

COMMENTARY

# Time to look beyond one-year mortality in critically ill hematological patients?

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See related research by Bernal *et al.*, <http://ccforum.com/content/17/6/R302>

## Abstract

The spectacular improvement in long-term prognosis of patients with hematological malignancies since the 1980s, coupled with the subsequent improvement over the past decade in short- and mid-term survival in cases of critical illness, resulted in an increasing referral of such patients to the ICU. A remaining question, however, is how these patients perform in the long term with regard to survival and quality of life. Here we discuss the present multicenter study on survival beyond 1 year in critically ill patients with hematological malignancies. We conclude with suggestions on how we can further improve the long-term outcome of these patients.

The long-term survival of patients with hematological malignancies has improved dramatically over the past decades. Nowadays, about 40% of patients with acute leukemia or high-grade non-Hodgkin lymphoma survive for more than 5 years and about 30% of these patients can be cured. Unfortunately, owing to their underlying disease or treatment or both, these patients are at high risk of severe complications, often requiring transfer to the ICU. Historically, intensivists have been reluctant to admit these patients to the ICU because of the almost uniformly fatal prognosis reported in the literature in patients with evolving organ dysfunction requiring mechanical ventilation, vasopressors, or renal replacement therapy alone or in combination. Over the past decade, several centers around the world that specialize in the management of these patients have clearly shown that these grim prognostic estimates no longer hold and that the reluctance to admit these patients to the ICU,

is simply because of their underlying malignancy, is no longer justified. This has resulted in an increasing referral of such patients to the ICU. An important remaining question, however, is how these patients perform in the long term with regard to survival and quality of life.

In a study in the previous issue of *Critical Care*, Bernal and colleagues [1] focused on the determinants of survival beyond 1 year in a multicenter setting. As could be expected from what we observed at the bedside, functional status (Eastern Cooperative Oncology Group performance status of more than 2), relapsing hematological malignancy, and absence of compliance with the scheduled therapy for the underlying disease after ICU discharge were associated with a worse survival. However, what was less expected is that the survival reached nearly 0% after 1.5 years if only one of these factors was present. Of note, only 62 patients were included in this study, and depending on whether we focus on a half-empty or half-full glass, the other half of the patients achieved a 5-year post-ICU survival of 40% to 50%. In the largest study ever published, including more than 1,000 patients with hematological malignancies admitted over a 16-month period in 17 specialized centers in France and Belgium, hospital survival was 60.7%; up to 80% of these patients had no change in treatment intensity, and 80% were in complete or partial remission 6 months after ICU discharge [2]. Moreover, recent studies have shown that ICU admission does not influence long-term outcome in patients with acute myeloid leukemia who survive the first 30 days after ICU discharge: they had similar survival and complete remission rates up to 3 years [3] and 6 years [4], respectively, after discharge in comparison with acute myeloid leukemia patients for whom ICU admission was not necessary. Therefore, what the study by Bernal and colleagues [1] shows above all is that being technically skilled in advanced life-support therapies is not enough to improve long-term outcome; as intensivists, we also have to acknowledge better when to use these therapies and when we have to withdraw them during ICU stay [5].

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More than ever, long-term estimations with regard to survival and quality of life should be taken into account upon referral to the ICU [5,6]. Only close collaboration and in-depth communication between hematologists and intensivists upon referral and during ICU stay can bridge the two extremes of the overoptimistic oncologists who often overestimate the long-term survival of their patients in daily practice [7,8] and the overpessimistic intensivists who are reluctant to admit them. Such an open and constructive atmosphere, in which physicians assume a leading role, disseminate a clear vision, and let other team members, the patients, and relatives actively and safely participate in the decision-making processes [9,10], will not only improve the average long-term outcome of published series focusing on any severe underlying comorbidity but also reduce the burden for individual patients and their relatives at the bedside [5,11]. Health-care workers will also benefit, since real or perceived disproportionate care in the ICU leads to acute or, much worse, more subtle chronic conflicts within the team, resulting in poor quality of care [5,9,10,12]. The latter is particularly deleterious since it will affect the patient's short- and long-term outcome in general, regardless of whether the admission is justified or not.

## Conclusions

A good admission policy is necessary in order to safeguard the quality of ICU care provided to patients with good long-term expectations on the one hand and to reduce the burden for patients and relatives with poor long-term expectations on the other. This can be achieved only by creating working environments enhancing close collaboration and communication between intensivists and hematologists and where the patient and relatives are closely involved in the decision-making process upon ICU referral and during ICU stay. It is important to note that this holds not only for patients with hematological malignancies such as in the study by Bernal and colleagues [1] but also for patients with any other severe underlying comorbidity that are increasingly referred to the ICU.

## Competing interests

The authors declare that they have no competing interests.

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