Original Article

Characteristics of Terminal Cancer Patients Who Committed Suicide During a Home Palliative Care Program

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Abstract
Cancer patients may commit suicide at any stage of the disease and many risk factors of suicide have been described in the literature. To identify the possible vulnerability factors of suicide in five terminal cancer patients who committed suicide while they were cared for at home by well-trained palliative care teams, a psychological autopsy study was carried out by reviewing their medical records; their report of symptoms at the time of care; and with the caregivers', doctors', and nurses' recollection of events by means of a structured interview prepared ad hoc. We collected data regarding the physical, emotional, and social suffering of the patients, their personality profile, and their feelings with respect to the illness and disability. The interviews lasted for a mean of two hours and were performed from 2–8 years after the suicide events by the social worker at the Rehabilitation and Palliative Care Division. The interviews took place between June 1996 and January 1998. All the patients showed great concern about the lack of autonomy and independence, refused dependence on others and had fear/worry of losing their autonomy. Four patients presented functional and physical impairments, uncontrolled pain, awareness of being in the terminal stage, and mild to moderate depression. They had a feeling of hopelessness consequent to their clinical conditions, fear of suffering, and feeling of being a burden on others. They had a strong character and managerial professions. They had isolated themselves from others and they had previously talked about suicide. Before committing suicide, three patients had adverse physical/emotional consequences to the oncological treatments—they showed aggressiveness towards their family and one towards the home care physician. Multiple vulnerability factors were present simultaneously in all patients. However, the loss of, and the fear of losing, autonomy and their independence and of being a burden on others were the most relevant. The identification of a cancer patient at risk of committing suicide forms the first step for the prevention of and the setting up of adequate psychosocial rehabilitation of these patients whenever possible. J Pain Symptom Manage 2001; 22:544–553. *© U.S. Cancer Pain Relief Committee, 2001.*

Key Words
Suicide, vulnerability factors, cancer, terminal patients, palliative care, home care

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Introduction

Although several studies have documented suicides in cancer patients, their results do not lead to a universal conclusion about the extent to which cancer should be considered as a risk factor for suicide. Holland[1] reported that it is extremely rare for cancer patients to commit suicide without some degree of pre-existing psychopathology that would place them at risk, and others[2–5] state that the risk of suicide is high with physical illness, especially when symptoms of depression are also present. Advanced cancer patients are thought to be vulnerable to committing suicide due to the increased likelihood of multiple risk factors, such as physical pain and suffering; depression and feeling hopeless; disinhibition, confusion and delirium; helplessness and the loss of control; advanced illness and poor prognosis; exhaustion and fatigue; pre-existing psychopathology, a history of prior suicide attempts and family history;[6–11] and/or when further treatment or contact with the health care system is not provided.[12,13] Studies suggest that the frequency of suicide in the cancer population is somewhat higher if compared to the general population.[14–19] However, it is difficult to obtain accurate estimates of suicide rates, adjusted for age, sex, and care setting, which could be compared with those of the general population.[16]

Some studies have stratified the risk and the frequency of suicide with the stage of disease and/or with the time of cancer diagnosis. Olafsen,[20] in research based on the Cancer Registry of Norway, found that patients are at more risk of suicide during the immediate period after diagnosis. The risk of suicide is relatively high in the first year after diagnosis.[14–18,20,21] However, it should be considered that for some pathologies, such as lung and pancreatic cancer, the first year usually refers to the terminal stage of the disease. Other authors[13,22] studying the incidence of suicide in hospitalized oncological patients found that over 60% of suicides occurred in the terminal stage.

Two studies have been carried out to evaluate the frequency of suicide on a large number of terminal cancer patients. A postal survey has been performed in 43 palliative care units. Among 72,633 patients treated from 1990 to 1994, a total of 21 suicides (0.029% of the patients) was reported.[23] We have recently published data relative to the frequency of suicide in 17,964 terminal cancer patients cared for at home from September 1985 to December 1997. Five cases of suicide were recorded (0.027% of the patients).[19]

The aim of this work was to identify the possible vulnerability factors of suicide in our 5 patients by reviewing the clinical history through their medical records and the patients' report of symptoms during the last week of their lives, and by reconstructing the different features of the patients through a structured interview of at least one relative and of the physician and the nurse who had cared for the patients during the home care program. Through these different approaches, we aimed at obtaining information about each patient regarding social and family history; personality; fears; functional status and physical impairments; psychological distress; control or not of physical and emotional symptoms; previous and ongoing psychopathologies; awareness of the disease and prognosis; wishes, refusals, and eventual requests for euthanasia and previous suicide attempts; emotional impact to treatments; and the relationship with the family and the palliative care team.

Methods

Patients

We considered the 5 patients who had committed suicide among the 17,964 terminal cancer patients (9200 males and 8764 females; 33% age ≤61 years; 35% age 62–72 years; 32% ≥73 years) who were cared for at home and died between September 1985 and December 1997. Two suicides had occurred in 1988 and one each in 1993, 1994, and 1995. Two patients were cared for by the home care team of the National Cancer Institute of Milan and the others by three different palliative home care teams. For the suicide patients the duration of home care was a median of 27 days.

Suicide was defined as a clear self-induced injury and/or a drug overdose resulting in death. Patients were usually seen daily which makes the underestimation of suicide unlikely even if this occurs by overdosing.

The criteria for admission to the home palliative care program are: 1) patient's consent; 2) incurable cancer; 3) prognosis estimated to

be no more than 2 months; 4) symptoms requiring a specific palliative evaluation and treatment; 5) performance status not allowing the patient to be seen in the outpatient clinic; 6) availability of some family support, identified in at least one family member or a caregiver living with the patient and willing to take active part in the patient's care.

Patients were cared for at home by 12 palliative care teams organized in Milan and the Lombardy region (the north of Italy) by the nonprofit Floriani Foundation and the Italian League against Cancer. Each team was made up of doctors, nurses, volunteers, social workers, and psychologists working together with the aim of providing continuing care allowing the patients to spend the end-stage of their lives at home with medical, nursing, and psychosocial support. All the teams had similar training in palliative care and were used to treating and dealing with dying patients. The same clinical setting was available for all the patients we studied.

Psychological Autopsy

By means of a psychological autopsy,[24] a multidisciplinary research group examined each suicide patient's characteristics and behavior in detail, looking for clues which might have been indicators of vulnerability factors for suicide. Our psychological autopsy was based on a 65-item structured interview prepared ad hoc. Information about the suicide patients was obtained via a comprehensive interview of at least one relative (or a caregiver) and of the physician and nurse who took care of each patient after having obtained their consent. The interviews were performed by the social worker (A.T.) at the Rehabilitation & Palliative Care Division of the National Cancer Institute of Milan from June 1996 to January 1998. The mean duration of the interview was 2 hours. The interviews were held at different times after the patient's death, from 1 year (1 interview) to 3 years (2 interviews) and 8 years (2 interviews).

Through the interviews, the following features were investigated: 1) sociodemographic data, education level, profession, religion, composition of the family, family problems, information on diagnosis and prognosis and the degree of awareness; 2) performance status, the presence of functional and physical impairments related to cancer and/or to treatments, the importance of autonomy to the patient, the belief that the patient was a burden to the family, the acceptance or refusal to be dependent on others and the emotional impact of the loss of independence; 3) the presence of physical symptoms and their control, as well as the presence of severe adverse effects related to the treatments; 4) psychological distress such as anxiety, depression, fear, aggressiveness, nervousness, anguish, the feeling of isolation and being cut off from others, as well as the tendency to isolate themselves, and change in personality; 5) cognitive status, confusion, hallucinations, central nervous system toxicity due to opioids; 6) social life, quality of relationship with the family and society, socio-economic problems linked to the illness; 7) post-traumatic stress disorders appearing after diagnosis of cancer or linked to treatments; 8) personality traits such as introversion, extroversion, depression, dependency, self-sufficiency, dominant, directive, authoritarian or anonymous, severe fear of suffering and/or death; 9) preexisting psycho-pathology, previous suicide attempts, psycho-pharmacological therapy during home care or in the past, alcohol and drug abuse, family history regarding these factors; 10) suicide dynamics; 11) will or messages left and discovered afterwards, hints and explicit remarks of suicide, euthanasia requests to the health care team or family and the reasons given; 12) motivations of the suicide according to family and palliative care team; 13) evaluation of the quality of the assistance received from the home care program (only family members were asked), the patient's wish to be admitted to hospital, the relationship between patients and the doctor/nurse of the team.

The written replies to the interviews were then classified on a grid independently by two research doctors and the congruence among the interviewees was evaluated. The missing answers were classified as "missing."

By means of the patients' medical records, we evaluated the primary cancer and metastases, the associated pathologies, the adverse physical and emotional consequences of oncological/analgesic treatments, the physical impairments, and the previous refusal of oncological treatment. Moreover, we considered the physical and emotional symptoms reported by the patients by means of a verbal scale (no, light, moderate, severe) the week before the suicide,

as well as the congruity of the assessment of the physical and emotional symptoms previously reported by the patients themselves in respect to the answers given by the interviewees on these topics. Through the interviews we also collected the social suffering of the patients, their personality profile, as well as their feelings in respect to the illness and disability.

Results

Table 1 reports the patients' sociodemographic characteristics, the type of suicide, and the messages found. There were 2 women and 3 men in this group. The mean age was 65 (range 50–76). All the patients except one (RB2) were married and had children, and all 5 were self-employed and had managerial positions. Four patients were Catholic and one was Protestant. Two patients jumped out of a window, two shot themselves, and one took an overdose of morphine by oral route. One patient left a letter thanking the palliative care team and the housekeeper who also acted as caregiver and one left some personal objects considered highly symbolic by her family because they were connected to family events. The level of education was medium-high in all cases.

Table 2 reports the primary cancers and the associated pathologies, the physical impairments, the adverse physical consequences of treatments, and the negative emotional impact in respect to the treatment received and physician/nurse relationship. The site of cancers were, respectively, bladder, breast, melanoma, lung, and unknown primary. All the patients had metastases but none at the brain level (CT or MRI evaluation). None of the patients had undergone or had been undergoing psycho-pharmacological therapy for psychiatric disease or had been admitted to a psychiatric ward, and no patient had delirium evaluated clinically.

The intensity of pain was described as moderate by three patients and light by two. The patients with moderate pain did not want to increase the dose of opioid analgesics.

Four patients had described themselves as depressed (respectively, 2 moderate and 2 of light intensity). Two of these patients were treated with tricyclic antidepressant drugs to manage neuropathic pain, without a dramatic change in mood. The interviewees judged the same four patients as depressed and feeling hopeless during the terminal stage of the disease. One patient was said to be not depressed at all.

Four patients presented associated pathologies which were severe and complex in two of them. Three patients had significant physical impairments such as blindness, impotency or

Table 1
Patient Characteristics and Type of Suicide

Patient	Age, Sex	Marital Status, No. of Children	Profession	Religion	Type of Suicide and Messages Found*
GB	76, M	Married, 3 children	Restaurant owner and manager	Catholic, churchgoer	Shot with a hunting gun
RB1	62, F	Married, 3 children	Former diplomat, manager in the volunteer sector	Protestant, non-churchgoer, strong ethical feelings	Jumped out of a window *Left a book opened at a page with a poem by Sappho, a mirror, a photo of a house having family memories near her bed
RB2	50, F	Single, no children, lived with the housekeeper who also was the caregiver	Shop owner and manager	Catholic, non-churchgoer, strong ethical feelings	Overdose of oral morphine *Left a letter of thanks to the housekeeper and to the palliative care team
SB	67, M	Married, 2 children	Manager	Catholic, non-churchgoer, strong ethical feelings	Shot with a hunting gun
AB	70, M	Married, 1 child	Administrator in the building sector	Catholic non-churchgoer	Jumped out of a window (8th floor)

Table 2
Clinical Characteristics

Patient	Primary Cancer, Metastases, Associated Pathologies	Physical Impairments	Adverse Physical Consequences of Oncological/Analgesic Treatments	Negative Emotional Impact of Treatments and Bad Relationships with Physicians
GB	Bladder, Bone metastases, Pulmonary emphysema, gastric ulcer, diabetes, heart disease	Blindness due to diabetic retinopathy, sexual problems	Permanent urinary catheter	Urinary catheter insertion, Sexual intercourse problems
RB1	Breast, Bone metastases, Toxic epidermal necrolysis (Lyell's disease) resulting in a full-thickness denudation, superinfection, fluid and electrolyte loss	Epidermal necrolysis in the legs and buttocks, pain on moving legs, need of daily multi-medications	Obstipation, painful fecal impaction caused by immobility and opioid treatment; it was not possible to establish the cause of Lyell's disease	Following mastectomy there was resentment towards the oncologist who did not tell the truth about diagnosis and prognosis, then resentment towards the PC doctor who wished to admit patient to hospital for the treatment of Lyell's disease
RB2	Melanoma, Widespread epidermal nodes, No associated pathologies	Widespread epidermal nodes disfiguring the body	———	———
SB	Lung, Bone metastases, Herpes zoster	———	———	Negative reaction to severe chemotherapy-related toxicity
AB	Unknown primary, Lateral cervical lymphonodes, No associated pathologies	Urinary incontinence	Urinary incontinence following surgery for prostatic hypertrophy	Urinary incontinence

PC = Palliative Care.

impossibility to have sexual relationships, epidermal necrolysis due to Lyell's disease, and widespread skin nodes that disfigured the body. Moreover, one patient had urinary incontinence, which provoked great emotional discomfort, as noted by the interviewees.

Two patients presented adverse physical consequences to the treatments. One had painful fecal impaction caused by opioids and another immobility due to bone metastases and epidermal necrolysis. Great emotional discomfort due to treatment was present in three patients: one patient had undergone the insertion of a urinary catheter resulting in sexual problems, one patient had presented severe chemotherapy-related toxicity, and the other had urinary incontinence following surgery due to prostatic hypertrophy.

Only one of the patients had resentment, at first against the oncologist and then against the physician of the palliative care team who had asked the patient to be admitted to hospital to control infection and severe dehydration caused by Lyell's disease. For this reason the patient did not wish to see the physician the day prior to committing suicide. The afternoon before death, the physician had been to visit the patient at her home but had been told by the daughters to go away because the patient did not want to see anyone.

Table 3 shows the data coming from the interviews relating to the functional, physical, psychological, and social conditions of the suicide patients. For all the patients, it was possible to interview the physician and the nurse of the home care team who had taken care of them. It was possible to interview at least one member of the family in four cases. One patient (RB2) lived with her housekeeper who could not be found to interview. There was congruity among the data relative to the rating of pain and other physical and emotional symptoms, such as depression, reported on the clinical chart and obtained by evaluating the patients during the week before suicide and the replies given by the interviewees.

From the interviews, it emerged that all the patients were very concerned about the lack of autonomy and independence. In fact, they showed fear and worry of losing their autonomy and gave great importance to maintaining their autonomy and independence. They strongly refused to be dependent on others.

The characteristics present in four of the five patients were the following: physical impairments, uncontrolled pain, awareness of being in the terminal stage, the feeling of being a burden on the family, depression associated with a sense of hopelessness, fear of suffering,

Table 3
Data from Interviews Regarding the Functional, Physical, Psychological, and Social Characteristics of the Suicide Patients

	Patients				
	GB	RB1	RB2	SB	AB
Functional Status					
Poor performance status	•	•	★	★	★
Physical impairments	•	•	•	★	•
Physical Symptoms					
Uncontrolled pain	•	•	★	•	•
Other uncontrolled symptoms	•	★	★	★	★
Psychological Characteristics					
Strong character	•	•	•	•	★
Cognitive impairments	★	★	★	M	★
Awareness of being in the terminal stage	•	•	•	•	★
Feeling of being a burden to family	•	•	M	•	•
Refusal of dependence	•	•	•	•	•
Depression	•	•	•	★	•
Aggressiveness	M	•	•	•	★
Fear/worry of suffering	M	•	•	•	•
Fear/worry of losing autonomy	•	•	•	•	•
Previous psychiatric disorders (admission/drugs)	★	★	★	★	★
Previous suicide attempts	★	•	★	★	★
Strong feeling of autonomy/independence	•	•	•	•	•
Previous request for euthanasia	★	★	•	★	★
Had spoken of the possibility of suicide	•	•	•	★	•
Negative emotional impact to treatments received	•	•	★	M	•
Social Characteristics					
Bad/poor relationship with all the family	★	★	★	★	★
Bad/poor relationship with home care team	★	★	★	★	★
Felt isolated	M	★	★	★	•
Did not want assistance at home	★	★	★	★	★
Self-imposed isolation	★	•	•	•	•

Characteristics: • = Present; ★ = Absent; M = Missing (no answer or different answers among the interviewees).

strong character, managerial profession, had previously spoken about the possibility of committing suicide and had begun to isolate themselves from others before committing suicide, not wishing to see their friends and relatives. To the above characteristics we can add the following found in three of the patients: aggressiveness in the days preceding suicide and negative emotional impact to treatments.

All the patients were in favor of being assisted at home and none had a bad relationship with the family and with the home care team. No patient had requested the doctor, nurse, or family for euthanasia or assisted suicide.

One patient (RB1) had attempted suicide in the past in a moment of conflict with her husband. The same patient had previously asked the doctor what would happen if she took all the available oxycodone capsules and, at the same time, she specified that if a patient decided to die, they would do so without involving other people. The patient had hidden some razor blades under her bed which were found and removed by one of the daughters. The following week she committed suicide by jumping out of the eighth-floor window even though she had difficulty in moving due to bone metastases and skin lesions of Lyell's disease.

According to the opinion of the family, the physician, and the nurse, the patients' concerns about their autonomy and the fear of being a burden on others appeared to be the most important reasons for committing suicide.

Discussion

Our study presents some limitations. However carefully a psychological autopsy is carried out, it is difficult to reconstruct the relational background of the suicide patient, just as it is difficult to reconstruct their personality profile and the degree of physical, social, emotional suffering, as their feelings in respect to their illness, and their functional/body impairments.[25] Another limitation is that the interviews were held at a long time after the patient's death.

However, there was congruity among the majority of answers given by the different interviewees, as well as among the data obtained by evaluating the patients during the week before suicide and the interviewees' replies. All the relatives contacted for the interview claimed to have lived close to the patients and the doctors and nurses of the team reported to have visited him/her and spoken to them frequently and that they have never forgotten the patient and the suicide act.

Some studies and clinical experience have identified multiple risk factors for suicide in cancer patients.[6–11] Demographic variables such as sex and age may be vulnerability factors in cancer patients.[7,12,13,15,26,27] Men with cancer appeared to be at higher risk of suicide in European studies,[12,15,16,20,26] as well as in American studies.[14,27] The same has been found in the general population.[28] Three of our patients were males.

In Scandinavian research, suicide in men with cancer peaked around age 70,[12,15] whereas in a Finnish study the majority of suicide patients were aged over 60.[26] Other authors note that patients in the sixth and seventh decade of life seem to be particularly vulnerable.[29] The elderly may be at risk of suicide and depression because, in addition to the loss of good health, older cancer patients may often endure other losses, including physical impairments, financial problems, loss of a partner, retirement and other social changes, and societal refusal.[10,30] One of our patients was 50 while the others were over 60. However, it should be underlined that 67% of our population was aged from 62 to over 73.

The characteristics of our patients that we consider suicide vulnerability factors in agreement with the literature are: loss of autonomy/independence linked to fatigue and to a poor performance status due to illness and body impairments caused by the illness or treatments; fear of losing autonomy/independence; perception of being a burden on their families; and depression with a feeling of hopelessness consequent to the clinical conditions. However, these events are present in most terminal cancer patients close to death, whereas the suicide act is committed only by a minority of the patients. In particular, for palliative caregivers, the problems concerning loss of autonomy are difficult to solve, above all when they are not due to manageable physical/emotional symptoms but are due to cancer-related cachexia, disease progression, or severe physical impairments.

A Finnish study[31] discovered that cancer suicide victims were different from other victims coming from the general population as regards pain and physical disability. The aspect concerning loss of autonomy and the perception of being a burden to themselves and to their family finds confirmation in the literature[8,11,32,33] and somatic symptom burden also has been significantly associated with the patient's interest in hastening death.[34]

It is possible to observe that 4 of our patients had uncontrolled pain (3 patients had moderate and one had light pain intensity) despite being assisted by a well-trained palliative care team. This confirms that it is not always possible to control physical pain even through the application of appropriate analgesic guidelines.[35,36] However, it should be considered that both the threshold of pain as well as fear of pain and the meanings attributed to this symptom are all extremely subjective factors. Moreover, in our culture, some patients and families still have a great fear of increasing opioid dose, both because of fear of the adverse effects as well as fear of addiction, notwithstanding the continual education given to the patients and their families by the palliative care team.

Four patients had depression with a feeling of hopelessness consequent to the clinical conditions. The interviewees judged the same four patients as depressed and feeling hopeless during the terminal stage of disease. Hopelessness is a key variable that links depression to suicide, not only in cancer patients[6–11] but also in the general population.[37,38] Studying the relationship between patients' concerns and psychological distress in a hospice setting, Heaven and Maguire[39] found that concerns about disability were linked with depression, whereas concern about cancer was linked with both anxious and depressive changes in mood.

Depression is considered to be a relevant risk factor for suicide by many authors[1,2,5–10] In a study on the desire for death in the terminally ill, it appeared that the wish for a hastened death correlated with ratings of pain and low family support but most significantly with the severity of depression.[40] In another study carried out by interviewing 48 patients with

painful metastatic cancer to ascertain their interest in hastening death, Sullivan et al.[34] found that current pain and depression levels were not associated with interest in hastening death, but current somatic symptom burden was significantly associated with this interest. Baile et al.[41] suggest that depression can affect rational decision-making in cancer patients requesting assisted suicide. A study carried out at the Palliative Care Unit at St. Boniface Hospice in Winnipeg showed that all 10 out of 44 observed patients who reported suicidal ideation or a desire for a rapid death suffered from clinical depression.[42] Block et al.[43] showed that a desire for death in terminally ill patients is strongly associated with psychological distress, especially major depression. Kugoya et al.[44] described six terminal cancer patients with suicidal ideations thought to be due to major depression and treated them with tricyclic antidepressant drugs. One week after the start of treatment with antidepressants, five of the six patients showed a marked improvement in their mood and showed no further suicidal thoughts or requests for terminal sedation.

Other factors such as previous suicide attempts, isolation and aggressiveness[7–10,12,45] may have played a role in our patients' suicide. Previous suicide attempts are considered to be one of the most relevant risk factors in all the suicide cases and should be adequately evaluated.[45,46] Many of the cancer suicides had been preceded by an attempted suicide.[7–9,12,13] One of our patients had attempted suicide in the past before cancer diagnosis.

Also, the patient's feeling of being isolated is considered to be an important risk factor for suicide.[12] It should be emphasized that patients can isolate themselves from the environment in which they live to prepare themselves for suicide.[47] A self-imposed isolation not provoked by the family, friends, and caregivers was present in four of our patients.

Clinical studies showed that one of the possible risk factors for suicide is the onset of sudden hostility towards the caregivers and/or relatives.[48] Reich and Kelly[48] surveyed 17 suicide attempts committed by inpatients suffering from physical disease over a 7-year study period. They observed that no patients gave any warnings or left notes or expressed suicidal thoughts. The authors noted that impulsive suicide attempts occurred in association with a disruption of the alliance with the therapeutic team. Three of the patients became progressively aggressive towards their family in the period before committing the suicide. Only one (RB1) of our patients showed resentment and aggressiveness towards the Palliative Care physician, which emerged only a few days before suicide and was manifested by the refusal to see the doctor and the request for the doctor to go away the afternoon before committing suicide. All the patients who committed suicide had no brain metastases and no clinical evidence of delirium. Furthermore, all of them were described as clear-sighted by the interviewees.

The results of our study show that multiple factors related to physical, functional, emotional, and social features are simultaneously present in our suicide patients, allowing us to hypothesize that the risk of suicide is linked to many factors rather than to only one. This is probably why it is particularly difficult to accurately predict a suicidal event.

However, we think we can underline the importance that each patient gave to autonomy. In fact, through the interviews, a series of elements constantly appeared, such as the strong feelings for the need of independence, the fear of losing their independence, the concern regarding poor performance status and physical impairments, and the worry of creating discomfort to the family due to continuing care. These findings show how much the loss of autonomy or the fear of losing it created most of the patients' suffering and became a significant vulnerability factor. According to the opinion of the family, the physician, and the nurse, the patients' concerns regarding their autonomy and the fear to be a burden on others appeared to be the most important reasons for committing suicide.

Although the patients felt free to talk about their illness, death, wishes and fears, and although four of them had spoken about the possibility of suicide, only one of them requested euthanasia or physician-assisted suicide. We do not know why this occurs. However, as one patient explained that "if a patient decides to die, they would do so without involving other people", we can speculate that probably the patients with a strong feeling of independence and strong character do not want to depend on others even in the case of their death.

Conclusions

We conclude that concerns regarding autonomy, not only considered as poor performance status but above all as fear of losing independence and of being a burden on others, particularly in patients who had a strong character, can be considered the most relevant vulnerability factor for our patients committing suicide. Moreover, associated factors, such as uncontrolled pain, depression with a feeling of hopelessness, fear of suffering, serious body impairments, negative emotional reaction to treatments received, and the adverse physical consequences left by these are important contributing risk factors.

The lack of a control group, and the qualitative and descriptive nature of our data call for future studies in which the vulnerability factors that we have found, particularly the concern for autonomy, should further be investigated in a comparable sample of patients who did not commit suicide. Qualitative studies may offer useful data to the clinician.[45,49]

In our opinion, it is important that these vulnerability factors are known and can be recognized by all the physicians and in particular by the people involved in oncological and palliative care settings. The identification of a cancer patient at risk of committing suicide forms the first step for suicide prevention and the setting up of adequate psychosocial and pharmacological interventions aimed at the psychosocial rehabilitation of these patients, whenever possible.

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