

Prognostic factors registered on admission to the hospital related to mortality risk in cancer patients with COVID-19: a retrospective cohort study

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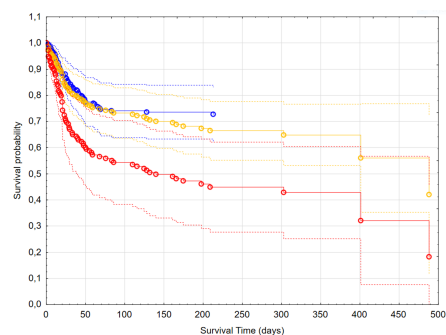
Abstract

Background: Cancer patients are a particularly vulnerable risk group of the severe course of COVID-19 due to, i.e. suppression of the immune system. The study aimed to find links between parameters registered on admission to the hospital, and the risk of latter death in oncology patients with COVID-19. Design: Retrospective cohort study. Methods: The study included patients with a reported history of malignant tumor (N=151) and the control group with no history of cancer (N=151) hospitalized due to COVID-19 between March 2020 and August 2021. The variables registered on admission were divided into categories for which we calculated the multivariate Cox proportional hazards models. Results: The median age of the study group was 68 years (min-max: 17-95). 50.33% (76/151) were women. Multivariate Cox proportional hazards models were successfully obtained for the following categories: Patient data, Comorbidities, Signs recorded on admission, Medications used before hospitalization and Laboratory results recorded on admission. With the models developed for oncology patients, we identified the following variables that registered on patients' admission were linked to significantly increased risk of death: male sex, presence of metastases in neoplastic disease, impaired consciousness (somnolence or confusion), wheezes/rhonchi, the levels of white blood cells and neutrophils. Conclusion: Identifying the predictors of a poorer prognosis may serve clinicians in better tailoring treatment among cancer patients with COVID-19. Our results can help develop prognostic models or compare the results of other studies, which will translate into better treatment management and better prognosis in this group of patients.

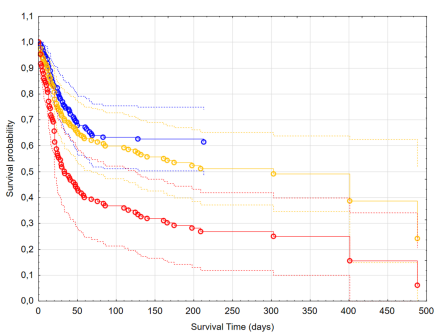
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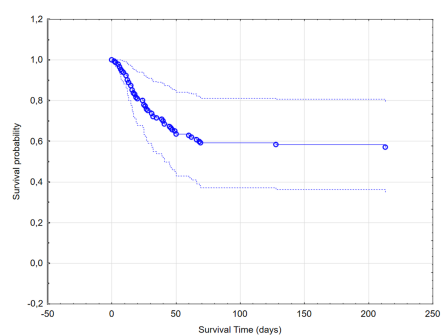
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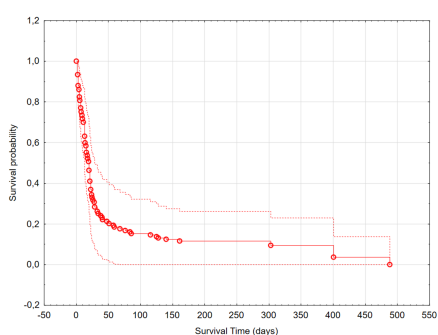
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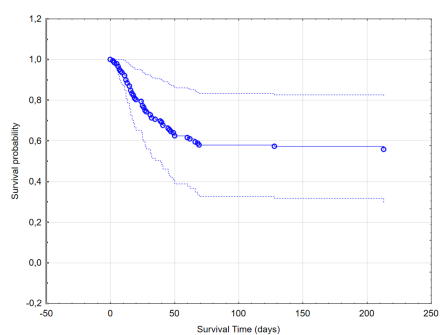
A.



B.



A.



B.

