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**Title:** Arterial thromboembolic complications in patients with lung cancer – Impact on survival

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**Body:** Background: Venous thromboembolic events (TEE) are a frequent complication in patients with lung cancer (LC) (own data: total 7.6%). Yet the impact of arterial TEE on the patient's prognosis and preventive treatment strategies is unclear. Aim: To evaluate the frequency of arterial TEE and their prognostic relevance in LC. Methods: In this monocentric, observational study all patients with primary diagnosis of LC between Jan. 2008 and Dec. 2010 were prospectively recorded and retrospectively evaluated with regard to arterial TEE. Results: Within 36 months 1940 patients (1209 men, 731 women) were diagnosed with LC (SCLC 10.3%, NSCLC 89.7%). Arterial TEE were documented in 51 patients (2.6%) with ischemic stroke as leading event (n=23, 1.2%), followed by events located in coronary (n=14, 0.7%), peripheral (n=12, 0.6%), mesenterial (n=4, 0.2%) and extracranial arteries (n=3, 0.6%). Kaplan-Meier-survival analysis showed shorter survival (p=0.003) for the group of patients with an arterial TEE (median survival 283 days vs. 479 days).

Conclusion: Besides an increased risk for deep venous TEE the frequency of arterial TEE in patients with LC is also increased. The tumor itself, chemotherapy and frequent cardiovascular comorbidities are believed to increase this risk and result in a significant worse prognosis. These data support prospective studies on primary antithrombotic prophylaxis in patients with LC.