Venous thromboembolism (VTE) is a serious complication in patients with cancer. In this population, the presence of thrombi is often assessed at cancer diagnosis by measuring D-dimer levels, which have high sensitivity but low specificity for identifying VTE at this clinical time point. However, the usefulness of D-dimer measurement during anticoagulation therapy has not been fully established, despite its widespread use. In this retrospective observational study, we investigated whether D-dimer measurement during anticoagulation therapy in cancer patients could predict overt VTE at follow-up. The study included patients who underwent D-dimer testing and contrast-enhanced computed tomography between 30 and 100 days after initiation of anticoagulation therapy. Eighty-two patients were included: 60 with cancer and 22 without. The diagnostic performance of D-dimer for overt VTE was as follows: sensitivity, 85.7%; specificity, 87.2%; positive predictive value, 78.3%; and negative predictive value, 89.2%. These findings suggest that D-dimer measurement at follow-up has high sensitivity and specificity for overt VTE in cancer patients and may aid in assessing thrombotic status. Clinically, if anticoagulation therapy is continued until D-dimer levels become negative, the absence of overt VTE could be inferred without additional invasive testing.

Keywords: D-dimer, venous thromboembolism, cancer