clinical characteristics and disease course of splanchnic vein thrombosis in gastrointestinal cancers: a prospective cohort study. *PLoS One* 2022;17:e0261671. <https://doi.org/10.1371/journal.pone.0261671>
4. Frere C, Bournet B, Gourgou S, et al. Incidence of ve-

nous thromboembolism in patients with newly diagnosed pancreatic cancer and factors associated with outcomes. *Gastroenterology* 2020;158:1346-1358.e4. <https://doi.org/10.1053/j.gastro.2019.12.009>

5. Key NS, Khorana AA, Kuderer NM, et al. Venous

thromboembolism prophylaxis and treatment in patients with cancer: ASCO clinical practice guideline update. *J Clin Oncol* 2020;38:496-520. <https://doi.org/10.1200/JCO.19.01461>