

# **RISK OF CHECKPOINT INHIBITOR- ASSOCIATED THROMBOEMBOLIC EVENTS IMPORTANT FOR CANCER PROGNOSIS**

Presented By

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Conference

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Trial

Cohort study

**A single-centre cohort study found a venous thromboembolism (VTE) incidence of over 10% in cancer patients treated with immune checkpoint inhibitors (ICI). VTE was further associated with an elevated mortality risk [1].**

The retrospective study tried to fill the knowledge gap concerning potential increased thromboembolic risk for cancer patients who are treated with ICI. Dr Florian Moik (Medical university of Vienna, Austria) and colleagues explored the likelihood of arterial thromboembolism (ATE) and VTE in a cohort of 580 patients who were treated with ICI at the Medical University of Vienna between 2015 and 2018. They also carried out an assessment of risk factors as well as a possible clinical impact. The most common cancer diagnosis identified in the chart review was melanoma in 35.6% and non-small-cell lung cancer in 27.2% of the cases. Of the ICI-treated subjects, 89.1% were at stage 4 of their disease. Median age was 64 years, BMI 24.5, and 40.5% of patients were female.

Over a median follow-up of 13.1 months, the cumulative incidence of VTE was 10.8% (95% CI 7.1-15.4), with deep vein thrombosis and pulmonary embolism most frequently diagnosed. Predictors for VTE were previous history of VTE and disease stage. Of note, VTE only happened in patients at disease stage 4. The cumulative incidence rate of ATE was 3.5% (95% CI 2.1-5.4). In this group, acute vascular occlusion, ST-elevation myocardial infarction, and ischaemic stroke occurred equally often.

In addition, VTE occurrence was linked to an increased mortality risk (transition HR 3.05; 95% CI 2.00-4.66). Likewise, VTE was associated with disease progression. There was no distinction in VTE rates for different types of cancer or for different ICI agents. Also, ECOG (Eastern Cooperative Oncology Group) performance status, Charlson-Comorbidity-Index, and Khorana Score were not associated to VTE. ATE occurrence was not associated with increased mortality (HR 1.38; 95% CI 0.68-2.81).

The researchers concluded that cancer patients treated with ICI bear a substantial risk of VTE and ATE. They also pointed to the negative impact of VTE on survival in affected patients.

1 [Moik F, et al. PB2162, ISTH Virtual Congress 2020, 12-14 July.](#)