

# What are the ethical aspects surrounding intensive care unit admission in patients with cancer?

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**Abstract:** Improvements in living conditions and increasing life expectancy have combined to result in ever older patients being admitted to hospital. In parallel, the increasing incidence of cancer, along with the improved efficacy of anti-cancer therapies has led to greater needs for intensive care among cancer patients. The objectives underpinning the management of cancer patients in the intensive care unit (ICU) are to achieve a return to a clinical status that would allow the patient to be either, transferred back to the original unit, or discharged from the hospital with an acceptable quality of life, and where warranted, pursuit of cancer therapy. The relevance of ICU admission should be assessed systematically for patients with active cancer. The decision needs to be made taking into account the expected benefit for the patient, the life-support therapies that are possible with discussion about a care project, and also considering the future quality of life and the short and long-term prognosis. Anticipating the question of potential ICU admission should help protect the patient against both inappropriate refusal of intensive care, and inappropriate admission to the ICU that might only lead to unreasonable therapeutic obstinacy. The intensive care physician has a major role to play in helping the cancer patient to develop an appropriate and flexible healthcare project. Anticipating the question of ICU admission in advance, as well as a close alliance between the oncologist and the intensive care physician are the two keys to the success of a healthcare project focused on the patient.

**Keywords:** Intensive care unit (ICU); cancer; ethics

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## Introduction

Improvements in living conditions and increasing life expectancy have combined to result in ever older patients being admitted to hospital. In parallel, the increasing incidence of cancer, along with the improved efficacy of

anti-cancer therapies has led to greater needs for intensive care among cancer patients. In the literature, between 5% and 15% of patients with cancer are admitted to an intensive care unit (ICU) during the course of their care (1), and even up to 25% in specialized anti-cancer centres (2-4). The main causes of admission to the ICU in these patients

are respiratory failure and sepsis (2,5).

Up to recently, there was some reluctance among intensivists (6), albeit based on sound arguments, about admitting such patients to the ICU, but this attitude no longer seems justified nowadays (7). Indeed, the overall prognosis of patients with cancer has substantially improved in the last 20 years (8-10), particular in solid tumours as compared to hemopathic malignancies (1,4). Currently, mortality in the ICU and in-hospital among patients with solid tumours is similar to that of patients without cancer (4). It is likely that patients with cancer have yielded benefit from the technical progress in intensive care medicine in the same way as patients with other diseases. Conversely, admission to the ICU during an acute episode remains associated with a higher mortality rate than admissions arising from scheduled surgery (3,4,11,12).

### Objectives of ICU management

The management of a patient with cancer in the ICU meets two overriding objectives. First, it can be a patient presenting potentially reversible failure of one or more organs (e.g., sepsis), whether related or not to the cancer. Apart from haematological insufficiency, and to a lesser extent, hepatic failure, other organ failures fall within the scope of the ICU's expertise. Second, the patient may be at risk of failure of one or more organs, with limited or unsuitable conditions for adequate surveillance in conventional wards (serious cancer surgery, prevention of therapeutic complications, performance of complementary exams such as bronchial fibroscopy with bronchoalveolar lavage in hypoxemic pneumonia with optimal safety conditions, etc.).

In both of these situations, the objectives underpinning the management in the ICU are to achieve a return to a clinical status that would allow the patient to be either, transferred back to the original unit, or discharged from the hospital with an acceptable quality of life, or where warranted, pursuit of cancer therapy (8,13,14).

### Admission of cancer patients to the ICU

A patient with cancer is at risk of developing complications linked to the neoplastic process itself and its management (e.g., chemotherapy or surgery), but is also at risk of complications related to pre-existing comorbidities or acute disease not related to the cancer. In the majority of cases, admission to the ICU occurs in an emergency context,

meaning that there has usually not been sufficient time to discuss and reflect on the numerous factors that enter into play when deciding on admission to the ICU. Indeed, the situation is usually life-threatening for the patient, often the usual medical intermediaries are absent or unavailable, the physicians are working in isolation and may be unaware of the active cancer. The information in the medical file is not always complete, particularly as regards the patient's wishes. Furthermore, the patient (and/or family) is often unable to express coherent desires in the acute context regarding intensive care (assuming that they know what that is!), or even regarding their overall management or their healthcare project. Two further elements may compound this already complex situation, namely the distress of the caregiving team when confronted with an acute, life-threatening situation, and secondly, the geographic distance separating the acute care hospital where the emergencies are sent, and the anti-cancer centre that habitually cares for the patient.

Thus, at the time when the question of admission to the ICU arises, there are as many issues as there are protagonists, rendering the situation highly complex. The healthcare professionals who know the patient and his/her medical history are center stage in this debate. First among these are the oncologists, who themselves acknowledge that they find it hard to "give up", and there may also be some overestimation of survival, poor knowledge of intensive care and its implications, as well as some delay in consulting the intensivists (15). The healthcare teams are often torn between unreasonable therapeutic obstinacy on the one hand, and potential loss-of-opportunity on the other hand, because they are so closely implicated in the patient's care. As regards palliative care teams, their involvement at this point in the patient's course is intricately linked to the room that has been left for them in advance in the healthcare project.

The patient him-/herself is central to the decision-making process about admission to ICU, but the degree of knowledge among patients about their own situation varies widely (regarding the disease, its prognosis, the possibility of intensive care etc.). The patient is not always aware of his/her own care project, and the existence of designated reference people to serve as intermediaries with the healthcare professionals (e.g., surrogates or power of attorney), or the existence of advance directives is not systematic (see article by Rigaud *et al.* in this issue on the ethical aspects of admission or non-admission to ICU). Another key player, at least according to French legislation (16) is the patient's surrogate, although the rate

of designation of official surrogates remains unacceptably low. Furthermore, the surrogate may have varying degrees of knowledge and understanding of the situation. Indeed, often, no surrogate has been designated before the acute situation arises, and the burden of the role may be too heavy for some to bear. For the healthcare team, it is indispensable that the surrogate be well-intentioned, and possess a good level of knowledge of the patient's medical situation (17). In other words, the role of the surrogate is largely conditioned by the whether or not the patient had taken the necessary dispositions for a surrogate before the acute episode occurred.

In addition to any surrogate, the patient's family and relatives represent a group of intermediaries whose level of understanding may vary widely, and they may not always be present at the acute phase. Worry, anxiety, disagreements between themselves, or even a feeling of guilt vis-à-vis the patient are all elements that can affect the decision to admit to the ICU, or even the delivery of suitable care in the ICU.

Finally, the healthcare professionals called upon to manage an acute situation are often unaware of the patient's situation, e.g., emergency physicians, mobile emergency units, or even oncologists for whom the risks of unreasonable obstination or, on the contrary, loss-of-opportunity are of paramount importance. As for these colleagues, the intensivist can find him-/herself in a similar situation, and may deliver disproportionate levels of care to the patient, or deprive the patient of care that could justifiably have been proposed.

### Relevance of intensive care in cancer patients

For most patients, the possibilities (or opportunities) offered by the ICU are at their greatest in the early stages of their care pathway (ongoing anti-cancer treatment with response to treatment as yet undetermined, in the period post cancer surgery, exact prognosis still undetermined, etc.) (3). It is interesting to note that cancer patients are most frequently admitted to the ICU within 2 years after the diagnosis of cancer (3). As the patient's clinical situation evolves, the opportunity for intensive care diminishes, either because the patient's clinical status improves, or because the prognosis is unfavourable.

The relevance of ICU admission should be assessed systematically for patients with active cancer. The decision needs to be made taking into account the expected benefit for the patient, the life-support therapies that are possible with discussion about a care project, and also considering

the future quality of life and the short and long-term prognosis. In addition, the cost to the patient in human terms should not be overlooked, as a patient admitted to the ICU may be separated from their family for an undetermined duration, or may find themselves in a clinical state that precludes communication of any sort (e.g., sedated with mechanical ventilation). Finally, the possibility of resuming the anti-cancer treatment after the ICU stay should also be considered, bearing in mind that the duration spent in the ICU is time that is lost in the treatment of the cancer.

Although important, these considerations should not override the patient's own wishes and preferences (or those of the family) concerning the objectives and meaning of care. In cases where no therapeutic project was laid down in agreement with the patient, there are clearly numerous situations where it is unreasonable to resort to intensive care. Such is the case, for example, for patients whose life is in imminent danger, or when autonomy and/or nutrition are severely impaired (5,9), and above all, when the patient does not agree to engage in complicated care whose sole objective is to keep them alive unnecessarily, sometimes even involving an underestimated degree of physical and/or mental suffering for the patient (18).

Beyond the patients themselves, in terms of distributive justice, it is not acceptable to expect society to bear the cost of inappropriate, not to say futile care, especially in a context where health resources are increasingly strained. In addition, it could mean that other patients are potentially being deprived of resources that they need (3,6,14). Wallace *et al.* (4) reported that the rate of ICU utilization in a comprehensive cancer centre declined over the last 20 years. One of the hypotheses proposed to explain this finding was that the expertise in specialist centres leads to earlier recognition of complications, leading to earlier treatment and avoidance of the need for ICU utilization, and as a result, better overall allocation of resources. It has been shown that cancer costs in the last month of life are higher in patients who receive aggressive end-of-life care, including ICU admission, than in those who are managed non-aggressively, with early initiation of palliative care consultations (19). It has also been reported that patients with metastatic non-small-cell lung cancer who had early palliative care integrated in their care plan survived longer and with better quality of life than patients who received standard management (20). Similarly, Zhang *et al.* reported that improved communication between the physician and the patient, in the form of end-of-life conversations, led

to lower costs and improved quality of life in patients with advanced cancer (21). The rate of ICU utilization was also reduced, since the patients had had an opportunity to express their wishes and define objectives for their care (21).

### **In this context, how is the decision on ICU admission made?**

The challenge in deciding about the need for ICU admission is to propose a management strategy that is appropriate for the current clinical situation, and in line with the patient's healthcare project. The physician (ideally, the oncologist) who requests the admission to the ICU should have obtained, in advance, the relevant information regarding the patient's wishes, preferences, and healthcare project. How much does the patient know? What does the patient want? What does the patient not want? Does the patient agree to be admitted to the ICU? Other parameters that need to be taken into consideration include the patient's overall state (e.g., WHO performance status), the supposed reversibility of the acute organ failure requiring ICU admission, and the prognosis of the cancer (response to prior therapy, therapeutic perspectives, expected effects, adverse effects). The intensivist who assesses the request for admission should consider the degree of organ failure, the likely reversibility (and need for life-support therapies), the vital prognosis and functional prognosis after a stay in the ICU (need for changes to the therapeutic plan, potential repercussions). As previously underlined, such weighty decisions are difficult to make in acute situations, where all of the necessary information for informed decision-making may not be available.

Clearly, anticipating acute situations is a key aspect of the management of patients with cancer. Anticipating the question of potential ICU admission should help protect the patient against both inappropriate refusal of intensive care, and inappropriate admission to the ICU that might only lead to unreasonable therapeutic obstinacy. Adequate preparation of the question in advance will result in well-thought-out, non-aggressive and palliative management. While the prognosis of cancer patients can be improved through appropriate management of infection, or complications of therapy (such as tumour lysis syndrome, aplasia, etc.), or organ failure unrelated to the cancer (4,22), the patient may, on the contrary, enjoy improved quality of life and an improved quality of dying in the context of an approach that limits ICU utilization (20,21). Naturally, no approach can be defined without first enquiring as to

the wishes of the patient and/or family, and without first providing full and transparent information about what ICU management entails. This conversation can also be an opportunity to find out if the patient has advance directives, and if not, maybe to incite the patient and/or family to think about formulating them. If this is too burdensome or difficult for the patient, then this reinforces the importance of recording the patient's wishes (or those of the family) as early as possible (23,24). In this way, the intensivist can participate in the advance care planning process of a patient with cancer. This is especially useful when the patient is still relatively well, and does not yet present a particularly poor prognosis, since the aim is to discuss what the patient (and/or family) would want in the event that an acute episode with organ failure were to occur, and the question of ICU admission were to arise (24,25). Management in the ICU will not cure cancer, but will contribute to the patient's care pathway. Relevant information about this should be given to the patient early enough, so that taking note of the patient's wishes may contribute to meaningful decision-making at a later timepoint, as close as possible to the patient's values and preferences. It is essential that this approach be carried out in collaboration between the oncologist, the patient, the family, the palliative care team and the intensivist (11,26).

Indeed, the oncologist is best placed to evaluate the state of advancement of the cancer, and assess the patient's prognosis and the level of therapeutic engagement. However, the intensivist is the best placed to translate and explain the therapeutic possibilities and techniques offered by intensive care, and to assess the crucial question of whether or not the indications are legitimate. The ICU physician has the necessary expertise to say what can be done in what situation, what will not be done, what it not be reasonable to do, all in agreement with the patient. For this, it is paramount to know the patient's wishes, what he/she accepts or refuses, what can be proposed and what can't, and to define with the patient the desired level of life-support, and to organize palliative management if intensive care fails. This in turn requires the intensivist to mention the conditions in which therapy can be withheld or withdrawn, insist on the avoidance of unreasonable therapeutic obstinacy, and the need to uphold the patient's desires and preferences (and those of the family), relieve suffering and support the patient and family in a palliative project (20,25).

### **Conclusions**

It is essential to develop an appropriate and flexible

healthcare project with the patient and his/her family. The intensive care physician has a major role to play in this process as a consultant, and the inclusion of intensivists in multidisciplinary cancer meetings and/or discussions of healthcare projects for the patient needs to be more widely implemented. Patients are increasingly called upon to participate in decisions pertaining to their healthcare and to determine the conditions of their end-of-life, so it is vital that they be adequately informed about all the possible facets of their therapeutic project. Given that the course of cancer is often beset with acute decompensations that may require admission to the ICU, the patient and family need to be properly informed in this regard. These conversations will make it possible to find out what the patient's wishes and desires are, and to define a level of care in line with what the patient and family want. Anticipating these questions in advance, as well as a close alliance between the oncologist and the intensive care physician are the two keys to the success of a healthcare project focused on the patient, and engaging the fully informed patient in the decisions about his/her own health.

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### Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

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