



## Solid cancer patients: high day-120 mortality post-ICU discharge



The challenge for intensivists is to identify which patients with solid cancers would benefit from ICU care. A new multicentre, retrospective study finds a high mortality in the ICU and in the hospital among these patients, although the medium-term survival is quite acceptable, especially for patients with cancers other than lung cancers. The findings are published in the journal *Annals of Intensive Care*.

Survival of patients with cancer has substantially increased in recent decades in developed countries, which, consequently, has led to increasing number of hospitalisations in the intensive care unit (ICU). However, data regarding in-hospital mortality and mainly post-ICU outcome of such patients remain scarce.

The primary objective of the current study was to assess hospital mortality of critically ill patients with solid cancers. The secondary objectives were to assess post-ICU day-120 mortality, to assess risk factors for poor outcomes in this population, and to develop a prediction score, named “Oncoscore,” regarding post-ICU day-120 mortality.

The study covered five ICUs in France and Brazil, two located in cancer centres, two in university affiliated and one in general hospitals. Consecutive patients aged > 18 years, with underlying solid cancers (known before admission to the ICU or diagnosed during the stay in the ICU), admitted to the participating ICUs and discharged alive from the ICU from January 2006 to December 2011 were included in this study. Patients admitted after scheduled surgery or to secure procedure were excluded.

A total of 1,053 patients aged 63 years (54–71) (median [IQR]), mostly male (66.8%), were included. The in-ICU, in-hospital, and four-month post-ICU discharge mortalities were, respectively, 41.3, 60.7, and 65.8%. Among patients discharged alive from the ICU, in multivariate analysis, factors associated with four months post-ICU discharge mortality were type of cancer (OR from 0.25 to 0.52 when compared to lung cancers), systemic extension of the disease (OR 2.54; 95% CI 1.87–3.45), need for invasive mechanical ventilation (OR 2.54; 95% CI 1.80–3.59), for vasopressors (OR 2.35; 95% CI 1.66–3.29), or renal replacement therapy (OR 1.54; 95% CI 0.99–2.38).

A predictive score, “Oncoscore,” was built performing fairly in predicting four months post-ICU discharge outcome (AUC 0.74; 95% CI 0.71–0.77). Two cut-off values were assessed, including a sensitive cutoff (score of 4, sensitivity 0.84) and a specific cutoff (score of 8; specificity 0.92). According to these cut-off values, day-120 mortality rates were 40% (n = 111), 70% (n = 363), and 87% (n = 216) in patients with “Oncoscore” < 4, between 4 and 7, and ≥ 8, respectively.

In this study, the primary reason for admission was sepsis or septic shock, while acute respiratory failure was the first one in large sets of haematology patients admitted to the ICU. The findings suggest that cancer characteristics influence the short- and medium-term survival in contrast to haematology patients.

"This contrasts with the fact that other characteristics of cancer such as status of previous specific treatment and age of diagnosis do not seem to influence the 4-month mortality. For this reason, these two parameters should substantially influence ICU triage decisions in patients with solid cancers as suggested by the 'Oncoscore,'" the authors explain.

In addition, the authors note that the "Oncoscore" must be validated in prospective studies and cannot be used, in its form without external validation, for individual decision making. Prospective studies to answer questions not provided by this study are needed, including only patients with solid cancers admitted in the ICU for medical reasons or after emergency surgery.

Source: [Annals of Intensive Care](#)

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Published on : Tue, 17 Apr 2018