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**Incidence of pulmonary embolism and right heart dysfunction and
impact on survival in patients with malignant melanoma**

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Purpose

Pulmonary embolism (PE) occurs frequently in patients with malignant melanoma (MM). The aim of this study is to determine the incidence of PE in patients with MM and to assess the clinical and survival characteristics of MM patients with PE.

Material and Methods

Medical records from 381 MM patients who underwent contrast-enhanced CT were evaluated. Imaging parameters like location of the PE and clinical parameters like D-Dimer levels, tumor staging (according TNM), and time of death were analyzed.

Results

6% of MM patients showed a PE, whereby 74% were detected incidentally and 26% were symptomatic. Central PE occurred in 41% and 50% of patients with incidental PE and symptomatic PE, respectively ($p > 0.05$). The presence of visceral and cerebral metastases was significantly higher in patients with PE. 56% of MM patients with PE had a tumor stage $\geq T3$ versus 23% of patients without PE ($p < 0.05$). An increased mortality was associated with the presence of PE (57% vs. 36%, $p < 0.05$).

Conclusion

The diagnosis of PE in patients with MM is indicative for advanced disease and a poor prognosis. Therefore anticoagulation therapy could reduce the risk of PE and improve the tumor-related outcome of MM patients.