





LSTL should be taken when a careful analysis of the patient's situation indicates that either the acute condition or the underlying disease will cause death rapidly, despite optimal treatment. However, the physician's values are also involved. Not every physician would make the same decision in a given situation [20]. The performance status of the patients just before the acute complication and the possibility of an active anti-cancer treatment after recovery of complication should be taken into account. In addition, the role of the patient and family in such decision of LSTL is crucial. Patients, families and clinicians may approach end-of-life discussions with different expectations and preference, influenced by religion, race, culture and geography [21]. A shared model of decision-making with values supplied by patients and families rather than physicians [22] should be used.

All the patients without LSTL died after intubation and with IMV support. Out of them, the majority died due to an anticancer treatment complication. However, in 8 of the 17 patients without limitation, cardiopulmonary resuscitation (CPR) manoeuvres were not applied. Hakim et al have already described that, in 5 teaching hospitals, 2% of seriously ill hospitalized patients died with no resuscitation attempted and with no order or decision documented in the chart [23]. A decision of no CPR can be taken without a formal written order in the patient's record when the situation is irreversible and the CPR maneuvers seem futile. In previous studies [24,25], it has been observed that CPR can be a successful technique in cancer patients especially for those in which cardiac arrest was the consequence of an acute insult but not in those in which it was the ultimate complication of multi-organ failure.

The question of who will live and who will die is fundamental. Some models have tried to respond to this important question. Models to assess probability of hospital mortality in cancer patients admitted to the ICU on the basis of variables readily obtained on admission were first published [26,27]. When the same principles were applied to development and validation of a 72-h model [28] reflecting a period of time for clinicians to attempt to reverse a life-threatening complication.

These scores could help in discussions with patients and their families to try and quantify what their "chances" might be [29]. Indeed, it can be proposed a full critical care for 72 hours and then see if there is amelioration or not. In the last case, LSTL should be discussed with the patient and/or their family. The actual time spent in the ICU (admission to death) by the patients has not been evaluated in this study, this could be assessed and analysed in a further study.

In conclusion, our retrospective study restricted to cancer patients dying at the ICU showed that respiratory failure and infections were the leading cause of ICU admission in this population and that infection was the first cause of death.

There is today few data about LSTL in cancer patients dying in the ICU. Functional stages, the existence of an oncological treatment project and the type of complication leading to ICU admission have a major impact in the decision of LSTL. Early LSTL is mainly related to cancer

